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was gathered as he taxied the ship up to the grand stand. While passengers told reporters, "We've never been more comfortable or less wearied," Gloria Swanson christened the plane from New York with another bottle of grape juice.

In two days and two nights, 20 people in two airplanes had crossed the continent—2,343 miles by air and 970 miles by rail. No other scheduled passenger carrier had ever done that before.

And so it all began with fanfare, signals flashing across the country and movie stars. A few years later, the diary writer noted, "if we can believe what they are telling us about new planes coming along, someday another young Lindbergh, flying in a fast jet-propelled or rocket ship will make the trip so fast that he'll get there before he started." And so it may be in the '70s—because of the three-hour difference on the clock, a supersonic transport will arrive in Los Angeles before it leaves New York.

RECESS

Mr. BYRD of West Virginia. Mr. President, I ask unanimous consent that the Senate stand in recess, subject to the call of the Chair.

The PRESIDING OFFICER. Without objection, it is so ordered.

(At 12 o'clock and 29 minutes p.m., the Senate took a recess, subject to the call of the Chair.)

(At 12 o'clock and 48 minutes p.m., the Senate reassembled, when called to order by the Presiding Officer (Mr. EAGLETON in the chair).)

Mr. BYRD of West Virginia. Mr. President, I suggest the absence of a quorum.

The PRESIDING OFFICER. The clerk will call the roll.

The bill clerk proceeded to call the roll.

Mr. STENNIS. Mr. President, I ask unanimous consent that the order for the quorum call be rescinded.

The PRESIDING OFFICER. Without objection, it is so ordered.

AUTHORIZATION OF APPROPRIATIONS FOR FISCAL YEAR 1970 FOR MILITARY PROCUREMENT, RESEARCH AND DEVELOPMENT, AND FOR THE CONSTRUCTION OF MISSILE TEST FACILITIES AT KWAJALEIN MISSILE RANGE, AND RESERVE COMPONENT STRENGTH

The Senate resumed the consideration of the bill (S. 2546) to authorize appropriations during the fiscal year 1970 for procurement of aircraft, missiles, naval vessels, and tracked combat vehicles and to authorize the construction of test facilities at Kwajalein Missile Range, and to prescribe the authorized personnel strength of the Selected Reserve of each Reserve component of the Armed Forces, and for other purposes.

Mr. STENNIS. Mr. President, what is the pending business?

The PRESIDING OFFICER (Mr. ALLEN in the chair). The pending business is amendment No. 108 offered by the Senator from Wisconsin (Mr. PROXMIRE).

Mr. STENNIS. I thank the Chair. Mr. President, this matter was made the pending business yesterday. It was my impression at that time that there would be no debate on the amendment. However, I learned later that the Senator

from Wisconsin planned to debate it. I had already made some other plans concerning other matters that I must look into in my home State.

I called the Senator from Wisconsin this morning and explained the situation. We had an understanding that each of us would proceed when we could. So in view of these other pressing matters, I am going to proceed, and I hope that the Senator from Wisconsin will be here before too long. I believe that he will.

Mr. President, the pending amendment concerns what we call the C-5A, which is a new, large cargo-carrying plane. The aircraft carries Army men and cargo as well as for the Air Force. It has just reached the point where we are close to having the production line product roll out, ready for use.

Mr. President, earlier in life one of my favorite teachers—one that I have remembered all of these years, not only for what she was, but also for many things that she said—laid down a cardinal guideline for her students in a special talk one day when she said, "Always keep your eye on the ball."

Regardless of all the things that may come up about the contract, who negotiated it, who signed it, who proposed it, and who went into the matter, the ball that we must keep our eye on is our national security.

The C-5A aircraft is an essential part in these modern times of the military plan for our national protection and our national security. Part of that plan for our national security is that we think it is necessary to protect certain other areas of the world as part of our front line defense.

This large cargo plane will replace others that we have in use at the present time that are not as adequate and do not have the qualities this one possesses. This is a modern plane.

As a member of the Armed Services Committee and the one member of that committee with special responsibility at this time, I have been disappointed repeatedly this year by the lack of surveillance over several contracts that has been exhibited by our Department of Defense. I have not only been disappointed in it, but frankly, I have been greatly surprised.

I have said several times during the last several years that whatever might be said about the past Secretaries of Defense concerning their judgment, the acts they performed or did not perform, and what advice they gave or did not give to the President, I thought that we were superb in our standing at the business table, at the contract table.

I really have been greatly surprised by the lack of surveillance and lack of attention given a number of these larger contracts.

I emphasize that if we really want to understand the matter, we must get on the ground and appreciate the great problems that go with a contract to create something that is not in being, to create a new concept of a plane, a missile, a ship, or a submarine, to conceive it in our minds from the beginning and get it on paper, and finally, through trial and error, starting and stopping, and

changing and ordering, conceive it as an imaginary instrument and then moving from that imaginary stage into the realities of the hardware and the putting together of the pieces and the creation of a powerful item, like this plane, that will really operate.

We have to imagine this crisis over a 6- or 7-year period and the changes that will come about, the competition for the engineering talent and the scientific talent, the competition for various kinds of metals, the competition even in the skilled labor field and all of the things that go over a 6- or 7-year period. That is the time over which this contract has run.

I point out in the beginning that I strongly support the items now in the bill and the C-5A. However, I do not approve of the kind of contract that was used in this case. This was the first large trial that that type of contract had.

It will be fully explained later in the debate. I am just debating the matter now to hit the high points for the Record so that it might be read during the recess.

That contract will be explained fully and critically by each side of the debate. I think, but certainly I do not defend it.

I know it has been proven to be a bad type of contract, a type that should not be employed any further. Perhaps one of the reasons it worked so badly in this case was because, without having prior use, it was used for one of the largest contracts that we have ever gone into. At any rate, it did not work out for this case. It was bad for the Government and it was bad for the contractor, too, as will very readily appear.

The point I want to emphasize is that we must keep our eye on the ball. According to all the testimony, I believe we have a good product. We have a good plane. We have one that is beyond the expectations of the Air Force, beyond the requirements of the specifications. It has had its usual bumps during the trial-and-error period, but there is no evidence that it is not going to come through in a fine way, and its performance is beyond expectations and requirements.

I refer to one witness, the Senator from Arizona. I requested him to go down there and go through this plane, go over it, and I was very much pleased when he returned with his report. He not only looked at it but also flew it, and he will give a report on that.

We move now to this amendment. The amendment, Mr. President, seeks to strike from this bill \$533 million for the procurement of 23 of these aircraft and certain lead funds.

We have what we call the No. 1 run, run A. That is composed of 58 planes in all—5 for research, development, and testing, and 53 for regular type, the finished product. All that has been taken care of by money that already has been authorized and appropriated. It is not involved in this bill.

So that moves us over to run B, under the contract referred to as run B, and that will consist of 57 planes in addition to the 58 I have mentioned; but this bill contains money for only 23

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planes out of run B. At issue is the sum of \$533 million for 23 C-5A aircraft.

What would be the effect of taking this money out of the bill with the adoption of this amendment? It should be understood that we do not have a single plane yet for use; but they are on the assembly line; they are moving. If this amendment is adopted, it would require a report from the GAO in 90 days; but that is purely incidental. It would take away the money for the plane. At the very best, we would lose 1 year. There would be a delay in the entire program. More money must be authorized by Congress; otherwise, the production lines will soon come to a grinding halt. We will have a standstill.

That is just a fact of life regarding this fine product which is just coming to fruition and which we need.

If we were to cut off the money, if we ever were to get any planes for use, the company would have to proceed solely with its own money to complete the first run of 58 planes, run A. It is estimated that if this should happen, the company would sustain a loss of at least \$600 million. I doubt that any company can stand such a loss.

Incidentally, I wish to point out that no one estimates that this company is going to make a great deal of money even if it gets all the contract—the planes beyond the number called for by this bill. Various estimates have been made. The Air Force has estimated that the company will lose a certain amount, and the company says they will lose less than that. But all agree that there will be a loss to the company under either situation.

According to the contractor, Lockheed, if all the aircraft in run B are bought, its loss would be in the neighborhood of \$13 to \$15 million. The Air Force says that if we buy all it is possible to buy under run A and run B, they think the Lockheed loss will be in the neighborhood of \$285 million. I mention that just to indicate that by no kind of figuring or estimates is this a contract in which the contractor is going to make money. There will be a loss either way it goes.

We talk about a 90-day investigation by the GAO—whatever that may mean. I will return to that later. But what the amendment really does is to take the entire project out of the bill and disallow the money.

There is one thing further about the number of planes involved, and it is not in the bill, and it does not have to be decided now. If the Senate keeps the money in the bill—as I trust it will do—there still will be a question of whether or not we are going to buy 34 additional planes at a later date. That is a matter that would be left up to the Defense Department initially. I do not know what their decision will be. I do not know what their recommendation will be. We cannot decide that now. That is just another mileboard down the road.

We cannot possibly come to it now. It is not involved in the bill. That is a judgment to be made by the Secretary of Defense. It would be up to him to make that judgment and to give Congress a recommendation.

Mr. President, if this program is killed now as a result of the failure to provide funds in the bill for the 23 aircraft now in question, additional Government costs will be over \$100 million because there will be termination costs of at least \$30 million and \$72 million in long-lead funds approved last year and already committed. Those are costs that are involved in the termination of a contract. Sometimes we have to incur them in the termination of contracts. However, it is a necessary part of any contract involving manufacturing of extensive products like this. It is a cost of doing business. It certainly is to be considered and measured when we get into the question of whether or not we are going to terminate the manufacture of a product that is more than good, it is essential, and a product that we actually need in the years to come.

Mr. President, when these planes are placed in operation they will replace other planes and actual savings will be had in connection with the operation.

In connection with the matter about the General Accounting Office—and I mention this with all deference to that fine agency of the Government that is certainly a great deal of help to the Committee on Armed Services—they have advised me that this amendment provides for them to make a study and to report in 90 days. They have informally advised me that at the best, any study would take at least 6 months, even in connection with those items they are competent to study. They are not committing themselves by any means to saying they are competent and have the type men with the type training that would be necessary to carry out all of the requirements.

Mr. President, just a word about a matter that was in the newspapers lately. I wish to pause at this point to say that I think the Senator from Wisconsin has done a lot of fine work in this matter. He is diligent and he always pursues a matter. He is frank, clear, and forceful in giving a report to the Senate about his work. I am proud he is that type man. It is a pleasure to work with him in the Senate.

There has been a great deal of publicity and many fancy names used about this contract. They have called the C-5A contract the Golden Handshake, and so on. However, let us remember that the main questions are whether it is a good plane and whether we need it.

There has been a crack in the wing in the testing. A crack occurred in the wing in a static test on July 13. I am advised over and over by those who know—and other members of the committee would be more competent to speak on this matter than I am—that that is a normal expectation in every aircraft development. The failure occurred at 125 percent of the load for which the airplane was designed.

Every aircraft wing, as I understand it, is tested upward and upward to the point of breaking. That is how they find out the terminal point. Where does the strength of this mighty wing stop after all?

In this case it did not crack until it had reached the point of 125 percent of the weight for which it was designed.

As I said, almost all aircraft, particularly the heavier ones, have experienced failures of some components during static testing. That is what static testing is for. To determine the amount of stress and learn its breaking point. Wing failure occurred on the B-52A, our present so-called big bomber, at 139 percent of the design load. In the C-130A it occurred between 127 percent and 135 percent; in the C-130B it occurred at 139 percent; in the F-104G it occurred at 135 percent; and the C-141 had a main landing gear frame failure at 129 percent of load, a vertical tail failure at 135 percent, a fuselage failure at 120 percent, and a main landing gear failure at 145 percent.

Many additional examples could be cited. Failures of this kind are not unexpected. In fact, it is a part of the development and testing process regularly to be expected. They reveal these possible weaknesses in the structures at an early stage of development to permit design modifications in the production of aircraft.

We have had much debate here about the amount of money in this bill for research and development. This is an illustration of how far removed from real research, as we ordinarily term this, is this testing we have been talking about. Over and over again a good part of the money for research and development is really research, development, test, and evaluation.

If I have any bearing at all with the Department of Defense when they bring over the recommendations next year, they will have this research and development account, as they call it, broken down with more commonsense and divided up into categories where Senators will have a better opportunity to know what they are passing on.

What is the need for the C-5A?

Certainly that has already been established, or there never would have been such a plane devised and contracted for. Six squadrons of the C-5A's will permit the phasing out of such obsolete and inefficient aircraft as the C-124's and the C-133's. "C" means here "cargo," Mr. President.

With the C-5A's we will reduce the number of airlift aircraft in the force by one-half while providing more than three times the transport capability.

Mr. President, that is the key fact in this whole debate.

Times have changed. Modern aircraft are altogether different. Versatility of the C-5A is greater and its capability more.

Thus, I repeat, with the C-5A's, we will reduce the number of airlift aircraft in the force by one-half, while providing more than three times the transport capability.

When we reduce the number of aircraft by one-half, we also reduce the number of pilots, navigators, and the rest of the crew members, including maintenance men—all will be reduced, including repair parts and all other items that go to make up the expensive line of operation. At the

same time, we will have three times the transport capability.

Second, the C-5A's operating cost per ton-mile will be way lower than any other airlift aircraft. It will be 2.9 cents for the C-5A against 5.3 cents for the C-141. That is the operating cost per ton-mile. It will be almost one-half as much for the C-5A as it is for the C-141 that is now in such extensive use.

Three, under any theory, the 23 aircraft in the fiscal year 1970 request are needed. They are ready now to start coming off the assembly line. These will take us only to four squadrons—the number I am talking about—81 aircraft versus the six squadrons of 120 aircraft, to be approved as a minimum requirement by the Secretary of Defense and the Joint Chiefs of Staff. That is under review by the Joint Chiefs all the time.

As I pointed out a few minutes ago, that will be a determination for the Secretary of Defense, as to whether the last purchase is made. It is not before us now. If he decides to quit at the end of the 81 aircraft that the bill will build up to, that is a matter of judgment, and also a matter of judgment for Congress whether to approve it, if the Secretary of Defense does recommend it. But this is no time to stop on a good plane just as the first ones start coming off the line for use.

Mr. President, despite cost overruns, every indication is that the Air Force will get an aircraft with fine performance characteristics. It is the only aircraft which can carry weapons and equipment of any Army division; namely, tanks, bridge launchers, armored personnel carriers, and helicopters, concurrently with the personnel associated with the equipment.

If the C-5A is used to carry only manpower, light equipment, and the lighter weapons, it is so large that it can carry an enormous load with great rapidity of movement.

Mr. President, we have heard a great deal of talk about overruns. I am going to be quite brief on that matter, but the idea is false that there can be a certainty and a fixed final figure in a contract like this, without running into a lot of big money, and it would cost just as much to the Government in dollars, even though not called overruns.

This contract had a form of sliding scale. If there had not been a sliding scale as to cost, any contractor, in order to protect himself, would have required a fixed amount, in much larger proportions, in order to provide a cushion of protection, even before we get to the concept of profits.

I have already mentioned profits. As I pointed out, so many changes came about that it not only caused the so-called overruns, but absorbed chances for profit.

I would in no way try to defend overruns as such in any kind of contract. I point out, however, that one reason for the genuine overruns has been the inflation which has been raging in our economy since 1964. There was a clause in this contract which covered part of the inflation, but we had an extraordinary situation existing during those months

and years, which made the situation different from what it had ever been. I covered this point in my opening remarks on this entire bill, and I would like to restate my remarks at this time, which occurred on page S7702 of the CONGRESSIONAL RECORD of July 8.

MAIN REASONS FOR OVERRUNS

The committee has found as a general proposition that the principal reasons that the original cost estimates in these programs have been invalid in recent years are as follows:

First. Subsequent to the original estimates there were changes in the weapons programs, that is, revision to the total number of weapons to be produced and the schedule at which they would be produced, both factors causing an increase in the unit cost.

It is possible to alter these two factors in such a manner that unit costs will be reduced. However, such decisions in recent years have resulted in increasing the costs of these programs. The assumptions on which original estimates were made were therefore invalidated to the extent of these changes.

I think we have moved too rapidly from research into procurement with respect to some of these goods. In some cases, the need exists, accentuated by the war. So we had to move forward regardless of cost.

Second. The military services themselves have requested changes in the weapons through either a change in technology or a policy decision which caused an increase over the original estimate.

Third. There appears to have been a lack of sufficient management supervision over these various programs to take timely action to either correct or recognize, early, the overrun problem.

Fourth. There has been the fact of abnormal inflation since 1964, which has reduced the Defense procurement dollar to a substantial degree. There is no precise index on the effect of the Vietnam war on the procurement dollar itself. Some estimates, however, indicate that the overall loss of purchasing power of the defense procurement dollar would approximate 25 percent.

Inflation since 1964 has affected not only Defense moneys but many other activities in the economy.

Between 1964 and 1968 the interest rate on 3 months Treasury bills rose from 3.5 to 6.15 percent or an increase of 75 percent; the interest yield on FHA home mortgages from 5.45 to 8.05 percent, or an increase of 48 percent; services—less rent—rose 21.6 points from 117 to 138.6 or an increase of 18 percent; the cost of food rose 12.9 points from 106.4 to 119.3 or an increase of 12 percent.

I point this out not by way of excuse. I am not defending any of those contracts. The military as such and civilian groups as such were given some of the hard reasons why some of the increase occurred and have been given some comparison.

Mr. STENNIS. Mr. President, without attempting to fully cover all the ramifications of the contract and the plane, I have presented the high points of what

the original conception was, the need for the plane, the contract, and the type of contract which was entered into in 1964. I have covered the fact that it proved to be the wrong type of contract.

I think one reason why the Department of Defense got into the contract for this large plane, involving so many millions of dollars, was that it just did not take time to try out that type of contract on smaller missions or smaller projects. If it had, these defects in it would have shown up. But that is all behind us now, and nothing can be done about it. We have to start from where we are.

This program is in fine form now, right to the point where the planes are going to start coming off the assembly line. We certainly will need the ones we have already appropriated money for. The number is 58 in run A; and, by all standards, we are going to need the 23 out of run B, as provided in the bill.

A great deal of testimony on this subject was taken by another committee. It is entitled to consideration, of course. We considered this item from every viewpoint. Then for all of the public who were interested, we had 2 full days of hearings, in which that testimony was taken. Nothing came out, either in public or private, that attacked the plane, or the product. Nothing came up that questioned the motives or questioned the impartiality of the Defense Department in awarding the contract. All the evidence is that, whichever way it goes, it is not going to be a profitable contract for the company. It is going to lose money, according to its own estimates and according to the Air Force. It is going to cost more money than we or they thought it would. We regret that, but it is another illustration that, over these long periods it is impossible to foresee what the future holds. Who can contract with certainty about the cost, particularly with things moving forward as rapidly as they are now in the field, for example, of electronics. It has gotten to the point where over half the cost of a plane is in electronics.

In preparation of this vast matter, we prepared a series of questions that related to the financial status of the program and the developments and effect of various lines of effort. We sent those questions to the Department of Defense for answers. I have the questions in my hand. The questions are ours. The answers are those of the Department of Defense.

Having checked through those answers, I believe they are substantially correct. The staff believes they are generally and substantially correct.

For the information of other Senators and all interested parties, I ask unanimous consent that the questions of the Senate Committee on Armed Services and the answers of the Department of Defense thereto be printed in the Record at this point.

There being no objection, the questions and answers were ordered to be printed in the Record, as follows:

Question No. 1: Financial Status of the Program:

(a) How much has been obligated to date?

(b) How much has been expended to date?
(c) On what date will present funds be expended?

Specify these funds by fiscal year and those under the continuing resolution.

AS OF JUNE 30, 1969

[Dollars in millions]

Fiscal year	R. & D.		Aircraft procurement	
	Obligations	Expenditures	Obligations	Expenditures
1964	10.0	10.0		
1965	42.0	42.0		
1966	158.9	158.9		
1967	278.6	278.6	385.6	383.7
1968	340.7	314.2	414.2	394.7
1969	123.6	68.7	443.7	414.2
Total	953.8	872.4	1,243.5	1,192.6

On July 28, 1969, the Department of Defense, under the authority of the continuing resolution for FY 1970, approved additional funding in the amount of \$100 million to protect production continuity. Of the \$100 million, \$80 million has been obligated. The difference of \$20.0 million will be obligated to the most urgent requirement consistent with the financial management of the total program. Based on the present rate of expenditure, presently available funds may be exhausted by 1 October 1969.

Question No. 2: Provide a summary of funds that have been authorized prior to fiscal year 1970 and indicate how they have been expended or obligated.

Answer:

R. & D. AND PROCUREMENT AS OF JUNE 30, 1969

[Dollars in millions]

Fiscal year	Program	Expended
1964	10.0	10.0
1965	42.0	42.0
1966	158.9	158.9
1967	667.0	662.3
1968	781.9	708.9
1969	624.7	482.9
Total	2,284.5	2,065.0

Question No. 3: Provide a summary of the effect on the present C-5A aircraft program if no fiscal year 1970 procurement funding is forthcoming and the program is delayed one year.

Answer: Failure to provide FY 70 procurement funding would void the current contract option commitments for Run B. The contract options between Lockheed and General Electric and their subcontractors and suppliers would lapse. The Air Force would be obligated to pay the \$30.5 million Run B termination liability if requested by Lockheed.

The \$225 million over target funds requested for FY 70 would still be required to fund the contracts from target to ceiling for Run A. Additional funds would be required because of the additional target and ceiling associated with the repricing application of the Run B option exercise in January 1969. These additional funds would not finance Lockheed until FY 1971 funds could be made available. It is doubtful that Lockheed would be able to finance on its own the costs of continuing the Run A production during this time period. As a result, there is a substantial likelihood that the contractor would be forced to default the contract for the Run A aircraft.

If it is assumed that the costs of continuing the current Run A production could be sustained by the contractor there would still be a production gap of about 18 months between Runs A and B. During this gap, as many as 40,000 employees could be affected.

Up to 20,000 at Lockheed would probably be laid off and 20,000 involved with subcontractors and vendors either laid off or put on other work. The rehire and/or retraining of these people would be extremely difficult. Negotiation of the prices of the Run B aircraft after this delay would be in a sole source environment with no contractual commitments or price options available. A rough estimate of the cost increase is from \$400-\$550 million for Run B.

Reduction in the Run A production rate in order to stretch Run A and avoid a production gap would void the existing contract. Negotiation of the stretch in Run A production would probably permit Lockheed to recover most of its presently projected losses on RDT&E and Run A. This negotiation would be essentially sole source and again with no contractual commitments or price options. It is likely that the program cost increase would equal or exceed the cost increase associated with the gap in the production line discussed earlier. In addition, while the total number of employees affected would be reduced, the lower production rates would require almost immediate lay-offs of people by both Lockheed and their subcontractors and vendors.

Question No. 4: What have we received for this money so far? How many airplanes will be delivered from prior appropriations?

Answer: Thus far, the bulk of the R&D effort has been completed. Five R&D aircraft have been completed and about 600 hours of flight testing have been accomplished. About nineteen production aircraft are in various stages of assembly. A substantial amount of maintenance and operational training equipment has been delivered. The first operational aircraft is scheduled for delivery in December 1969. We have high confidence of securing a much needed strategic airlift capability with the delivery of an aircraft that will meet all of its performance guarantees. Fifty-eight (58) aircraft are contractually required to be delivered from prior year appropriations.

Question No. 5: Give a complete statement of the effect of the repricing formula and the reverse incentive on the procurement of the 23 aircraft proposed in the bill.

Answer: Our interpretation of the present contract is that the repricing formula came into effect when we exercised the Run B option in January 1969. It will apply to the 23 Run B aircraft requested for FY 70 and will result in a new target cost and ceiling price for the 76 production aircraft. This means that some, but not all of the contractor's RDT&E plus Run A over-ceiling condition will be eliminated. This over-ceiling relief would be only a fraction of that which would obtain by applying the repricing formula to all 57 Run B aircraft.

No reverse incentive (see questions 10 and 20) exists with the 23 aircraft being requested for FY 70. We are negotiating with Lockheed to eliminate the possibility of a reverse incentive, before more than the 23 FY 70 Run B aircraft are procured.

Question No. 6: What could the Air Force be expected to receive in the way of operational C-5A aircraft in the event no additional funds other than the \$225 million for over-target costs on Run A in the present bill and prior year funds were available?

Answer: Contractually, the Air Force can expect to receive 58 aircraft when the \$225 million is added to the Run A contracts. Realistically, in view of Lockheed's projected loss on the sale of only 58 aircraft, it is questionable whether the contractor could proceed if a decision were made not to buy any Run B aircraft. If the contractor defaulted the contract, it is possible some 10 to 20 airplanes could be delivered.

Lockheed is contractually committed to provide the 58 R&D and Run A aircraft. The Government is committed to provide the

\$225 million over-target funds requested in the FY 70 Budget plus whatever additional costs may result from the application of the repricing formula relative to our exercising the Run B option in January 1969. If Run B were terminated, an additional \$30.5 million of termination liability would be also required.

Question No. 7: Is the company not legally committed to furnish 58 aircraft under Run A?

Answer: The company is committed to furnish five test aircraft under RDT&E and 53 operational aircraft under production Run A, a total of 58 aircraft. This commitment is legally binding so long as the Government meets its commitments. This means that funds must be provided in a timely manner for the allowable costs associated with producing these 58 aircraft.

Question No. 8: What changes, if any, are being considered in the contracting methods, i.e., repricing formula, abnormal escalation, etc.?

Answer: It is the Air Force's intention to change the C-5A Lockheed contract as follows:

- Remove the reverse incentive possibility feature from the repricing clause, which does not arise until more than four squadrons are procured;
- Incorporate a new delivery schedule in the contract;
- Modify the methods of procuring/pricing spare parts;
- Negotiate the disagreement as to the intended application of abnormal escalation. Other secondary issues and attendant matters will be clarified and resolved within the overall negotiation package.
- Negotiate the scope and operation of the Correction of Deficiency Clause so as to better clarify its meaning and to facilitate its administration.

Question No. 9: Summarize in simple terms the cost elements of Run A.

Answer: The cost elements for R&D plus Run A may be expressed in the following way. These are based on the assumption that only three squadrons are procured and no repricing is involved.

	Cost to Government	Cost to produce
Lockheed-Georgia Co	1,764	2,436
General Electric Co	534	558
Other program costs	214	214
Initial spares	201	201
	2,713	3,409
R. D. T. & E. or	1,003	1,246
Procurement	1,509	1,962
Initial spares	201	201
	2,713	3,409

Question No. 10: Furnish a graphic analysis of how the reverse incentive operates.

Answer: Price adjustment in accordance with Air Force position: (Applicable Run A actual cost \$1526M, Run A target cost \$832M).

Quantity of Run B Aircraft	Increase in overall contract ceiling price (millions)	Increase in overall contract ceiling for each \$1 over run A ceiling	Reverse incentive
AT-23	\$292	0.66	No.
AT-33:			
AF position	393	.89	No.
Lockheed position	558	1.01	Yes.
AT-57	680	1.54	Yes.

Question No. 11: Can the Air Force give assurance that the reverse incentive provision will be deleted from the contract? Explain the manner in which the repricing

formula will operate on the proposed procurement of 23 aircraft.

Answer: As Dr. Seamans publicly stated, the nature of the Air Force commitment beyond the 4th squadron is dependent upon the results of negotiations. In large measure, these revolve around the deletion of reverse incentive feature in the contract. This deletion is a prime negotiation objective of the Air Force prior to procurement of the balance of Run B aircraft. Presently, operation of the reverse incentive on the proposed FY 1970 buy of 23 aircraft depends upon whether or not we procure the fifth squadron. If we stop at 23 aircraft, repricing of the contract target cost and ceiling will be made only on the basis of the items actually ordered. The total amount of Run B costs to be treated in the repricing formula will be just the target cost associated with the 23 aircraft and associated support. It is specifically noted that the procurement of the 23 aircraft does not involve any reverse incentive feature when the repricing formula is applied.

Question No. 12: Explain in precise terms the elements of the C-5A aircraft contract which will be controlled by military personnel and those elements controlled and administered by civilian personnel. In other words, what is the chain of authority for the contracting and administration of the program?

Answer: Authority and responsibility for procurement decisions concerning major Air Force systems, such as the C-5, rests completely with the Secretary of Defense and Secretary of the Air Force. Military people evaluate technical material, selection data and procurement approaches and make recommendations when required. Final decisions clearly and completely rest with the statutory civilian appointees with the Department of Defense.

Statutory procurement authority for executing contracts for the government within the Air Force flows from the Secretary of the Air Force through the Chief of Staff to the Deputy Chiefs of Staff (Research and Development) and (Systems and Logistics) and to the Director of Procurement Policy in Air Force Headquarters and then to Air Force Systems Command and Air Force Logistics Command.

Under this authority the Deputy Chiefs of Staff and the Director of Procurement Policy are responsible for providing the Commands with broad policy and procedural guidance resolving issues beyond Command jurisdiction, assessing Command compliance with established policy and guidance, and for supporting the Air Force Secretary in connection with his statutory and administrative responsibilities to Congress.

In the C-5 aircraft and engine procurement, the Air Force followed its standard source selection procedures. The Air Force Secretary was the Source Selection Authority. The Source Selection Advisory Council and Evaluation Board functions were carried out by senior military members of the Aeronautical Systems Division and C-5 System Program Office respectively at Wright Field, Ohio. Contractors submitted proposals covering all elements in great detail. Proposals were evaluated by a large, highly skilled group of specialists specifically picked for the task. Recommendations of these Source Selection bodies were reviewed at appropriate levels in the Command chain up to the Air Force Secretary. Based on a detailed review of these recommendations plus those of the major Commanders and Chief of Staff, the Air Force Secretary determined that the recommendation of General Electric for the engine would be accepted and the award of the airframe contract to Lockheed was in the best interest of the Government. The Air Force Secretary provided a detailed report to the Secretary of Defense.

In addition to source selection decision, others are required during regularly scheduled program reviews, program change requests, or when a program varies from the cost schedule or performance requirements of the contract. Again, these decisions are made by the Secretary of the Air Force or Defense.

Question No. 13: The current cost estimate under which you are operating is based on a study culminating in late October which is now ten months old. Lockheed and the Air Force have serious disagreement about certain provisions of the contract and how they apply. The question is, if the October 1968 estimates should be substantially wrong—substantially lower—and the alleged ambiguities in the contract should be decided in favor of Lockheed, how does the Government exposure change?

Answer: The Government exposure will increase if our October estimate to complete production Run A (53 aircraft) is substantially low. This is so because in exercising the Production Run B option in January 1969 we activated the price adjustment clause.

The Government exposure is the contract ceiling price and the price adjustment clause adjusts the contract ceiling price. Operation of the price adjustment clause and the resultant increase in ceiling price, is dictated by (1) the cost to complete Run A aircraft, and (2) the total number of Run B aircraft produced.

In addition, if the abnormal economic escalation estimates increase, the contract ceiling would increase further by that amount.

The current negotiations with Lockheed are being conducted with a view toward mutual resolution of all of the ambiguities presently in the contract. One of the principal ambiguities relates to the use of the abnormal escalation in the repricing formula. Should we be unable to resolve these ambiguities in negotiation, the Armed Services Board of Contract Appeals (ASBCA) and/or the courts would be resorted to. A judgment favorable to the contractor in these cases would also increase the Government exposure.

Question No. 14: Based on the October cost data, what was the estimated cost per aircraft

(a) Under Run A with 53 aircraft? (5 R&D not included)

(b) Under Run A plus 23 aircraft of Run B?

Answer: The procurement cost for the 53 Run A aircraft (assuming completion of the Run B buy) was estimated at \$1,904 million for an average cost of \$35.9 million per aircraft. If we had decided at that time not to buy Run B, the repricing formula would not have become effective. The procurement cost of the 53 aircraft would have been \$1,509 million for an average cost of \$28.5 million. It is very unlikely that this cost would be valid if we decide now (after exercising the Run B option in January) not to buy Run B. The cost of the Run A aircraft would probably be decided in court, if the aircraft were produced at all. The average price would probably be substantially higher than \$28.5 million. As noted earlier, however, there is no assurance that Lockheed would be able to complete Run A if Run B is eliminated.

If we procure Run A plus only 23 aircraft of Run B (76 production aircraft), considering the effect of the price adjustment clause, the average procurement (flyaway plus AGE, training, and data) cost for the 76 aircraft would be about \$29.9 million.

Question No. 35: On page 24 of the C-5A study the following appears:

"It should be noted that the costs to the Government reflected above are based on the detail cost review completed in October 1968. There is a distinct possibility that costs may

continue to increase. A quick look cost review is now in the process of being completed by the Aeronautical Systems Division (ASD). Preliminary information from this cost review indicates that the estimated cost to complete the program (i.e., the contractor's cost) may increase above the October 1968 estimates."

Furnish some estimate as to what the maximum cost to completion will be, based on the information now available.

Answer: A revised cost estimate is now being completed by the System Program Office. Preliminary information indicates a potential increase in the two to four percent range for the six squadron program. Part of this increase is associated with the schedule slip. The October 1968 estimate was based on a Run B production rate of four aircraft per month. The Air Force changed to three per month in order to extend the decision time for the fifth and sixth squadrons pending more definitive cost data. That action extended the production period several months and results in some increased cost in Runs A and B. These factors combined with increased inflationary trends contribute to the potential cost increase.

Question No. 16: How will the spares be provided and how will it affect the contract?

Answer: We are now negotiating with the contractor to determine specifically how the spares are to be provided and how their procurement will effect the contract. Our intent is to get good spares at reasonable prices. We intend in our negotiation to establish a reasonable break-out of the spares and insure that we procure from Lockheed only those spares and equipment that cannot effectively be procured directly from the supplier. We do not intend for the procurement of the spares from Lockheed to off-set the losses expected to be incurred as a result of their RDT&E and Run A efforts.

Question No. 17: Is the aircraft meeting all performance specifications, specifically, the sink rate, the lower flap speeds, and wing failure?

Answer: The aircraft is predicted to meet or exceed all of its mission performance guarantees. Its weight empty is projected to be exceeded by less than 1%. However, the aircraft is more streamlined (less drag) than required and this more than offsets the slight additional weight and permits it to meet or exceed the performance guarantees. Some minor changes were made to some specifications. This was done to produce a better airplane through a more balanced design and to reduce cost to the Government. No degradation of safety or mission performance resulted. Equitable consideration was received by the Government. The sink rate, flap speeds, etc., all meet established military standards. Critics who do not understand the technical details may allege the Air Force reduced criteria to "help" the contractor. This is not the case. For instance the sink rate was changed from 10 feet per second maximum to nine feet per second. The FAA standard is 10 FPS; but the FAA allows a lower weight for 10 FPS. The Air Force nine FPS at a higher weight is equivalent to the FAA standard of 10 FPS at its lower weight.

The flap speed criteria change affected only the use of full flaps. The criteria for use of partial and take-off flaps were not changed. Since the flaps on the C-5 are not considered a braking device, the reduced speed for use of full flaps will impose no diverse limitation on operation or performance.

The static test failure in the wing of the test article was not related in any way to any specification changes made. This failure was not unusual for the static test program the purpose of which is to demonstrate the aircraft capability to withstand flightloads up to 150% of its design limit load.

Question No. 18: How many significant

changes have been made and have any of them resulted in a degradation of the performance specifications?

Answer: Only minor changes have been made in the specifications as outlined in the answer to Question 17. None have resulted in any degradation of the mission performance of the airplane.

Question No. 19: How real is the threat of termination if no funds are available by the end of August?

Answer: The contract, as amended, permits Lockheed to request termination if Run B funding is not provided before 1 September. The contract also permits equitable cost and schedule adjustments associated with the funding delays. The purpose of these provisions is to maintain program continuity and to protect vendor commitments. The risk of termination, depends largely on the contractor's confidence that FY 70 funds will be ultimately provided. Both contractors have a number of subcontractor funding commitments which must be met. The Air Force would attempt to assist in this interim funding problem. It is likely, however, that there would be a cost increase to the program. If funds were delayed for several months after the 1 September date, it is probable that a number of the vendors and subcontractors commitments would lapse. There would be a substantial cost increase and a schedule slip. The General Electric contract does not permit them to request termination if funding is delayed but price and schedule adjustment could result, depending on the extent of the delay.

Question No. 20: Define in simple terms:

- The meaning of the repricing formula
- The reverse incentive as it applies to the repricing

Answer:

(a) The intention of the repricing formula was to preclude catastrophic losses to the contractor. A formula was developed in recognition of the early commitment to operational aircraft prior to development. The clause provided that if the actual costs associated with the production of Run A aircraft exceeded the contract target costs for that effort by a specified amount or greater, the contractor is entitled to an adjustment in the overall target and ceiling price. The amount of this adjustment and the changes to the contract prices are determined pursuant to the application of the formula. Until the target for Run A aircraft are exceeded by 130%, the repricing formula is not invoked.

(b) A point can be reached where, for each additional dollar of cost occurring in the production of Run A aircraft, the result is an increase in total contract target and ceiling of more than a dollar. This potential could encourage a contractor to add costs to Run A so as to reduce his overall loss on both the Run A and the Run B production.

Question No. 21: What would be the impact of delaying appropriation of FY 70 funds for procurement of the Run B aircraft until after completion of a 90 day review of the program?

Answer: The Air Force has requested \$533 million for the 23 FY 70 aircraft of Run B. In the event the appropriation of FY 70 funds is delayed 90 days, the actual delay in applying these funds to the C-5 contract would probably amount to four or more months. The Lockheed contract as amended requires FY 70 funds for the 23 aircraft to be on contract by 1 September 1969. The contract stipulates that if such funds are allotted after 1 September, an equitable adjustment in the price, delivery schedule, or both may be made provided the contractor has incurred additional costs or delay due to the funding delay. Further, the contractor can request termination for convenience of the Government in the event funds are not allotted by 1 September.

There would be a substantial impact associated with this funding delay. Existing contract options between Lockheed and General Electric and their subcontractors and suppliers would be voided. As a result, production costs would increase by about \$140 to \$170 million depending on whether the Run A delays were stretched to preclude a production line gap or not.

Mr. STENNIS. Mr. President, for the time being, that will conclude my remarks. I believe they are the main high points.

Mr. BYRD of Virginia. Mr. President, will the Senator yield?

Mr. STENNIS. Mr. President, I yield to the Senator from Virginia, a valuable member of our committee.

Mr. BYRD of Virginia. Mr. President, I would like to say a few words with regard to the Senator from Mississippi.

This is the sixth week that the Senate has been debating the pending legislation.

During all this time the Senator from Mississippi has been on the floor and he has carried the burden of answering the many questions—proper questions—which have been put to him as committee chairman.

I doubt if there have been any committee chairmen in recent years who have been under such intense pressure in regard to work here on the floor for such a long period of time as has the distinguished Senator from Mississippi in handling on the floor of the Senate this very important and very difficult bill.

When the legislation was first submitted, the budget request sought by the Johnson administration totaled \$23 billion. Then the new administration came into office, and the budget request was revised somewhat to \$22 billion. Then the Committee on Armed Services, of which the Senator from Mississippi (Mr. STENNIS) is chairman, went over this proposal in great detail.

The bill which finally came before the Senate represents, in round figures, a total of \$20 billion for procurement of military weapons for the fiscal year 1970. So the committee brought about that reduction and now recommends to the Senate that the budget request of the Nixon administration be reduced by \$2 billion.

I favor such a reduction.

That is, in round figures, a 10-percent reduction.

The committee is aware of the need to carefully scrutinize all items in the budget, whether it be a budget for the Defense Department, or a budget for the Department of Health, Education, and Welfare, or any of the other departments of the Government.

The committee went into these matters very carefully and, as I mentioned before, has recommended to the Senate that the authorizations for military procurement be reduced from the amount originally requested by \$2 billion.

That is a substantial reduction, but I think it is one that can be sustained.

I think that we can accomplish, with the reduced amount of money, all that is necessary to be done to protect the security of the United States.

I say again, Mr. President, that I have

great admiration for the way the distinguished chairman of the committee, the Senator from Mississippi (Mr. STENNIS) has handled this legislation on the floor of the Senate during 6 difficult weeks. The hours have been long each day, and there has been a keen debate. I say to those whose viewpoints have differed from those of the Senator from Mississippi and the Senator from Virginia that I think it is important and desirable that Senators do just what they have done for the past 6 weeks: go into these budgeted figures item by item, and require justification.

I believe that the Senator from Mississippi has fully justified what the committee has recommended, and I state again that I am pleased to be associated with the distinguished Senator. I commend him on his handling of a very difficult problem over a long period of time.

Mr. STENNIS. Mr. President, I thank the Senator from Virginia for his gracious remarks. What little I have done required much help, and help was forthcoming from many different sources, including the Senator from Virginia. He played an important part in the making of this bill, in tearing it apart, as it were, and then putting it back together. We all owe him a debt of gratitude for his fine work; I do, particularly as chairman of the committee. I appreciate his statement, and I give him fair warning that I am looking forward to getting a lot more work out of him.

Mr. President, I yield the floor.

Mr. PROXMIRE. Mr. President, before I yield to the Senator from Indiana, which I shall do in a moment, I wish to say that I concur in everything the distinguished Senator from Virginia has just stated about the distinguished Senator from Mississippi. This has been a very difficult and trying 6 weeks for him. He has done a magnificent job. I, as one who has disagreed occasionally with the Senator from Mississippi, can say that he has been most helpful and accommodating, though he has certainly been under unusual pressure. Rarely in the 12 years I have been in the Senate has any chairman had to meet challenges as often as has the Senator from Mississippi on this measure; and he has done the great job of meeting them.

I agree wholeheartedly that this debate is certainly in the national interest, as well as in the interest of a more intelligent and healthy fiscal policy.

Mr. STENNIS. Mr. President, I thank the Senator from Wisconsin. There has been a little effort, from some sources, to try to drive a wedge between Senators who might have differing viewpoints. I am proud of the Senator from Wisconsin for not letting them do it. I, too, did my part in not letting them do it. After all, we are all here working for the same cause. I do not deserve any credit for the days I have spent on this floor; for it is a privilege to be a Member of this body. It has been a little bit rugged at times, but it is a privilege, and I think trying to do our duty is reward enough for all of us.

Mr. PROXMIRE. Mr. President, I think every Senator is proud of the way

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that the Senator from Mississippi has done his duty and handled his work on this measure.

I yield now to the Senator from Indiana.

Mr. HARTKE. Mr. President, before I begin my prepared remarks, I, too, would like to express my appreciation for the outstanding work done by the Senator from Mississippi. He is well versed and well informed, and takes the debate in his stride, in a manner he might not do if he did not have the feeling that the debate on the Senate floor is entirely sincere on both sides, and with good purpose, and that differences of opinion do not necessarily mean that those who hold them are disagreeable otherwise. The Senator from Mississippi has stood up extremely well under the strain, and I compliment him, before he leaves the floor for a well deserved recess, for the fine work he has done.

Mr. STENNIS. I thank the Senator from Indiana. He has always been an important contributor to the debate on these matters.

F-14: A \$25 BILLION MONUMENT TO THE PAST?

Mr. HARTKE. Mr. President, the pending military procurement bill contains a \$239 million authorization for the purchase of a new Navy fighter plane, the F-14A. This item is significant because it marks the first procurement request for a new fighter system which may run to a cost of nearly \$25 billion over the next decade. In this year of the taxpayers' revolt, I believe that no new system of such major proportions should escape close congressional scrutiny.

My own interest in the F-14A has been heightened by some disturbing news—I have been informed that according to a recent cost comparison study conducted by the Pentagon, the relative cost of carrier-based fighter strength far exceeds the cost of comparable land-based strength. The F-14A, a carrier-based fighter, will require reevaluation if these high costs can indeed be avoided by basing our air strength on land. At any rate, our consideration of the F-14A should be undertaken with full knowledge of these cost relationships, and so I am requesting today that the Defense Department release to the Congress this most recent study of the problem, which clarifies the economy of land-based air strength and which adds measurably to the doubts which already surround the proposed F-14A. I have sent a letter to the Secretary of Defense requesting the immediate release of this revealing cost comparison study.

It will be difficult, of course, for the U.S. Senate to conduct its own study of the F-14A. This new fighter aircraft is an enormously complicated weapon, just as complicated as the ABM or the MBT-70. The features of the F-14A must be described in a technical jargon which requires our closest attention; the need for the F-14A must be measured in uncertain probabilities about the future; and the high cost of the F-14A must be judged against the far higher cost of inadequate military preparedness.

But we must not let these difficulties prevent us from taking a hard, critical

look at the F-14A. Whenever the expenditure of so much money is at issue, the Congress has a responsibility to do no less. Accordingly, I shall outline some of my own doubts about the F-14A, and suggest some alternatives to the blank-check approval of that weapons system which is found in the bill as it reads today.

In the words of Secretary of the Navy John Chafee, the current F-14 program is an outgrowth of the cancellation of the F-111B, the Navy version of the ill-fated TFX tactical fighter-bomber. In fiscal year 1969 Congress appropriated \$130 million to finance engineering development of this new plane; and now, for fiscal year 1970, the Senate Armed Services Committee has recommended approval of the \$224.6 million F-14A procurement request, with an additional advance procurement of \$14.4 million.

These funds represent new obligational authority for development only—technically, real production of the aircraft will not begin until fiscal year 1971, according to Assistant Secretary of the Navy Robert A. Frosch. This year's money will be spent building airplanes, but test and evaluation models only, not full-scale production models.

The F-14, when fully developed, will be a multipurpose carrier-based fighter. The A model, designed to become operational in 1973, will be a swing-wing, tandem seating, supersonic aircraft—with a new airframe design incorporating the engine and the avionics of the now abandoned and ill-fated F-111B. It was envisioned as a replacement of the Navy's F-4 Phantom, to perform a fleet air-defense mission, carrying the yet-to-be-developed Phoenix air-to-air missile. The F-14B and F-14C models will become operational in the middle and late 1970's as advanced technology engines and advanced avionics become available to replace the older component systems planned for the F-14A.

Doubts about the wisdom of producing the F-14A in quantity stem in part from this mismatch between a new airframe and an old engine. By producing the F-14A, the Navy hopes to replace our F-4's by 1973, 2 years before the F-14B is scheduled to become operational. This may be a worthy goal, but it is not yet clear that a hybrid aircraft such as the F-14A is the proper means to reach that goal. By rushing the F-14 airframe into production before its engine and avionics components are fully developed, the Navy may find itself saddled with an expensive, low-performance substitute for what it really needs, resulting in the worst of both worlds.

Surprisingly, well-known flaws in the F-14A design are not even mentioned in the committee report. That report describes the F-14A as an aircraft of "superior range, endurance, and maneuvering performance over the F-4, allowing greater utilization of its supersonic capabilities in the combat situation." This evaluation is misleading because it does not mention the fact that the air combat performance of the F-14A has been compromised by its multipurpose specifications and its hybrid design. The airframe of the F-14A was not designed to carry

the heavy weight of the F-111B engine, and when fully loaded with the 1,000-pound Phoenix missiles, the aircraft will not be capable of anything approaching "superior performance." I have learned that the acceleration of the F-14A, when it finally becomes operational in 1973, will be less than the best Soviet fighter in operation today, in 1969.

The committee report also fails to mention the serious difficulties which have plagued the Phoenix missile, the complement to the F-14A. I have learned that the Phoenix, which has been under study and development since 1957, was tested live for the first time only last year. These tests, however, did not measure the capability of the weapon against maneuvering targets, multiple targets, or jamming. The Phoenix missile is fantastically complicated—five times as complex as our next most sophisticated radar missile—and we must not take its successful development for granted.

Finally, and perhaps most important, the committee report failed to mention the conceptual flaws of the F-14A system. Technical difficulties aside, it is simply not clear that a carrier-based fighter is needed in the 1970's. This brings me back to my point about the relative costs of land and sea based air strength. But it also raises the question of just what mission the F-14A would perform. The F-14A was originally designed to protect the fleet from a Soviet bomber attack, but as we know, the Soviet bomber threat has never materialized. Chairman MAHON of the House Appropriations Committee made this point clearly enough during hearings in 1968 when he said:

The bomber threat against the fleet, as you know, has been predicted by Navy officials for some time. It has not, of course, developed to date.

I understand that Chairman MAHON has expressed concern again about the substances of this, even as late as today.

Later in 1968, a report on the U.S. tactical air power program by the Senate Armed Services Preparedness Investigating Subcommittee, made a similar assessment of the Soviet bomber threat, and drew the obvious conclusions with regard to the F-14A when they said:

The F-111B was designed primarily for fleet air defense against Soviet supersonic bombers. But that threat is either limited or does not exist; and therefore, we believe the Navy should re-examine the prime requirement for the VFX-1 (F-14A) as to its most important role, in the light of the most predictable threat to the fleet.

If our fleet were to come under Soviet attack in a conventional war situation, of course, Soviet submarines would pose the most predictable and by far the greatest threat to our carrier force. As unlikely as that contingency may be, it is clear that the F-14A will not be of much help in meeting the danger of a submarine attack.

Clearly, the F-14A deserves a more critical appraisal than it has received to date. My own assessment of the F-14A suggests two alternatives to blank check approval. First, we could prohibit the purchase of any production model F-14A's. Second, we should deal with the

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conceptual as well as the technical flaws in the system. We should admit to ourselves that a multipurpose carrier-based fighter is never going to be able to provide superior air combat performance.

It has been 20 years since the United States has developed a single purpose, air-superiority fighter; in those same 20 years the Soviets have developed four such fighters. Our air superiority over the Soviet Union could be threatened if we continue to develop F-X-type multipurpose designs.

The proposed Air Force F-15 shows more promise than the F-14A for this very reason. There has been a firm determination, reinforced by a directive from the Air Force Chief of Staff, not to compromise air-superiority capability of the F-15 through corollary mission requirements. Unlike the F-14A, the F-15 will be a single seat, fixed wing aircraft with a thrust-to-weight ratio of better than 1 to 1. I believe it is a mistake to assume that anything less will provide us with adequate air combat strength, and I believe that we must pass judgment on the F-14A with this comparison in mind.

In conclusion, Mr. President, I hope that my remarks will stimulate a more thorough review of this \$25 billion weapons system. I intend to continue my discussion of the F-14A until all relevant information has been made available to the Congress, and until the troublesome issues which I have raised are fully clarified.

I ask unanimous consent to have printed at this point in the Record a letter written by me to Secretary of Defense Melvin Laird under date of August 13, 1969.

There being no objection, the letter was ordered to be printed in the Record, as follows:

AUGUST 13, 1969.

HONORABLE MELVIN LAIRD,
Secretary, Department of Defense,
Washington, D.C.

DEAR MR. SECRETARY: As the Senate continues to review the pending military procurement bill, it will be helpful to insure Congressional access to all relevant information detailing comparative cost and advantages of various weapons systems under consideration.

Accordingly, I would like to request the release of a cost comparison study, conducted in the Office of Systems Analysis, which measures the relative cost of carrier-based and land-based air strength.

Sincerely,

VANCE HARTKE,
U.S. Senator.

Mr. HARTKE, Mr. President, I thank my friend, the distinguished Senator from Wisconsin, for yielding.

C-5A: AN UNNECESSARY PLANE—A FISCAL
DISASTER

Mr. PROXMIRE, Mr. President, I thank the Senator from Indiana, and I thank him especially for the substance of his remarks.

I think it is most desirable that this very expensive, new plane which is of highly questionable value be critically examined, as the Senator intends to examine it.

I think this has a great deal of merit. It is an example of how we can save a great deal of money. Certainly, by means of fiscal pressure, the Senator from In-

diana and I will try to hold down the budget and decrease the immense amounts being spent in the military area.

I think the Senator has found one area in which we can make substantial savings without any real loss.

Mr. HARTKE, Mr. President, I thank my friend, the Senator from Wisconsin. He is well known for his diligence in pursuing such matters. He is trying to cut down on the Government expenses where it can be done without threatening our national security.

C-5A: AN UNNECESSARY PLANE, A FISCAL
DISASTER

Mr. PROXMIRE, Mr. President, I thank the Senator.

Mr. President, the purchase of the C-5A by the Air Force from the Lockheed Corp. already represents one of the greatest fiscal disasters in the history of Federal procurement. The purpose of my amendment is to make the best of a bad situation, to suspend pouring good money after bad, to permit an investigation based on current data and the latest analyses.

WEAK CONTRACT

The C-5A contract is one in which there is now every evidence of a "buy in" bid. That is a deliberate low bid, impossible of fulfillment, in order to get the award of a major contract.

It is a contract in which the target cost has been greatly exceeded.

It is a contract in which the "ceiling cost" has also been broken.

It is a contract in which there is a \$2 billion overrun.

The planes are being built in a Government-owned plant, with large amounts of Government-owned machinery, and where huge "progress payments" are made which in effect supply the working capital.

The Federal Government investment in this matter is very great. The Lockheed investment is minimum.

REVERSE INCENTIVE

But, in addition, it is a contract which has a repricing formula in which there is a blatant reverse incentive. If the costs of the first 58 planes exceed the original estimates, the contractor is rewarded. Each additional plane will cost more, not less. The contract gives incentives for excessive costs and inefficiencies. Just think of that: the contract gives incentives for excessive cost and inefficiency.

It is a contract in which the "reverse incentive" becomes effective if any part of the second run of planes beyond the original 58 is authorized. This is the "golden handshake" in which millions are at stake in my amendment.

It is a contract under which there is already a 6-month delay in delivery.

MODIFIED SPECIFICATIONS

It is a contract in which the original specifications have already been modified and reduced. FAA requirements are not to be met. The landing sink rate has been modified. The wing stress failed to meet specifications.

It is a contract in which the contractor has thus far failed in meeting key requirements in some aspects of quality, timely delivery, and costs; and, under its outrageous terms, the contractor will

be rewarded for inefficiency if my amendment is not adopted.

HEARINGS BY COMMITTEES

The Subcommittee on Economy in Government first looked into the C-5A last November. Since that time at least three other congressional committees have held hearings and heard testimony about this contract. In addition, a recent study has been conducted by the Air Force. The Air Force study, entitled "Review of the C-5A Program," was released on July 28, 1969. The striking fact, however, is that none of the investigations of the costs of the C-5A since last year have been able to proceed on the basis of any significant and substantial information gathered since the hearings before the Subcommittee on Economy in Government in November, 1968. The fact is that even the recent Air Force review, published only a few weeks ago, failed to gather any new cost data. I quote from the Air Force study:

It should be noted that the costs to the Government reflected above are based on the detailed review completed in October 1968.

The information gathered by the Subcommittee on Economy in Government was also based on the cost review completed in October, 1968. That information led the subcommittee to conclude that there would be a cost overrun in the C-5A program of approximately \$2 billion.

Mr. President, I point out that only five of these planes have been produced out of 120, and they already have an overrun of \$2 billion in a contract that originally was to call for \$3.4 billion. It is costing \$2 billion more than that. Specifically, according to testimony received by the subcommittee, the original estimate of the cost of 120 C-5A airplanes was \$3.4 billion. Because of cost overruns mainly being experienced in the performance of the Lockheed contract, actual costs would total \$5.3 billion. These estimates included the cost of spare parts. I will come back to the subject of spare parts later, because I am sure there will be a dispute on the floor with respect to this matter when we return in September; and there was a dispute when I was briefed by the Assistant Secretary of the Air Force, Mr. Whitaker, as to the actual size of the overrun. The difference is that, somehow, the Air Force does not want to include all the spare parts, including replenishment parts. When they are questioned on it, they admit that the spare parts are essential parts of the plane. They have to be purchased. They should be included both in the first estimate and in the last estimate, and that is what I have done.

EMBARRASSING FACTS

At first the Air Force refused to comment on the C-5A cost overruns. I can well understand this refusal. In light of earlier Air Force assertions and representations to Congress about the C-5A, it must have been extremely embarrassing for the Air Force when these facts came to light. Only a few months prior to our hearings, the Air Force had testified before another committee of Congress that the current costs of the

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C-5A were within the original cost estimates—in other words, no cost overrun. For example, on March 6, 1968, Alexander H. Flax, Assistant Secretary of the Air Force for Research and Development, testified before the House Subcommittee on the Department of Defense, of the Committee on Appropriations. Secretary Flax was asked whether C-5A program was within the original cost estimates. He replied:

We believe it is within the range between the target and ceiling costs at the moment.

Secretary Flax went on to say:

According to the best estimates of people in the program office the contractor is in the range where he should be between the target and the ceiling costs.

Secretary Flax added that the average weapons systems cost of the first 53 production aircraft would be \$22 million each, and that the average weapons systems cost for the first 115 aircraft would be \$18.6 million per copy. To be generous with Secretary Flax, his testimony was wildly overoptimistic.

SECOND TESTIMONY

On May 8, 1968, the Air Force again testified to Congress, this time before the Senate Subcommittee on Appropriations for the Department of Defense. General Robert G. Ruegg, Deputy Chief of Staff, Systems and Logistics, was asked to describe the C-5A program. He responded:

The design, development and manufacture of the C-5A aircraft is progressing very satisfactorily and is generally on schedule.

General Ruegg then stated that the current average weapons systems unit cost for the approved program of 120 C-5A aircraft was \$19.6 million per plane.

It should be noted that there is a slight discrepancy between the testimony of Secretary Flax before the House Subcommittee on the Department of Defense and the testimony of General Ruegg before the Senate Subcommittee on Appropriations for the Department of Defense. The discrepancy amounts to a mere \$1 million per plane. Secretary Flax testified that the cost would be \$18.6 million for 115 aircraft, while General Ruegg testified that the aircraft would cost \$19.6 million for 120 aircraft.

It seems strange that the unit cost of 120 aircraft would be more than the unit cost of 115 aircraft. But this discrepancy and this confusion in the wake of the real facts as we now know them is neither here nor there, unless one were to expect consistency and accuracy on the part of the Air Force with regard to the costs of its weapons systems. Again to be generous to General Ruegg, his testimony on the costs of the C-5A was also wildly overoptimistic.

COST AND DELIVERY SLIPPAGE

The point is that the Air Force has been asserting as recently as 6 months before the hearings before the Subcommittee on Economy in Government—my subcommittee—that there was no C-5A overrun, and the Air Force assured Congress that the program was proceeding satisfactorily. These assurances, by the way, related to the delivery schedule and

to the performance of the C-5A as well as to the costs. Both of the Air Force spokesmen to whom I have referred also testified that the plane would be delivered on time, and that the first delivery was scheduled for June 1969. They also testified of their high expectations of the performance of the plane. Now we know that these claims were also overoptimistic. The fact is that a substantial delivery slippage has occurred. The Air Force was to have its first C-5A's last June. They were not delivered. In other words, the contractors have already failed to meet their delivery schedule. The first deliveries are now scheduled for next December a slippage and delay of 6 months.

Whether the plane when it is finally delivered will perform according to the contract specifications is also a question, in my opinion. For we have learned that the C-5A has developed a wing crack during static testing in the last few weeks. Just how serious this wing crack is and how it relates to the overall strength or weakness of the C-5A aircraft has not been publicly disclosed so far.

In any event, one can well understand the embarrassment of the Air Force to see the public disclosure of the \$2 billion overruns in November 1968.

HUGE FUNDS AT STAKE

Mr. President, \$2 billion is a phenomenal amount of money. These are not the funds for the yearly procurement of an entire military service. Two billion dollars is the amount of money by which costs will exceed the estimates on one weapon system alone. That is the hard, shocking, scandalous fact.

Look at the alternatives to spending the money on the overrun.

Two billion dollars would pay for the housing subsidy under the new homeowners section of the 1968 Housing Act, for some 3½ million housing units for poor families for an entire year. Yet we are having trouble getting the full \$100 million for that program. The \$100 million needed for the program for the entire country is only one-twentieth the \$2 billion overrun on this one plane.

COMBAT TROOPS

Mr. President, the \$2 billion, at \$10,000 per man per year, would finance the pay and allowances and associated personnel costs for 200,000 combat troops or more than 10 combat divisions for a full year. That is why many of us say this country would be stronger if we spent defense funds more efficiently.

The \$2 billion overrun on one plane and one contract would finance all the economic assistance or AID funds in the fiscal 1970 budget of \$1.973 billion.

The \$2 billion is five times the amount in the budget for rural electrification.

It is more than five times the amount the Interior Department will spend on all forms of recreation.

The \$2 billion excess to be spent on the C-5A is almost 20 times the \$212 million in the Department of Transportation budget for urban mass transportation to which the President addressed himself with such vigor in the past few days—and high-speed ground transpor-

tation programs which are desperately needed.

DOUBLE HOUSING FUNDS

It is almost double all the funds we intend to spend in 1970 for low- and moderate-income housing by HUD.

The overrun on the C-5A is more than twice as much as we intend to spend in this entire fiscal year for low- and moderate-income housing for the entire country. If there is one economic shame in this country, where we have really fallen down, it is in low- and moderate-income housing.

It is only slightly less than all the \$2.3 billion in the fiscal 1970 budget for Federal outlays to elementary and secondary education.

The C-5A overrun would virtually pay for all non-service-connected pensions for the U.S. veterans for fiscal year 1970. It is more by \$300 million than all the money we spend on veterans' hospitals and medical care.

The \$2 billion overrun on the C-5A is almost three times the \$742 million in the Federal budget in fiscal year 1970 for law enforcement, justice, and civil rights. What kind of priority system is that when our cities are burning, when our courts are jammed, when the crime rate has risen, and when millions of Americans still suffer the stigma and indignities of second-class citizenship?

These are among the reasons this contract is outrageous. What kind of priorities do we have when we spend \$2 billion more on one single plane than for any one of the programs I have mentioned above?

The alarming thing about it is the Air Force performance. They have backed and filled. They have tried to hide the facts. They have attempted to cover up the excesses.

CHANGE PRIORITIES

For the sake of the security of the country on the one hand, and the welfare of the American people on the other, the time has come to call a halt to such outrageous excesses.

AIR FORCE PRESS RELEASE

As I stated, at first the Air Force would not officially comment on the disclosure of the overrun. Finally on November 19, 1968, a week after the disclosure was made before the Subcommittee on Economy in Government, the Air Force did make a statement in the form of a press release. The press release stated as follows:

C-5

The prime contract for the C-5, with Lockheed Aircraft Corporation for the airframe and General Electric Company for the engines, were the first on a "Total Package" basis, which was an innovation in Government procurement. Under these contracts, designed to check the large cost increases of the past, the competing contractors made commitments with respect to production C-5 airplanes prior to their development.

In view of the great risks inherent in such commitments, which embraced a period of seven years, the contracts contained safeguards both for the Government and the contractors. The Government is protected by contractual provisions which create increased motivation for the contractors to produce technically superior equipment on time at the lowest cost possible. For example, the

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contractors pay 20-30¢ of every dollar above the target price of 2B\$. The Government is not obligated to pay anything above the ceiling price of 2.4B\$ for the first 58 airplanes including their engines and the research and development. Similarly, should the Government proceed with a follow-on buy, the contract contains a formula which would reduce but not eliminate large losses that the contractors might incur on the first 58 airplanes, by increasing the target cost of the follow-on airplanes. All of these terms were contained in the original competitively awarded contracts.

The Government is now considering the question of ordering C-5 airplanes beyond the original 58, but no decision has been made. The incentive for the contractors to reduce costs remains in effect; and any such order will provide continued positive motivation to maintain cost control.

At the beginning of this program over three years ago, the Air Force estimated that the cost of development and production of the first 58 airplanes would be \$2.3 billion. The corresponding estimate for the 120 airplanes ultimately contemplated was \$3.1 billion. Current estimates, including economic escalation and all other factors, are \$3.25 billion and \$4.3 billion, indicating increases of 41% and 89% respectively.

These additional costs result from: (1) increased costs for labor and materials resulting from the combination of a significant war effort and an unprecedented demand for civilian aircraft, both of which occurred after the original estimates, (2) the introduction of new technology, and (3) modifications to overcome technical difficulties inherent in the development of all new aircraft.

Based on flight experience to date, the C-5 will exceed its technical performance guarantees.

What all that verbiage means is that the Air Force was admitting that the 120 C-5A's would cost approximately \$1.2 billion more than the original 1965 estimates. This concession, although it did not represent the whole truth, indicated part of the magnitude of the problem.

CONGRESSIONAL RESPONSIBILITY

The problem revealed by the C-5A case goes far beyond the cost of a single weapons system, even though the cost problem alone is very great. The problem is whether the Congress is willing and ready to exercise its full responsibility to the American people with regard to the military budget. In my view, military spending for many years has been out of control so far as the Congress is concerned. The Congress, in short, has failed to properly exercise its constitutional responsibility to provide for the common defense. This responsibility should not signify the complete abdication of authority by the Congress over the military budget in general and military weapons systems in particular.

The C-5A program symbolizes the failure and the breakdown of the present system.

WHY A C-5A?

In the first place, Congress unthinkingly permitted the military to sell the C-5A concept to it. Is there a real military requirement for the C-5A? What is the nature of this military requirement? Why do we need 120 C-5A's, even assuming that there is a real requirement?

I may emphasize that my amendment would permit 58 C-5A's, already authorized. It would simply mean that the additional 23 C-5A's—or going to 81 C-5A's—would be held up until we could

get an investigation to determine whether that was desirable.

Why would not the 58 C-5A's presently authorized, funded, and under construction not meet whatever military requirements exist?

My information indicates that the Air Force and the military already have more than adequate aircraft capability with the cargo planes in its inventory. In addition, the Air Force has access to the cargo capability of private carriers. The Air Force has traditionally utilized private carriers for its airlift needs. This seems to me to be an eminently sound policy. But with the addition of the C-5A and the excess cargo airlift capability which it would bring to the Air Force, I predict that there will be a change in this policy. Already there are signs that the military is cutting down on its use of private carriers. I think this is unfortunate, that it represents a mistake in judgment, and that it will impair our private carrier fleet.

THE 58 PLANES WOULD BE PRODUCED

Now let me explain that my amendment would not end the C-5A program altogether. Fifty-eight planes has been authorized and are under construction, as I have stated. My amendment does not apply to the 58 aircraft under construction. These aircraft are known as first production run, or run A. A second production run is also contemplated by the Air Force. In fact, the Air Force may be contemplating several subsequent production runs.

The second production run is known as run B. The total number of aircraft in run B is 62 units. The authorization bill before us today contains funds for 23 aircraft from the second production run, or run B.

My amendment applies only to the 23 aircraft in run B. The funds that my amendment would strike from the bill are the funds earmarked for the 23 aircraft. The amendment provides that no more than 58 C-5A's, meaning run A, shall be purchased until after the Comptroller General of the United States has completed and submitted to the Congress a comprehensive study and investigation of the projected costs of the C-5A's.

Among the facts the Comptroller General should gather are those which would allow us to judge, whether the purchase of the 23 aircraft from run B would add significantly to the deployment capability of the military forces of the United States. This in effect is the military requirement.

The essence of the military requirement justification for the C-5A concerns the rapid deployment strategy envisioned by the former Secretary of Defense, Robert McNamara. This strategy contemplated the availability of military forces for very rapid deployment. It would therefore depend upon a strategic deployment force which could deliver the necessary military forces with unprecedented speed.

TWO AND ONE-HALF WAR STRATEGY

All of us have now heard of the 2½ war contingency. This means that our entire defense strategy is based on the assumption that we might have to fight simultaneously two major conventional

wars and one minor "brushfire" war. That is we assume, not that we might have to fight these two wars in succession or in a relatively short space of time; rather, we assume that we might have to wage the wars all at once, simultaneously. I might add, that how this farfetched and questionable assumption crept into our defense policy and our foreign policy is a mystery to me; and until a relatively short time ago, very few Members of the Congress, on the basis of my information, knew that there was such an assumption.

In any event the military requirement for the C-5A, and specifically for the full 120 aircraft, is based on the 2-plus war contingency plus the McNamara rapid deployment strategy.

IS IT COST EFFECTIVE?

In my judgment, the 23 aircraft from run B cannot be justified even if we accept the assumption that we must be prepared to engage in two major conventional wars and one minor war, simultaneously, which, as I have indicated, strikes me as an unrealistic if not irrational assumption.

I do not say that the United States should not have any rapid deployment capability. No doubt some rapid deployment capability is desirable. That is not the question here. The 58 C-5A's now under production will give us substantial rapid deployment capability. What is at issue is the question of whether the 23 additional C-5A's will add significantly to our deployment capability. In my judgment, it will not. The 23 additional aircraft will add only the capability to move the equipment for half an Army division to Europe in 3 weeks and for less than one-quarter of a division to Asia in the same period.

This is a very small capability considering the very large price we are being asked to pay. I would also add that the McNamara rapid deployment concept is questionable because the C-5A is justified only during the very early movement requirements following the outbreak of hostilities. Only for the 1- to 3-week period following the beginning of a war can the C-5A be justified. At any later period, that later than 3 weeks, ships become a much more efficient and effective means of moving men and equipment. Ships, of course, can move many more men and much larger tonages than aircraft.

As an example, if we plan to move our military forces to Europe from the United States in a period of 2 weeks, ships become more economically efficient than C-5A's. If we plan to deploy our forces to Asia during a 3½-week period, ships are more economically efficient than C-5A's.

SHIPS LESS EXPENSIVE

The question should be asked, what is our realistic readiness capability? The fact is that our military has never demonstrated the capability to assemble and deploy more than one or two light airborne or marine divisions in a matter of a few weeks. Any plan we may have to assemble, transport, and reassemble for combat 12 or more heavy, mechanized or armored divisions in a period of a few weeks is completely unrealistic based on our experience and our peacetime

training. If we take our experience into account and allow for the relative readiness capabilities of peacetime troops, ships are far more inexpensive than the C-5A for equal deployment capability in a 2-month period after D-Day. According to information that I have received, ships are one-half to one-sixth as expensive as the C-5A for such a period.

In other words, if 23 additional aircraft are not purchased there will be only a minor impact at best on our overall rapid deployment capabilities. This is because of the relatively minor incremental advantage to be gained from the purchase of the 23 additional planes, considering their cost. The fact is that we already have more than an adequate aircraft capability from our available C-141's, C-130's, and our civilian reserve aircraft. Indeed this aircraft capability is already adequate even assuming the 2½ war contingency. According to my information currently procured aircraft forces are adequate even for emergency wartime supply.

SYSTEMS ANALYSIS STUDY SAYS PLANE NOT JUSTIFIED

I recently asked Philip N. Whittaker, the Assistant Secretary of the Air Force, Installations and Logistics, to brief me on the military requirement for the 23 additional aircraft or for the 120 aircraft. Mr. Whittaker replied that the military requirement is based on classified information. I can well understand the Air Force's reluctance to discuss the military requirement publicly. I have learned that the most recent study by the Office of Systems Analysis into the C-5A program concludes that the 23 follow-on aircraft cannot be justified on either military or economic grounds.

Mr. President, I suspect that this is probably the most important statement I shall make this afternoon, and I wish to repeat it. I think if all Senators know of this statement, very considerable question will arise in their minds as to whether they should vote for this C-5A; and I think it would be very persuasive to many Senators to vote for my amendment. Let me, therefore, repeat it: The most recent study by the Office of Systems Analysis into the C-5A program concludes that the 23 follow-on aircraft cannot be justified on either military or economic grounds.

That is an analysis by the Office of Systems Analysis, in the Office of the Secretary of Defense. I do not know how we can get a better qualified authority, and it is especially persuasive in view of the fact that the Secretary of Defense and the Defense Department have asked for these aircraft and yet their own analysis shows they cannot be justified on either military or economic grounds.

TWO BILLION DOLLAR OVERRUN

The second major issue in the C-5A procurement is the matter of costs. I have indicated that the conclusion of the Subcommittee on Economy in Government was that the cost of 120 aircraft will be about \$2 billion more than was estimated when this contract was entered into in 1965.

This brings us to a discussion of the C-5A contract. Since the largest portion of the overrun and the problems revealed

so far deal with the Lockheed contract, I will refer to it. The contract entered into by the Air Force with Lockheed was a negotiated, fixed price incentive contract. It was the first contract utilizing the so-called total package procurement concept—TPPC. When the Air Force announced the award of this contract, it did so very proudly. It was proud of the contract as a new concept in procurement, that is, the total package procurement concept which was supposed to achieve two major objectives. Because the C-5A contract gave birth to this new concept, it is important to understand what it was supposed to do.

FAILURE OF TOTAL PACKAGE PROCUREMENT

First, total packaging was supposed to act as a deterrent against cost overruns in less than promised performance. To accomplish this objective, all development, production, and as much support as is feasible of a system throughout its anticipated life, was to be procured in a single contract, as one total package. The contract for the C-5A includes price and performance commitments by the contractor, which is supposed to motivate him to control costs, perform to specifications, and produce on time. In view of the enormous overrun and the 6-month delay in the delivery schedule, at least two of the three criteria for performance of the contract show negative results. It has been our experience that contractors have often bought into an R. & D. contract by offering to perform it at a low price and making other promises, often unkept, in order to place themselves in a position to be the prime contractor or the sole source contractor for the production. The production of a weapons system, of course, is usually the more lucrative end of the job.

INEFFECTIVE METHOD

Second, total packaging was supposed to motivate contractors to design for economical production and support of operational hardware.

In May of 1966, several months after the award of the C-5A contract, the Air Force published a description of the total package procurement concept. This description contains the following passages:

Most simply stated, the TPPC as conceived by the Air Force, envisions that all anticipated development, production, and as much support as is feasible of a system throughout its anticipated life is to be procured as one total package and incorporated into one contract containing price and performance commitments at the outset of the acquisition fees of a system procurement.

In other words, the C-5A contract with Lockheed included R. & D. production, and support; that is, spare parts. The contract also contained price and performance commitments.

PAST FAILURES

In explaining why the Air Force felt the need for this new contractual device, it stated:

Thus, the history of defense procurement is replete with cost overruns and less than promised performance which were, at least in part, the results of intentional "buy in" bidding where cost estimates are understated and performance and scheduled estimates overstated on the initial contract and this

has been the case even where there has been no substantial increase in the then state of the art.

The principal benefits enumerated by the Air Force in this publication are that the contract:

First, requires a tightening of design and configuration and discipline.

Second inhibits the unrealistic salesmanship or buy in bidding, includes overestimates of performance as well as underestimates of cost.

Third, motivates the contractor to design initially for economical production, and should produce not only lower costs on the first production units, but also a lower takeoff point on the production learning curve, thus, benefiting every unit in the production run.

Fourth, permits the Department of Defense to negotiate with a contractor on the basis of binding commitments concerning the performance and the price of what is really required—operational equipment.

OBJECTIVES UNOBTAINED

These were the expressed objectives of the total packaging concept as embodied in the C-5A contract. They are desirable objectives. Unfortunately, none of them were obtained in the C-5A contract. There is considerable evidence, in my judgment, that Lockheed engaged in unrealistic salesmanship and that its intent was to buy into the C-5A. It did this by underbidding the Boeing Corp. which was also a candidate for the C-5A by \$300 million. Lockheed also underbid its nearest competitor in price, the Douglas Corp. by \$100 million. The enormous cost overruns cast Lockheed's low bid in a new perspective. In light of what we now know, Lockheed's low bid is ludicrous, and it can be reasonably concluded that Lockheed knew or had reason to know that its bid was unrealistic. The proposal submitted by the Boeing Corp. by the way, was considered superior on technical design grounds than the Lockheed proposal by the Air Force Source Selection Board.

The Air Force assertion that this contract was based on binding commitments concerning the performance and price is especially foolish or deceptive in view of what we now know. This brings us to a discussion of the now famous repricing formula and it also brings us to the subject of spare parts which I said earlier I would more fully discuss.

REPRICING FORMULA

The repricing formula contained in the contract was first publicly disclosed in hearings last November. The repricing formula is the most blatant reverse incentive in Government contracting that I have ever encountered. It provides, in effect, that the second production run, run B, is to be repriced, on the basis of the actual cost of the first production run, run A, and in accordance with a specific formula. The effect of using the repricing formula is to renegotiate with the contractor over the price of the follow-on production, run B. It means that in the event the actual costs of the first 58 planes exceed the original estimates, the contractor receives a higher price for the follow-on production. In

other words, the higher the cost to produce the first 58 planes, the higher the prices goes for the follow-on aircraft. As can be seen, there is a very limited incentive to control the costs. Instead of being penalized for exceeding these cost estimates, the contractor in this case is awarded a higher price for the follow-on production.

NO BINDING COMMITMENT ON COST

How firm, therefore, are the firm price commitments which the Air Force has claimed for the C-5A contract? I asked this question of the then Assistant Secretary of the Air Force, Robert H. Charles—the father of the package procurement, and some Senators say he wrote the book on it—when he testified before the Subcommittee on Economy in Government on January 16, 1969. The colloquy with Mr. Charles on this point follows:

Mr. PROXMIRE. Do we really have binding commitments on the C-5A price if the contract is repriced for future production runs in order to take care of cost overruns in the initial production? Do we not lose one of the main advantages of the total packaging?

Mr. CHARLES. No, I think not.

Chairman PROXMIRE. I do not see how we can have binding commitments, on the one hand, on price and a repricing projection at the same time.

Mr. CHARLES. I do. It is a binding clause in the contract. Any contract adjustment is made pursuant to a formula to which the competitor bids. I see nothing non-binding about it.

In other words, to the Air Force a contract clause provides for a firm price commitment even though another clause in the contract provides for a way to increase the price. It seems to me that under that kind of arrangement, the only party committed is the American taxpayer and he is committed to pay any price, no matter how high and excessive it might be, once the Air Force decides it wants a new weapons system.

AIR FORCE NOW ADMITS MISTAKE

But even the Air Force has recently admitted that the repricing formula was a mistake. The Air Force states in its recent review of the C-5A program:

This provision was well intentioned but poorly comprehended at the time of award. In operation it is beset with ambiguities, complicating its implementation and raising the prospect of a reverse incentive. Under a selected set of conditions, the point can be reached where, for each additional dollar of cost occurring in the production of Run A aircraft, an increase of total contract target and ceiling of more than a dollar could result. This potential could encourage the contractor to add costs to Run A so as to reduce overall loss on both the Run A and Run B production.

GOLDEN HANDSHAKE

Contrary to Air Force claims at the early stages of this program, when it was being sold to the Congress and to the public, the contract has not produced lower costs for the first production units. The costs for the first production units are greatly exceeding the original estimates. Thus, instead of a lower takeoff point on the production of learning curve, benefiting every unit in the production run, we have a higher takeoff point on the production learning curve, thus inflating every unit in the production run. On top of all this, we have the repricing

formula, which has been called the "golden handshake," which further inflates the cost of the run B aircraft. The Subcommittee on Economy in Government concluded in its unanimous report the following:

Not only were the price increases made possible by the repricing formula, but the cost overruns which are resulting in the higher prices may very well have been encouraged by the existence of the formula and by the nature of the formula. For the mere fact that a repricing provision existed in the contract constituted a built-in get-well remedy for almost any kind of cost growth. According to this provision, the price of the second increment (run B) could be increased on the basis of excessive actual costs on the first increment (run A). The motivation, if any, of the incentive feature of the contract is thereby largely nullified, provided the contractor is confident that the Government will exercise the option. Why bother to keep costs down if their increase forms the basis for a higher price? Additionally, because of the nature of the formula, the higher the percentage of overrun over the original contract ceiling price on the first increment, the higher the percentage by which the second increment is repriced.

As I have indicated, the Air Force itself now recognizes that the repricing formula was a serious mistake. The mistake was so serious that the Air Force says it would now like to renegotiate the contract to remove the reverse incentive feature. The Air Force review of the C-5A program calls for such a renegotiation.

The problem, however, cannot be so easily resolved. Revising the contract to eliminate or modify the repricing formula will not make this a good contract nor will it necessarily reduce the cost of the C-5A to the Government. And the cost is what is at issue here.

SHOULD STOP AFTER FIRST RUN

There is no way, in my judgment, to get out from under the huge cost of this program without curtailing it at this point. If the program is ended at the completion of the first 58 aircraft, Lockheed would be forced to absorb the cost of overruns for which they are responsible, over and above the ceiling price in the contract. There is no reason for Lockheed not to absorb the costs over and above the ceiling price.

And these costs, by the way, would include the possibly extensive costs brought about by the recent failure of the C-5A wing to meet structural strength requirements. I might add here that the failure of the C-5A to meet the structural strength requirements in the contract is a serious matter. It is no excuse to say that the plane is satisfactory to 100 percent of its designed load limit, and that it only fails to meet 150 percent of the designed load limit. The fact is that the 150 percent provides for a safety feature which is absolutely essential before any plane can be deemed airworthy. The FAA, according to my understanding, would require this plane to meet 200 percent of its designed load limit. But the Air Force has decided for some reason which it has not made known, not to seek FAA certification, although the contract provides for FAA certification. In addition, the fact that the plane failed to meet the static tests indicates that it would more

than likely fail under dynamic conditions. Static tests only simulate dynamic conditions. The static tests that occur on the ground do not create the same kind of stresses on an airframe that is created during the dynamic conditions that occur in the air.

LETTER TO SECRETARY

On this point I wrote a letter to Robert Seamans, Secretary of the Air Force, on July 18, 1969, inquiring about the reported crack in the C-5A wing. I also addressed certain questions to the Secretary relating to recent changes in the C-5A specifications which seem to represent degradations in its performance standards. So far I have had no response from the Secretary of the Air Force to my letter, although I wrote him on July 18! However, I believe that what I said to him was pertinent to this discussion:

JULY 18, 1969.

The Hon. ROBERT C. SEAMANS, JR.,
Secretary of the Air Force, Department of Defense, The Pentagon, Washington, D.C.

DEAR MR. SECRETARY: I have noted the recent announcement by the Air Force that tests of a C-5A aircraft produced a crack in one of its wings.

This development seems to me to raise additional questions about the C-5A program. You may be aware of recent testimony by Mr. A. E. Fitzgerald before the Subcommittee on Economy in Government with regard to certain changes in the C-5A specifications. One of the changes, according to Mr. Fitzgerald, is a decrease in the maximum speed for lowering flaps on landing from 205 knots to 180 knots. Another change is a decrease in the maximum allowable sink rate at landing. It occurs to me that both of these changes represent degradations in the C-5A specifications.

What are the reasons for lowering the standards of the C-5A specifications?

Have wing cracks, fuselage cracks, or any other substantial defects been produced in the C-5A prior to July 13, 1969, by ground static tests or other tests or usage of this aircraft?

Were the performance standards for the C-5A lowered because defects were produced in previous tests?

Would you be normally advised of any defects produced from the C-5A during tests?

Will the delivery schedule for the C-5A be affected by the current difficulty? If the delivery schedule will be delayed, please estimate the amount of the delay.

Please estimate the cost of fixing the current difficulty (the cracked wing). Who will pay the cost of necessary modifications, the Government or the contractor?

In the event that Congress does not authorize the purchase of the Run B aircraft, who would pay the costs of the modifications made necessary by the cracked wing? In the event that Congress does authorize the purchase of Run B, who would pay the costs of the modifications?

Your early response to these questions will be appreciated.

Sincerely,

WILLIAM PROXMIRE,
Chairman, Subcommittee on Economy in Government.

IS GOVERNMENT LIABLE FOR REPAIRS?

The question that we also need answered is whether the purchase of the 23 additional aircraft would make the Government liable for the cost of repairs and modifications necessary to correct the structural defect. This is one of the questions which my amendment seeks to answer. In the amendment, the Comptrol-

ler General is instructed specifically to seek an answer to this question.

I should add here that according to the lawyers for the contractor, the Government would be liable not only for the costs of repairing the cracked wing and making whatever modifications are necessary, but would also be liable for all contractor losses and termination costs if the full 120 aircraft are not procured. This view is based on the fact that the Secretary of the Air Force early this year exercised the option to purchase the following on aircraft.

The exercise of this option was announced on the morning of the January 16, 1969, hearings before the Subcommittee on Economy in Government, of which I am chairman. This announcement came in spite of my request to the Secretary of Defense that the Government not commit itself to purchase the Run B aircraft until a complete investigation of the cost overruns could be completed. The investigation I asked for was not even started on the morning of January 16, when the announcement of the Government was made.

COST OF SPARES

The amendment I have introduced addresses itself to several other cost issues, including the cost of spares. The Air Force has consistently tried to gloss over and obscure the huge cost increases that have occurred on the spare parts. It has even attempted to create the impression that the original contract did not include the cost of spares. This is not true. The contract entered into in 1965 with Lockheed did not include the cost of spares.

Now the Air Force claims that the original contract included only the cost of initial spares as distinguished from replenishment spares. The difference, as it has been explained to me by the Air Force, is that the initial spares would be comparable to the first set of tires on an automobile needed to replace the original tires, while the replenishment spares would be the second and third set of new tires.

The question, then, is whether the original contract estimates included the cost of the replenishment spares.

REPLENISHMENT SPARES IN CONTRACT

In answering that question, I would first point out that the contract itself contains a provision covering the costs of replenishment spare parts and repair spare parts. Secondly, it has always been assumed by persons familiar with the contract from its origin that replenishment spares were included in the original contract estimates. This assumption is based on the description of the total package contract described by the Air Force in 1966 and on an early briefin document written in 1965. The Air Force's description of total packaging, as I stated earlier, indicated that all anticipated development, production, and as much support as is feasible was to be included in the total package contract. This would include spare parts, whether initial or replenishment.

Further, the briefing document which I referred to states explicitly that replenishment spare parts are to be included as part of the C-5A package. I

will now read from this briefing document. On the title page is the following:

Contract AF 33(657) 15053 FPIF-VP, C-5A, Lockheed Aircraft Corporation Lockheed—Georgia Div.

On page 3 of this document, which was prepared by the Air Force, is the following:

What we bought: Item A—RDT&E, System Integration and Assembly ACFT/Mission Kits, Training/Training Equipment, AGE, System Test, System Management, Data and Reports.

On page 4, this list of what the Air Force bought continues:

What we bought: Item B—Production, ACFT/Mission Kits, Training & Training Equipment, AGE, Contract Technical Services.

Provisions for: Initial Spare and Repair Parts, Replenishment Spare and Repair Parts, Up Dating/Modification Changes.

It will be noted, of course, that the list of what the Air Force bought with the C-5A contract included initial spare and repair parts as well as replenishment spare and repair parts.

In my judgment, the Air Force is intentionally attempting to confuse the Congress and the people on the subject of spare parts.

Mr. President, I go into the detail on replenishment spare parts because again and again we have had different estimates as to the original cost of the C-5A and as to its present cost. Repeatedly, those who have argued that the overrun is not \$2 billion but some lesser figure—it is \$1.4 or \$1.3 billion—have said that in the initial estimates, replenishment spare parts were not included, and that by adding the cost of replenishment spare parts in the present estimates, we are not comparing the same things. I go into this detail today to establish beyond any question the documentation to show that I am comparing the same things, that the replenishment spare parts are included in both, and that on that basis there is a \$1.9 billion to \$2 billion overrun.

Rarely has there been a case with so much concealment and obstruction on the part of a Government agency with respect to its handling of public funds that has been so well demonstrated and documented in public hearings. The callous and devious treatment by the Air Force of one of its employees, Mr. A. E. Fitzgerald, well illustrates this point.

FITZGERALD CASE

Mr. Fitzgerald has been the deputy for Management Systems, Office of the Secretary of the Air Force, for almost 4 years. His responsibilities until recent months included development of the management controls used on the C-5A program. He was also a member of the steering committee reviewing the financing of the C-5A. He was first asked to testify before the Subcommittee on Economy in Government last November because of his recognized expertise in the area of management systems and cost controls.

Mr. Fitzgerald's problems began when he was invited to testify. The Air Force first attempted to deny his appearance before the subcommittee altogether. Only

after repeated urgings by my office did the Air Force finally relent and grudgingly permit him to appear. However, the Air Force notified me that Mr. Fitzgerald was to appear only in the capacity of a "backup" witness. The main witness was to be someone else. But this someone else was an individual with whom the subcommittee was not familiar and whom it had not invited.

In other words, the Department of Defense was attempting to dictate to the Subcommittee of Congress who was to be its principle witness; and the Department of Defense had taken it upon itself to inform us of the appearance of someone who was not invited, while relegating the individual who was invited to "backup" status. Of course, the subcommittee insisted on hearing from Mr. Fitzgerald, and we did.

However, the Air Force denied Mr. Fitzgerald the opportunity to prepare a written statement, although the subcommittee had requested a written statement from him in our letter of invitation. A written statement permits the witness to organize his testimony in an orderly way, and to prepare statistical data, charts, and other materials. It also provides a committee with a chance to become familiar with the testimony in advance of the hearing, to prepare thoughtful questions, and to have a more fruitful dialog with the witness. But the subcommittee was denied this opportunity because of the directive to Mr. Fitzgerald not to prepare a written statement.

The only explanation, in my judgment, is that the Pentagon was attempting to interfere with this witness' testimony by gagging him as much as possible.

This explanation is amply supported by the events that followed Mr. Fitzgerald's oral testimony in November. In his oral testimony, responding to direct questions from me, he conceded the fact that there would be a cost overrun on the C-5A, possibly as high as \$2 billion.

COMPUTER ERROR

Less than 2 weeks after his testimony, he was notified of his loss of Civil Service tenure. Imagine that. Less than 2 weeks after this man testified before a congressional committee and simply answered a question put to him—and as far as we know he answered it honestly—he was notified of the loss of his civil service tenure by the Air Force. The Air Force claims that this action was only coincidental to the fact that he had recently testified before the Subcommittee on Economy in Government about the C-5A.

It was called a "computer error." We checked on the basis of the latest testimony and found that the computer made very few errors. It had made two errors before that were similar to this one, although it made some 50,000 decisions. Whether the Air Force's action in stripping Fitzgerald of his job protection was a coincidence may be judged from the events that followed. For the subcommittee subsequently obtained a copy of a memorandum to the Secretary of the Air Force from the Secretary's administrative assistant. The memorandum was dated January 6, 1969.

GET RID OF FITZGERALD

The intriguing feature of this memorandum is that it concerns ways in which the Air Force could get rid of Mr. Fitzgerald. I think the Members of this body ought to think about this a few minutes. Here was the Secretary of the Air Force, Harold Brown, receiving an interoffice memorandum from his administrative assistant. The subject of the memorandum was ways by which the Air Force could get rid of one of its civilian employees. The civilian employee happened to be Mr. A. E. Fitzgerald. The civilian employee happened to have testified before a committee of Congress on the costs of the C-5A cargo plane. The civilian employee testified that there would be a \$2 billion cost overrun on this program. Previously the Air Force had gone to great lengths to hide the costs of the overruns. Less than 2 weeks after his testimony the civilian employee was stripped of his Civil Service public tenure. A few weeks later a memorandum is prepared by the administrative assistant on how to get rid of the civilian employee. Is this still a coincidence?

The memorandum itself explained for the benefit of Secretary Brown three separate actions "which could result in Mr. Fitzgerald's departure." They were, first, adverse actions for cause. Second, reduction in force. Third, conversion of Mr. Fitzgerald's position from an expected category to career service, and then eliminating him in subsequent competitive procedures. To explain the last possibility, the memorandum contains this example of Air Force ethical constraints:

This action is not recommended since it is rather underhanded and would probably not be approved by the Civil Service Commission, even though it is legally and procedurally possible.

A coincidence?

I have done everything in my power to prevent the Air Force from taking punitive action against Mr. Fitzgerald. In my view, he is a dedicated, loyal Federal employee and citizen, whose conduct is beyond reproach. His only offense is that he is cost conscious. His job is to control costs, to save the taxpayers' money. He works at this job conscientiously and tries to save as much of the taxpayers' money as possible.

He is extremely competent in this area. He is one of those rare persons who is highly gifted and who has had the character and the strength to persist in what is an unpopular job of trying to hold down costs. This is the kind of conduct which engenders real hostility on the part of contractors and others who worked with him in the Air Force and the Pentagon.

COLD CLIMATE FOR FITZGERALD

Unfortunately, there are those in high places in the Air Force and in the Department of Defense who do not agree with this approach to Government spending. And these persons have been responsible for the peculiar coincidences affecting Mr. Fitzgerald's job. Even now they are attempting to hound and discredit him.

His major responsibilities have been taken away from him. Instead of the

major weapons systems for which he was formerly responsible, his new job is to look into the cost overruns on a bowling alley in Thailand.

But perhaps the most reprehensible and dangerous acts committed by the Air Force in connection with Mr. Fitzgerald's appearance before the subcommittee relates to the supplemental testimony the subcommittee requested last November. The subcommittee had asked Mr. Fitzgerald to prepare certain cost data and other information in writing, to be submitted to the subcommittee following the close of oral testimony. Among other things, the subcommittee had asked for a breakdown of the C-5A cost overruns. The request was made on November 13, 1968.

DELAYED TRANSMITTAL

Not until December 24, 1968, did the subcommittee receive the materials from Mr. Fitzgerald, and only after the subcommittee has raised strenuous objections to the delay in transmitting the supplemental testimony. In fact, as the subcommittee later learned, Mr. Fitzgerald had prepared his supplemental testimony within a few days of the November 13 appearance and had turned it over to the Air Force for transmittal to the subcommittee. The Air Force had held on to the supplemental testimony and intentionally delayed its transmittal for more than 4 weeks.

The materials received on December 24, were labeled "Insert for the Record testimony of A. E. Fitzgerald." However, upon checking with Mr. Fitzgerald, the subcommittee learned that the materials received on December 24 were not the same materials prepared by Mr. Fitzgerald. They had been altered by the Air Force. More importantly the Air Force had altered the C-5A cost estimates prepared by Mr. Fitzgerald. The alterations made it appear that Mr. Fitzgerald's figures corresponded with the official Air Force figures contained in its November 19 press release.

The subcommittee advised the Air Force that it would not accept the materials received on December 24 as the testimony of A. E. Fitzgerald. We insisted on our right to receive the true and accurate testimony of the witness, unaltered and uncensored by the Air Force. The subcommittee finally, on January 15, received Mr. Fitzgerald's authentic and uncensored testimony.

The Air Force's attempts to muzzle, interfere and alter the testimony of Mr. Fitzgerald cannot be justified. They appear to have been almost desperate and panic stricken in their efforts to prevent public disclosure of the C-5A overrun. The Air Force testimony in two separate committees of Congress in March and May of 1968 that there was no C-5A overrun should be considered in this connection.

LATE REPORTING OF OVERRUN

What also needs to be considered is the fact that they began to learn of the C-15A overrun as early as November 1966. During that month an Air Force team, which included Mr. Fitzgerald, visited the Air Force plant in Marietta, Ga., where the C-5A was being produced. The review team found overruns

of up to 100 percent in key segments of the program.

That was in 1966, a year and a half before Mr. Flax testified before an appropriations subcommittee of the House that there were no overruns, and that the costs were between the cost and the ceiling.

The second visit 3 weeks later confirmed the initial observation. The overrun in the C-5A program grew steadily in late 1966. Yet, according to the evidence received by the subcommittee, evidence of its existence began disappearing from Department of Defense internal reports. In 1968 evidence of the overruns also disappeared from internal Air Force reports. In fact, the Air Force reports had been changed by directive from higher headquarters to eliminate the evidence of the C-5A overruns. Mr. Fitzgerald requested an audit to determine the true facts about the C-5A costs but it was never performed.

Mr. BYRD of Virginia. Mr. President, will the Senator yield?

Mr. PROXMIRE. I am happy to yield to the Senator from Virginia.

Mr. BYRD of Virginia. The Senator from Wisconsin mentioned that the records were altered, and I believe he said by higher authority. Could the Senator identify the higher authority more precisely?

Mr. PROXMIRE. I cannot identify it other than by saying that the information, the testimony of Mr. Fitzgerald, was sent to us and we received it. We then checked with Mr. Fitzgerald and he said that that was not his testimony, that it had been changed by persons in the Air Force. Unfortunately, at the present time, I do not know and I cannot tell the distinguished Senator from Virginia who it was that changed that testimony.

I will do my best to determine the identity of that person, or persons, and provide it for the Record.

Mr. BYRD of Virginia. I was not so much concerned about that as whether it was done within the Air Force or by a higher echelon; namely, the Department of Defense as differentiated from the Air Force.

Mr. PROXMIRE. Again, I would have to say to the distinguished Senator from Virginia that I am not sure. I think he makes a good point. It could come from either source. It would not be fair to the Air Force to assume that it was likely they, because it might very well have come from the Department of Defense. Mr. Fitzgerald worked in the office of the Secretary of the Air Force. His superior was in the office of the Secretary of the Air Force. On the other hand, he did work with the Department of Defense in this, and it could have come from either area, both of which, of course, would be higher headquarters than Mr. Fitzgerald.

Mr. BYRD of Virginia. I have had great concern about this contract, just as has the Senator from Wisconsin. I shall not further interrupt the Senator at this time, but when he finishes his address, I should like to go over a few points with him.

Mr. PROXMIRE. Very good.

Mr. President, I believe that the evidence in the case indicts the Air Force

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and Department of Defense for its handling of the C-5A program. The C-5A has been mismanaged and public funds have been mishandled. The Air Force has shown its great disregard for the heavy responsibility it has over the use of public funds, and it has shown serious disrespect for Congress by its high-handed conduct.

MISMANAGED WEAPONS SYSTEM

I might point out that the Air Force is not alone in this regard. The House investigation of the Army Sheridan tank program revealed similar disclosure problems, deceptions, and mismanagement on the part of the military. The Aerospace Daily and Executive Report, a trade newspaper, on July 30, 1969, commented on certain aspects of the tank and the C-5A cases. I believe what the Aerospace Daily has to say on this matter is significant because that journal can by no means be labeled as critical of military spending or of the aerospace industry. I will therefore read excerpts from what the Aerospace Daily has to say:

Pentagon internal reporting has come under fire and suspicion as an outgrowth of findings of the House Army tank investigation and Congressional hearings on the C-5A jet transport cost overrun.

In the \$2.5 billion Army tank procurement, House Armed Services Committee investigators found internal reports misleading, inaccurate and deliberately optimistic. Officials connected with the program were criticized for failing to provide objective information to high command upon which logical and supportable decisions could be made.

In the now \$4.6 billion C-5A Galaxy transport procurement, Air Force admits that it deliberately did not report for two years initial and continuing cost growth which showed up only five months into the eight-year program.

In the first case, Army claimed it wrote optimistic reports on development of the M-551 Sheridan light assault reconnaissance vehicle and its Shillelagh weapons system because at every reporting period developers "believed" serious deficiencies were shortly to be corrected. The House investigation shows they were not in many cases, despite 10 years of work.

In the second case, Air Force said it withheld cost growth because it did not want to jeopardize the financial condition, in the stock market and elsewhere of its only C-5A supplier.

As a result of these faulty reports, Congressmen and Senators charged with responsibility for authorizing and appropriating Defense funds have been abashed to discover they are the last persons to find out about unsolved developmental problems and cost overruns. In a time of inflation, high taxes and serious Federal budget constraints, they are placed in a tenuous position vis a vis their constituents.

The article then points out that the Senate Armed Services Committee has requested quarterly reports on cost, schedule, and performance on 31 major weapons systems and that it is considering having the General Accounting Office monitor contracts. The Aerospace Daily continues:

How effective this step will be has to be seen. House tank investigators found that GAO was denied access to Army records, a procedure which the Pentagon can invoke under "executive privilege" precedents. Further complications are caused by differing

record-keeping and auditing procedures used by the services and by their contractors.

A price example is the fact that in the C-5A procurement Air Force estimates that contractor Lockheed Air Craft will lose \$265 million. Lockheed estimates it will lose \$13 million but make a profit after spares are ordered. The systems analysts in Laird's office have still another set of figures.

It remains that the Pentagon's veracity has been hurt by the findings of Congressional inquiries into the tank and transport procurements. Members of Congress can forgive and forget if they feel they made a bad decision based on objective information. But if the information they received was not honest, they will look at future Pentagon reports askance, and take them with a very large grain of salt.

TIME TO CALL A HALT

What all of this adds up to, in my judgment, is that the Congress must call a halt to Pentagon shenanigans. The C-5A case symbolizes the worst aspects of military procurement. The Air Force has been managing this program since 1965 and it has utterly failed to do a good job. Public funds have been squandered on a program of dubious value which will cost at least \$2 billion more than Congress originally agreed to pay. Where are the C-5A overruns leading? The recent Air Force report admits that "there is a distinctive possibility that costs may continue to increase." I believe that this statement means that the Air Force is putting the Congress on notice that it will come in at a later date to ask for even more money for the C-5A.

Mr. President, let me add that when Assistant Secretary Whittaker briefed me in my office a few days ago he said that, too. He said that there is evidence of further cost growth, that we have not seen the end of the overruns on the C-5A, that we cannot say that \$2 billion is the limit; it could be more. There is every indication that it will be more. As a matter of fact, the Air Force now is being franker in predicting overruns than it has been at any time.

The American people deserve a better accounting of its tax money with respect to the C-5A program than we can now give. My amendment will at least place the Congress in a position of knowing what the real military requirements for the 23 additional aircraft are and what the economic justification for them is. The amendment asks the General Accounting Office for an investigation of the facts and to submit its findings with recommendations to the Congress within 90 days.

NEED MORE KNOWLEDGE

Clearly it is not unreasonable to refuse to authorize any additional C-5A's until we know more about this program. Furthermore, if it is determined that there is a military requirement for the 23 additional aircraft, then I believe we ought to know what they will cost and whether their costs will be ballooned by the re-pricing formula. I therefore urge the adoption of the amendment.

Mr. President, I ask unanimous consent that sections from the Subcommittee on Economy in Government Report on the Economics of Military Procurement, on the C-5A overruns, which in-

cludes a table on the cost overruns, be printed in the Record.

There being no objection, the excerpts were ordered to be printed in the Record, as follows:

2. COST OVERRUNS: THE C-5A CARGO PLANE

The Air Force selected the Lockheed Aircraft Corp. as the airframe prime contractor for the C-5A, a large, long-range, heavy logistic aircraft, on September 30, 1965, after proposals had been received in response to Requests for Proposals (RFP) from 5 firms, and preliminary contracts had been entered into with 3 of them in 1964. It is not clear, from the evidence, how much price competition had to do with the selection. Secretary Charles testified that there was competition among the firms. But when asked how low Lockheed's bid was compared to the others, he refused to disclose the figures on the grounds that "this is company proprietary information". A similar procedure resulted in the selection of General Electric as the engine manufacturer.

The contract with Lockheed is a negotiated, fixed price incentive fee contract. It is also the first contract utilizing the total package procurement concept (TPPC). Two major objectives of the concept, according to the Defense Department, are to discourage contractors from buying in on a design and development contract with the intention of recovering on a subsequent production contract, and to motivate contractors to design for economical production and support of operational hardware. Thus, TPPC is supposed to act as a deterrent against cost overruns and less-than-promised performance. To accomplish this, all development, production, and as much support as is feasible of a system throughout its anticipated life, is to be procured in a single contract, as one total package. The contract includes price and performance commitments to motivate the contractor to control costs, perform to specifications, and produce on time. As the C-5A is an incentive contract (TPPC does not necessarily result in incentive contracting) it contains the usual financial rewards and penalties associated with incentive contracting.

The C-5A contract for the airframe provides for five research, development, test and evaluation (R.D.T. & E.) aircraft plus an initial production run of 53 airplanes (the total of 58 planes is called run A), and a Government option for additional airplanes. The present approved program for the C-5A is 120 airplanes comprised of run A (58 airplanes) plus run B (57 airplanes) plus five airplanes from run C.

The testimony received during the November 1968 hearings indicated a cost overrun in the C-5A program totaling as much as \$2 billion. A "cost overrun" is the amount in excess of the original target cost. According to the testimony, the program originally called for 120 C-5A airplanes to cost the Government \$3.4 billion, but because of cost overruns mainly being experienced in the performance of the Lockheed contract actual costs would total \$5.3 billion.

Following the November hearings, Senator Proxmire asked GAO to investigate into the causes and amount of the C-5A overruns and other matters relating to the contract.

On November 19, 1968, the Air Force announced, in a press release, that the original estimate for 120 C-5A aircraft was \$3.1 billion, compared to the current estimate of \$4.3 billion. Subsequently, in response to a request by the subcommittee, Mr. Fitzgerald, who was responsible for the development of a management controls used on the C-5A and who was on a steering committee directing a financial review of the C-5A, supplied a breakdown of the estimates of C-5A program cost to completion. This data showed Air Force estimates for 120 airplanes

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was \$3.4 billion in 1965, and \$5.3 billion in 1968, indicating an overrun of about \$2 billion. The difference between the Air Force press release and the data supplied by Mr. Fitzgerald seems to be accounted for in the figures for spare parts. The data supplied by Mr. Fitzgerald shows \$0.3 billion for spares estimated in 1965, and \$0.9 billion in 1968. If the figures for spares are added to the estimates in the Air Force press release, the two sets of figures are close to one another.

In the January 16 followup hearing, GAO reported on its investigation, the nature of which is discussed below on page 40. Briefly, GAO transmitted to the subcommittee figures supplied by the Air Force 2 days prior to the hearing. These figures indicated a substantial overrun but a smaller total cost for the overall C-5A program than the \$5.3 billion figure shown in the November hearings. The reason for the lower total was the omission by the Air Force of the costs of the spares.

Nevertheless, testimony and other evidence received in the course of the hearings confirmed the existence of the approximately \$2 billion overrun in the C-5A program, the reverse incentives contained in the repricing formula, and large overruns in other Air Force programs. The latest estimate of the total cost of 120 C-5As, including spares, provided by Secretary Charles, is \$5.1 billion. This is close to the estimate previously supplied by Mr. Fitzgerald, and about \$2 billion more than was estimated in 1965. The following table shows the estimates supplied by Mr. Fitzgerald, the Air Force press release of November 19, 1968, and Assistant Secretary Charles:

COMPARISON OF ESTIMATES OF C-5A PROGRAM
(In billions of dollars)

	Fitzgerald		Air Force press release ¹		Charles	
	1965	1968	1965	1968	1965	1968
120 aircraft: R.D.T. & E. plus production.....	\$3.1	\$4.4	\$3.1	\$4.3	.....	\$4.3
AFLC ² invest- ment.....	.3	.9	.....	.....	.....	.8
Total.....	3.4	5.3	3.1	4.3	.....	5.1

¹ The Air Force press release of Nov. 19, 1968, did not provide cost breakdowns between R.D.T. & E. (research development, testing, and engineering), production runs, and AFLC investment. The figures given seem to omit AFLC investment.

² AFLC (Air Force Logistics Command) investment submitted by Fitzgerald includes spare parts; that submitted by Charles includes initial spares, replenishment spares, and support. Table submitted by Secretary Charles (hearings, pt. 1, p. 311) does not include estimates for 1965.

The cost growth in the C-5A program can be seen in the table. The figures supplied by Fitzgerald show an increase from \$3.4 billion in 1965 to \$5.3 billion in 1968. The Air Force press release can be reconciled with the Fitzgerald figures if the AFLC investment (spares) is added to each of the estimates. Thus, the \$3.1 billion estimate for 1965 would total \$3.4 billion, and the \$4.3 billion estimate for 1968 would total \$5.2 billion. Secretary Charles' own figures for 1968 total \$5.1 billion. The subcommittee rejects the attempts of Air Force spokesmen to minimize the size of the program or the size of the overrun by removing spares as an item of cost. Spares are an integral part of the C-5A program and should be included in any consideration of costs.

According to the Air Force, the cost growth in the C-5A program has resulted from normal development problems associated with complex weapons and inflation. However, the subcommittee notes that the C-5A was chosen for the first application of the total package procurement concept partly for the reason that it was not considered a highly complex weapon system requiring technologi-

cal advances beyond the state of the art. The inflation argument, which is supposed to account for \$500 million of the cost growth, appears questionable. The contract contains an inflation provision to protect the contractor from unforeseeable price changes in the economy, to go into effect 3 years after the issuance of the initial contract, that is, October 1, 1968. The initial 3-year period was supposed to be considered a normal business risk. The Air Force official explanation of this provision states: "The contract thus included in the price an amount which reflected a projection of the mounting cost trend in the economy of labor, materials, equipment, and subcontract prices." If future inflation for at least 3 years was included in the price, it is hard to see why inflation should be a major factor in later increasing the price. Without a more thorough investigation of the C-5A program, the technical problems encountered, the failure to anticipate them at the time of the negotiations, and operations of the inflation provision, the subcommittee cannot form any firm conclusions about the reasons for the enormous overrun.

A repricing formula built into the contract was also revealed in the November testimony. The repricing formula is one of the most blatant reverse incentives ever encountered by this subcommittee. It should be recalled that the C-5A contract is supposed to represent an important step toward cost control. An Air Force manual on the total package procurement concept dated May 10, 1966, states that "It should produce not only lower costs on the first production units, but, in turn, a lower take-off point on the production learning curve, thus benefiting every unit in the production run." The facts about the C-5A are just the reverse. Costs for the first production units are greatly exceeding original estimates, resulting in higher take-off point on the production learning curve, thus inflating every unit in the production run. In addition, the contract is supposed to provide the Government with binding commitments on price and performance. Obviously, there is in fact no binding commitment on price if the price can be modified upwards, as is being done in the C-5A, because actual costs are exceeding estimates. Whether the actual performance of the C-5A lives up to its promise remains to be seen. On the matter of delivery, it is interesting to note that the Air Force announced on February 25, 1969, a 6-month delay in the first operational C-5A aircraft, from June 1969 to December 1969.

Not only were the price increases made possible by the repricing formula, but the cost overruns which are resulting in the higher prices may very well have been encouraged by the existence of the formula and by the nature of the formula. For the mere fact that a repricing provision existed in the contract constituted a built-in get-well remedy for almost any kind of cost growth. According to this provision, the price of the second increment (run B) could be increased on the basis of excessive actual costs on the first increment (run A). The motivation, if any, of the incentive feature of the contract is thereby largely nullified, provided the contractor is confident that the Government will exercise the option. Why bother to keep costs down if their increase forms the basis for a higher price? Additionally, because of the nature of the formula, the higher the percentage of overrun over the original contract ceiling price on the first increment, the higher the percentage by which the second increment is repriced.

The subcommittee learned, on the morning of the January 16, 1969, hearing, that the Air Force had exercised the run B option for 57 additional C-5A aircraft, apparently committing the Government to spend at least \$5.1 billion on aircraft originally estimated to cost \$3.3 billion. The subcommittee was

dismayed to learn that this decision was made before the completion of the GAO investigation and without a full disclosure of the reasons for the cost overruns. The public interest in economy in Government was not served by this precipitous decision, announced a few hours before the start of a congressional hearing and a few days before the inauguration of the new President.

Mr. BYRD of Virginia. Mr. President, will the Senator from Wisconsin yield?

Mr. PROXMIRE. I am happy to yield to the Senator from Virginia.

Mr. BYRD of Virginia. I do not want, at this time, to comment on the amendment offered by the Senator from Wisconsin because I want to give it more study than I have had the opportunity to give it up to this point. However, I commend him for going so fully and into such detail in regard to the C-5A contract.

It seems to me the Senator from Wisconsin has rendered both the Senate and the American people a real service.

I have been deeply concerned with regard to this contract, which appears to me to be so flexible and so ambiguous that either party can do almost anything it might wish to do.

In that connection, I ask unanimous consent to insert in the Record at this point some inquiries that I put to the president of Lockheed and other officials of Lockheed when they appeared before the Committee on Armed Services. That testimony begins on page 2150, beginning with, "Senator BYRD of Virginia. Thank you, Mr. Chairman," and goes through page 2152, ending with, "Senator BYRD of Virginia. Thank you very much."

There being no objection, the extract was ordered to be printed in the RECORD, as follows:

Senator Byrd?

Senator BYRD of Virginia. Thank you, Mr. Chairman.

I shall not attempt to second-guess either the Air Force or Lockheed on this contract. Necessarily it is a very complicated one. It does seem to me after 2 days of hearings it is a very flexible one and a very ambiguous one. I would like to get an understanding of a couple of things.

As I recollect Mr. May's chart, Lockheed says that the cost to the Government when the contract is completed will be \$3.2 billion.

Mr. MAY. Yes, sir.

Senator BYRD of Virginia. Now the Air Force testified yesterday, and I checked my memory a little while ago, that the cost to the Government will be \$4.3 billion, or a difference of more than \$1 billion, and could it be explained where that \$1 billion is?

Mr. MAY. Senator Byrd, I think we have to recognize that the Air Force estimates are for the total program, including the Government-furnished engines. Our projections that we showed you are only for that portion of the cost that Lockheed is responsible for, and this involves primarily the airframe.

Now that differential that you speak of, as best I can understand it consists therefore of items that are not within the framework of our contract, plus the difference in estimates that exist between what the Air Force feels our costs will be and what we feel they will be for 115 airframes.

Senator BYRD of Virginia. You feel that your cost will be a great deal less than the Air Force believes your cost will be?

Mr. MAY. I think the Air Force estimate is approximately \$200 million higher than ours through 115 airplanes, and that the difference in those numbers that you are citing

is accounted for by the prime contract with the General Electric Co. for the furnishing of their TF-39 engines.

Senator BYRD of Virginia. Then the cost to the Government, if you take Lockheed's figure, is not \$3 billion which your chart shows? That is only your part of the contract?

Mr. MAY. Yes. We feel that is the only portion that we are competent to testify about.

Senator BYRD of Virginia. Yes, I agree with that, but I wanted to get clear that the total contract, the total cost to the Government will not be \$3.2 billion for the total contract. It will be \$3.2 billion if you are correct insofar as Lockheed's share is concerned.

Mr. MAY. That is correct, sir.

Senator BYRD of Virginia. You have a difference between the Air Force and the Lockheed Company, there is a difference of about \$272 million, as I understand the figures. The loss would be 285 if the Air Force is correct, while it would be roughly \$13 million if Lockheed's figures are correct.

Mr. MAY. Yes, sir.

Senator BYRD of Virginia. How much has Lockheed actually spent on the C-5A program to date? Do you happen to have those figures?

Mr. MAY. The number is approximately \$1.5 billion, Senator, and we will supply the precise number for the record if we may.

Senator BYRD of Virginia. You will supply the precise figure for the record?

Mr. MAY. Yes, sir.

(The information furnished is shown below.)

"Through May 30, 1969, Lockheed has expended \$1,372,112,173. In addition unliquidated progress payments to subcontractors amounted to \$197,580,196. In total, through May 30, 1969, the amount was \$1,569,692,369."

Senator BYRD of Virginia. Now, how much has Lockheed received from the Federal Government up to this point?

Mr. MAY. I will have to supply that for the record, sir.

(The information furnished is shown below.)

"Cash receipts from the Government through May 30, 1969, are as follows:

"Final billing for contract line items delivered-----	\$494, 878, 575
"Progress payments to Lockheed for work in progress--	827, 699, 140
Total -----	1, 322, 577, 715

"Progress payments to subcontractors for work in progress ----- 197, 580, 196

"As additional information, through May 30, Lockheed had incurred \$91,966,671 in unreimbursed work in process costs."

Senator BYRD of Virginia. I am not suggesting that this be done at all, but if the contract were canceled at the end of Run A, do you have an estimate as to what Lockheed's profit or loss would be?

Mr. HAUGHTON. We do not have such an estimate, Senator, and we think that it is past the time when it would be canceled at Run A, because we already have funding on Run B, so Run B would have to be included now.

Senator BYRD of Virginia. And as I understand from your reply to one of Senator Symington's questions, Lockheed feels that it has a contract for 155 C-5A aircraft.

Mr. HAUGHTON. Subject to certain funding requirements, yes, sir.

Senator BYRD of Virginia. Of course Congress has not approved the funding, but Lockheed feels that it does have a contract for 115 aircraft, provided the Congress funds the 115 aircraft?

Mr. HAUGHTON. Right, yes, sir.

Senator BYRD of Virginia. Now it was testified yesterday that Lockheed is 6 months behind schedule. Does Lockheed concur in that assertion?

Mr. HAUGHTON. Yes, sir.

Senator BYRD of Virginia. The contract provides for a penalty up to a total of \$11 million for schedule delays. As I understand it, no penalties have been determined or assessed at this point.

Mr. HAUGHTON. That is right. There have been no penalties assessed, because the operational aircraft are not required for delivery as of this time.

Senator BYRD of Virginia. Yesterday the Air Force testified that it is not, at this time, able to estimate as to what the Government would lose if the program were terminated at the present time. Does Lockheed have an estimate as to what the Government loss would be if the program were to be terminated?

Mr. HAUGHTON. No, sir; we do not, because it goes out into termination clause for all the suppliers of the program, and I do not have that figure. I think that figure would be very difficult to develop with any accuracy.

Senator BYRD of Virginia. The next question may be one that you would prefer not to answer and I will not press it if you feel that way for business reasons, but what percent of the business of the Lockheed Corp. does the C-5A program represent?

Mr. HAUGHTON. Well, there is going to be 2 or 3 years in here when it is going to approximate 25, close to 25 percent of our total sales. Our sales last year ran \$2.2 billion, and I think our sales average on the C-5 over a 3- or 4-year period would be about \$500 million a year.

Is that about right, Tom?

Mr. MAY. A little higher than that, but substantially 25 percent.

Mr. HAUGHTON. About 25 percent, maybe a little more, give or take a little.

Senator BYRD of Virginia. Thank you very much.

Mr. BYRD of Virginia. Mr. President, may I ask the Senator from Wisconsin his estimate as to the total cost to the Government if and when the contract is completed.

Mr. PROXMIRE. The total cost to the Government, on the basis of the evidence we have now—and, as I said, my estimate would have to be conservative because the Air Force tells us it is going to be higher—is \$5.3 billion for the 120 planes.

Mr. BYRD of Virginia. As I understand it, that is the estimate which the Senator and his staff made. It is not the Air Force estimate?

Mr. PROXMIRE. I understand the Air Force estimate is \$5.2 billion.

Mr. BYRD of Virginia. The Air Force estimate for the completed contract is \$5.2 billion?

Mr. PROXMIRE. \$5.2 billion.

Mr. BYRD of Virginia. And the estimate of the Senator from Wisconsin is what?

Mr. PROXMIRE. \$5.3 billion.

Mr. BYRD of Virginia. Through May 30 of this year, Lockheed has expended, in round figures, \$1.570 billion, according to testimony submitted on page 2151 of the committee hearings. Lockheed has received, during the same period of time, up to the date of May 30, \$1.520 billion, in round figures, on this contract from the Government.

Mr. PROXMIRE. This is an important colloquy. The Senator is pointing out that Lockheed has received almost 100-percent reimbursement—not quite, but very close to it.

Mr. BYRD of Virginia. Lockheed has received practically 100-percent reim-

bursement, which means Lockheed has been operating on Government money. Would the Senator not agree?

Mr. PROXMIRE. The Senator is absolutely correct, not only with respect to progress payments, but the Government owns the plant in which Lockheed is building the plane. \$150 million worth of equipment is also owned by the Government. Therefore, Government capital, the capital supplying the equipment, is largely, but not entirely, Government capital; a great deal of it is; and almost all of the working capital cost is provided by the Government.

Mr. BYRD of Virginia. So Lockheed has had the benefit, I calculate, of somewhere around \$150 million in interest. If the Government had not put up the money and Lockheed had had to go on the market to borrow the money, Lockheed would have been billed for that money and would have had to pay it.

Mr. PROXMIRE. The Senator has made a point that escaped me. That point should be made. \$150 million is just about right. It may be a little more than that in view of what has happened to interest rates, but it is close to that.

Mr. BYRD of Virginia. I would like to make a further study—

Mr. PROXMIRE. If the Senator will yield, I want to make the point that interest payments are not reimbursable. They are not allocable. So the point is well made that it would have had a great effect on Lockheed.

Mr. BYRD of Virginia. So Lockheed has had the benefit of \$150 million of otherwise nonreimbursable cost that has been paid by the taxpayers.

Mr. PROXMIRE. That is correct.

Mr. BYRD of Virginia. So when we speak of the total cost of the contract, I think it is well to consider the interest charges, as well as the other figures the Senator gave, to make up the total.

Mr. PROXMIRE. I agree wholeheartedly with the Senator.

Mr. BYRD of Virginia. I would like to read into the Record at this point one paragraph of the statement I made before the committee last June when the officials of Lockheed appeared before the committee.

Now, just another brief comment or two. Mr. Haughton has mentioned the lack of flexibility in the contract.

Lockheed had been complaining of lack of flexibility.

Continuing the statement:

I admit I find the contract very difficult to understand, but it seems to me that here is a great deal of flexibility in that contract, and a great deal of ambiguity in the contract, to the extent of at least \$272 million worth, because that is the difference between what the Air Force figures the final figure will be and what the company figures it will be, so it seems to me there is a great deal of flexibility, and the taxpayers will be called upon to pay somewhere between those two figures, the one mentioned by the Air Force of 285 million and the other by the company of \$13 million. In the way of flexibility, while I say I do not fully understand the contract, it seems to me there is a great deal of flexibility in this contract and a great deal of ambiguity.

The question I am suggesting is whether the public interest is being adequately protected by the Department of Defense,

particularly the Department of the Air Force. It is not Lockheed's responsibility to protect the taxpayer, but it is the Air Force's responsibility to protect the taxpayer. The Air Force is a Government organization. It is part of the Department of Defense. It receives all of its money from the taxpayers. It is the responsibility of the Government—the Air Force in this case—to say that any contract made on behalf of the Government adequately and fully protects the general public and the tax funds that come out of the pockets of the wage earners of our country.

What passed through my mind, as I was listening to the distinguished Senator from Wisconsin as he spoke on the Senate floor this afternoon and brought out many facts and figures, just as went through my mind during the committee hearings, was whether the Air Force in its procurement practices is adequately protecting the taxpayers. I think it is important that all Government agencies handle their contracts in a way that will adequately protect the taxpayer.

Mr. PROXMIRE. I thank the Senator from Virginia. His point is well taken. We should be concerned not only with the Lockheed contract. That is only one. The Air Force spends billions and billions of dollars of the taxpayers' money every year. It is important to focus attention on the practices which have been highlighted by the way the Lockheed situation was handled. No matter what action is taken on my amendment, the important lesson we should learn from the Lockheed contract is that the Air Force simply must handle its procurement practices more honestly as far as Congress is concerned and it must handle them with far greater regard for the American taxpayer than it has in the past. I think that is the point made by the Senator from Virginia, and it was made extremely well. I think it was the most important point of all made with reference to the Lockheed contract, in terms of what we can save in the future.

Mr. BYRD of Virginia. The Senator from Wisconsin has rendered a splendid public service in focusing attention upon this fact. As he pointed out a moment ago, it concerns not just the C-5A contract or just the Air Force, but all departments of Government, and particularly the Defense Department, because that is where the greatest spending occurs and that is where these large contracts are. It is important that the Department of Defense promulgate practices and procedures which will protect the tax dollars taken from the pockets of the wage earners. What the Senator from Wisconsin has been doing in recent weeks in this regard, and what he is doing today on the floor, I believe will contribute substantially toward the protection of the dollars of the American taxpayers.

Mr. PROXMIRE. I thank the Senator from Virginia. I assure him that our subcommittee has just started hearings, which will continue through the recess, into the spending of a number of Government agencies—not the Defense Department alone.

Mr. President, the current issue of Life

magazine, on August 15, 1969, contained an article entitled "The New Math of Inflation," which should be a lesson for everyone in politics, particularly those who serve our country in the Senate and the House of Representatives. It says:

For a decade it's been called "the affluent society," but suddenly the U.S. public is beginning to think all those dazzling statistics and ever-rising curves are a giant con game. Between inflation, which today is at an annual rate of 7.2%, and the relentless increase in Federal, state and local taxes, we are all running to stand still. In fact, many have begun to fall behind, and the average citizen is furious about it. The Life Poll, conducted by the opinion research firm of Louis Harris and Associates, Inc., reveals that 86% of a nationwide cross section of young and old, rich and poor, rural and city dweller assess their anger at current tax policies as either "high" or "very high." Eighty-two percent of them want major cuts in Federal spending now, and a surprising 56% are even ready to see wage and price controls imposed to stabilize prices. Twenty-one percent claim they are ready to take part in a tax revolt, and another 22% who could never openly oppose their government said they could sympathize with those who did.

The Bureau of the Budget made an analysis last year of controllable and uncontrollable spending. They found that about \$100 billion of our Federal spending is controllable. We obviously cannot control such items as interest on our national debt; we could pass all the resolutions in the world, and still could not do it. We cannot cut social security payments. But 80 percent of all our national spending is in the budget.

As the Life magazine article points out:

The potential savings in the post-Vietnam defense budget are estimated by the August 1 Fortune at \$17.6 billion out of \$78.7 billion. . . . To get this monstrous 40% of all federal spending under control would be the biggest single step toward a more rational schedule of national priorities.

In this connection, Mr. President, I call to the attention of the Senate a series of very thoughtful and revealing articles in the current issue of Look magazine, which I shall ask to have printed in the Record.

The articles are entitled as follows:

"The Defense Establishment," written by Charles W. Bailey and Frank Wright.

"Defense Contract: The Money Web," written by Gerald Astor.

"Generals for Hire, written by Berkeley Rice.

"The Waste," written by David R. Maxey.

"How to Cut the Budget," written by David R. Maxey.

"The University Arsenal," written by Ruth Gelmis, showing how the universities have become involved and enmeshed, and what the effect has been.

A fine epilog by Averell Harriman, entitled "Our Security Lies Beyond Weapons."

I ask unanimous consent that the articles which I have listed, published in Look magazine for August 26, 1969, be printed in the Record at this point.

There being no objection, the articles were ordered to be printed in the Record, as follows:

THE DEFENSE ESTABLISHMENT

(By Charles W. Bailey and Frank Wright)

For the first time in 30 years, the American defense establishment is on the defensive.

Not since the 1930's—before World War II, the cold war, the Korean War, Vietnam—have those who build and manage our military machine been seriously challenged.

The argument this year in Washington has been centered mainly on the ABM—the anti-ballistic-missile system that President Nixon proposed to defend our own intercontinental missiles and bomber bases against surprise attack.

But the issue has become much broader: What is the proper place of the nation's defense establishment in the Government and in American society? Has the military machine grown so large that it threatens to throw that society critically out of balance? Once again, critics are raising the specter of the "military-industrial complex"—the shorthand label for that combination of political, military and economic pressures that influence U.S. security policy, military strategy, armed forces and defense spending.

The Vietnam war has dragged on for years, and military victory, despite repeated predictions by the nation's civilian and military leaders, is now admittedly beyond our grasp.

Military spending has grown steadily until it swallows almost \$80 billion a year—more than 40 cents of every dollar in the Federal budget—and requests for new and more costly strategic weapons may offset any savings that would result from a cease-fire in Vietnam.

Pressures are rising for greater Federal outlays to meet the domestic needs of a nation whose multiplying urban problems are compounded by racial, social and economic stresses. The voices of concern do not sing in unison, and most of them recognize both the complexities of the issue and also the high motives of those with whom they disagree. The chorus is rising nonetheless.

"I don't question the patriotism of anyone," says Sen. Mike Mansfield of Montana, majority leader of the U.S. Senate. "But I do question the judgment of creating a military-industrial-labor complex which exercises such great power. You have to control the money—control the spigot—and then you can get into philosophy."

Former Vice President Hubert Humphrey says, "It isn't as if bad men were conspiring against good people. It is that events combine to bring about a preponderant allocation of resources to defense. That preponderance inevitably affects national policies, inevitably brings a looseness of control, and feeds on itself."

Walter F. Mondale of Minnesota, a young Democratic liberal in his fifth year in the Senate, sees the issue as one of national priorities: "I've watched every fiscal dividend be dribbled away. There's not a dime left for people. We ought to write a book on ourselves. The first chapter ought to be what we think we are as white people. The rest should be on what we really are and what we do to people who can't defend themselves—the Indians, the blacks, the Mexican-Americans. Then we call them animals because they don't react right after we've beat them flat. If you want to destroy the defensive capacity of our nation, just keep it up the way we've been going. If these young militants on campuses and in the political parties are going to be the leaders—and someday they are—they are not going to be interested in keeping this kind of society together."

John Sherman Cooper of Kentucky, who speaks for anti-ABM Republicans in the Senate, recalls his early efforts to question big defense outlays: "You couldn't find out anything. The Armed Services Committee would say, 'It's classified,' or 'We've gone into this already and have more information than you.'"

Another anti-ABM spokesman, Democratic Sen. George McGovern, knows firsthand the kind of pressures that can be generated. Some of his South Dakota constituents urged him to try to get an ABM site in the state because of the economic benefits it would bring. "I don't think there's any conspiracy between the military and industry," he says, "but it does develop a momentum. Even the clergymen know their congregations are swollen by defense installations. There's a subtle influence on labor unions, business, community groups."

The defense establishment is complex. It is huge. It is also one of the most pervasive institutions in the nation: one out of every ten Americans who works for a living is part of the defense establishment. In the fiscal year just ended, an estimated \$78.4 billion was spent on defense—nearly nine percent of the gross national product.

There are 500 major military installations in the continental United States, and 6,000 smaller ones. The Defense Department controls 45,000 square miles of land—an area the size of Pennsylvania. Overseas, we have 3,400 big and little bases in 30 foreign countries, Hawaii and Alaska.

Some 22,000 U.S. corporations are rated "major" defense contractors, and another 100,000 or so get a piece of the action through subcontracts. One example of the geographic spread of the defense dollar: When Lockheed Aircraft Corp. got the contract to build the C-141 *Starlifter* jet transport for the Air Force, it bought parts and services from 1,200 other firms. Just one small part for the plane—a fuel-pump switch—required material from New York, Connecticut, Illinois, Ohio, California, Wisconsin and Massachusetts.

The major share of defense spending—\$44 billion last year—goes for weapons and other equipment. Two-thirds of that went to the 100 biggest defense contractors, and a whopping one-quarter of the total—\$11.6 billion—was paid out to these ten: General Dynamics, Lockheed, General Electric, United Aircraft, McDonnell-Douglas, American Telephone & Telegraph, Boeing, Ling-Temco-Vought, North American Rockwell and General Motors.

Even the university campus can be a big defense contractor. Last year, both MIT and Johns Hopkins University were among the top 100.

Some states do better than others. California got one out of every seven defense-procurement dollars last year—or \$6.5 billion. Texas was second with \$4.1 billion. The rest of the top ten are: New York, Connecticut, Pennsylvania, Ohio, Massachusetts, Missouri, New Jersey, Indiana.

How did it all start? And how did the defense establishment get so big? There are many reasons for its growth—but only one for its birth: We live in a dangerous world.

At the end of World War II, the nation rushed—as it had after every war—to dismantle its armed forces and turn its attention to the search for the good life. Suddenly, however, the U.S. faced an unprecedented military and ideological challenge. The Soviet Union sought to expand its dominion westward across Europe and southward into Iran, Turkey and Greece. In Asia, another Communist government came to power in a bitter civil war in China. The United States hesitated—and then, in an extraordinary series of basic policy decisions, moved to check the Communists. The rationale was "containment," which came to mean a U.S. commitment to meet, if necessary with armed force, any Communist encroachment on independent nations that asked for our help. This required our nation for the first time to maintain a large peacetime military force.

Beyond this, there was another reason for the pyramiding growth and cost of defense: atomic bombs, hydrogen bombs, jet airplanes and, finally, intercontinental missiles made

the tools of war astronomically costly. The complexities of these weapons dictated years of research and development before they could be ready. Their capacity to strike a single, sudden, devastating blow meant that a nation committed by political decision to constant readiness for conflict could no longer wait until war began to beat its plowshares into swords.

There are other reasons—some of them unrelated to either high policy or the march of science—why defense spending has grown. Neither Congress nor the White House has been able to find ways of exercising anything like the critical scrutiny that is routinely applied to much smaller domestic programs. Many congressmen are reluctant to vote against anything for "our boys in service." Secrecy labels applied to many projects hinder those who do raise questions. Finally, there is "pork"—the economic benefits that defense spending can bring to a community.

There are positive factors too. By and large, the Pentagon and its industrial allies have done all they can to encourage congressional permissiveness. This year, there are 339 Defense Department employees assigned to "legislative liaison"—the bureaucratic euphemism for lobbying. That works out to two Pentagon agents for every three members of Congress; no other special-interest group comes close to having so many.

Defense Department lobbyists don't limit themselves to pushing the Pentagon's legislative program. They also spend much of their time currying favor with congressmen in other areas—passing advance word of contract awards so members can get political credit for "announcing" them, or handling inquiries about the problems of constituents in service.

They also give special attention to congressmen who hold major influence over defense affairs. The South Carolina district of Chairman L. Mendel Rivers of the House Armed Services Committee is chock-full of Army, Navy, Air Force and Marine Corps bases. Georgia—home of Sen. Richard B. Russell, for years, chairman of the Senate Armed Services Committee and now head of the Appropriations Committee—is loaded with armed services installations and defense industry. The congressional military barons get some personal benefits too. The Air Force routinely provides planes from its "VIP" fleet to ferry them around the country. And one night this spring, the Defense Department not only turned out its top brass for a Mississippi testimonial dinner for Chairman John Stennis of the Senate Armed Services Committee but also flew in the entertainment—a Navy choir from Florida, an Army WAC band from Alabama and an Air Force string ensemble from Washington, D.C.

If the Pentagon can bring heavy pressures and blandishments to bear on Congress, the defense industry—companies and unions alike—can exert massive leverage on both. Its lobbyists, ranging from high-priced vice presidents to clerks, do most of their work in private, staying out of public debate over weapons systems or budgets.

Industry's influence in Congress is sometimes magnified by outside help—from chambers of commerce, state and local officials or labor unions eager to impress on congressmen the benefits of defense bases or contracts. A study two years ago of 27 firms slated for prime contracts on the ABM suggests the potential for this kind of pressure; the firms operate more than 300 plants in 172 congressional districts spread across 42 states. Thus, at least 256 senators and representatives had some economic stake—direct or indirect—in the ABM. A recent estimate that 15,000 firms, including subcontractors and suppliers, would share in ABM spending suggests that the impact is even broader.

At the Pentagon, several factors combine to bolster industry's standing. First, the growing complexity of modern weapons has made it ever harder for Government to keep its provisioners at arm's length. No longer does a service simply decide what it wants, design it, and then advertise for somebody to build it; now, industry's "sss men"—strategic-systems salesmen—and engineers play a major role in military-weapon design.

Industry and the military join hands in other ways too. There are the service associations, to which active and retired officers as well as industry representatives belong. The groups are large (the Air Force Association counts 100,000 members) and often rich—upwards of \$2 million yearly income in some cases, with industry providing much of it through dues and advertising in association magazines that advocate bigger and better weapons.

Another factor is the ease with which some men move from defense industry to the Defense Department, and vice versa. Secretaries of Defense, and lesser officials, have come from industry, and returned to it. Retired military officers flock to defense industry, often going to work for a firm whose operations they had monitored while on active duty.

When industry and the Pentagon go hand-in-hand to Congress, they find powerful friends awaiting them. A few senior members control congressional action on military matters; four committee chairmen—all Southerners, all conservatives, all well along in years, all with over 20 years of service—make up the elite:

Rivers, 63, a congressman for 28 years, chairman of the House Armed Services Committee.

George Mahon of Texas, 68, a congressman for 34 years, chairman of the House Appropriations Committee.

Stennis of Mississippi, 68, a senator for 21 years, chairman of the Senate Armed Services Committee.

Russell, 71, whose 36 years of service make him the Senate's senior member, chairman of the Senate Appropriations Committee.

These men are strong and talented in their own right. But the primary source of their power lies in the seniority system, in the way members are chosen for advancement, and in the structural and jurisdictional tradition of Congress.

The Southern flavor of the defense positions—one official calls it "the South's revenge in perpetuity for Gettysburg"—is a self-feeding process. Warm weather and ease of year-round operation lead the military to spend much of its money in the South. Members of Congress from Dixie therefore gravitate to the committees that deal with military affairs, and because it is relatively easy for them to get reelected, they build up seniority and thus control the committees.

This process is even more marked in the Senate, where the smaller membership allows senators to serve on more than one major committee. The result has been the creation of interlocking directorates; the three top-ranking members of Armed Services—Stennis, Russell and Republican Margaret Chase Smith of Maine—are also on Appropriations. Such dual membership and parallel inclinations almost always produce the same result: Armed Services approves Pentagon proposals and Appropriations provides the money to finance them.

There are more personal ties to the Pentagon too. Two members of the Senate Armed Services Committee hold commissions as major generals in the Reserve forces, a third is a retired two-star Reserve general. The man who writes the military-construction appropriation bill each year—Rep. Robert L. E. Sikes of Florida—is a major general in the Army Reserve. A 1967 *Minneapolis Tribune* survey of the entire Congress

turned up 32 senators and 107 representatives with Reserve commissions.

One reason military committees generally have their way is the system itself; if you attack the other fellow's committee on the floor, he may do the same to yours. Armed Services and Appropriations members defend their bailiwicks with relentless zeal against either individual attack or jurisdictional raids by other committees. The bulk and complexity of programs, the frequent censoring of reports and hearings records for "security" reasons, and the traditionally one-sided nature of the testimony that is published—all these also inhibit opposition to military outlays.

The debate on the defense establishment has been highlighted this year by a new round of "horror stories" about Pentagon mismanagement and inefficiency: \$2 billion increase in the cost of a new giant jet transport; the belated cancellation of a contract for a new helicopter that was badly flawed. Such disclosures of waste are only ancillary to the basic issues in the rising debate over the proper role and size of the nation's defense establishment. But saving a billion here and a billion there has its merits—especially in the light of the military's post-Vietnam "shopping list" of new and even more costly weapons.

The new weapons list is long and varied. It includes a replacement for the Minuteman missile, now the backbone of our strategic force; multiple warheads to boost the striking power of missiles; a long-range bomber to replace the B-52; fighter planes for the Navy and Air Force; three nuclear-powered aircraft carriers at a half-billion dollars each. There are dozens of others.

All of these systems would cost money. But critics argue that some of them—especially the Multiple Independently-targeted Reentry Vehicle (MIRV), as the multiple-warhead project is called—could also seriously escalate the U.S.-Soviet arms race. To some in Congress and elsewhere, MIRV is a greater menace than the ABM.

The case of MIRV points up the critical importance of how decisions are made on whether or not to build a weapons system. The crucial decisions are made, in the end, by only one man: the President. But the coinage of presidential actions is often minted long before it is issued by the White House. Proposals for foreign and defense policy, for military strategy and for the spending to implement them come to the President's desk from many sources: the Secretaries of State and Defense, the Joint Chiefs of Staff, the National Security Council, the Budget Bureau, the Congress. Policy-making decisions should, in theory, flow in an orderly sequence: first, basic foreign policy, defense policy to support it, military strategy to implement defense policy, military forces to carry out the strategy; finally, budget decisions to pay for the forces. But, in fact, it sometimes goes the other way: money decisions determine force levels, these in turn affect strategy, strategy influences defense policy—and defense policy then dictates foreign policy.

One man who served two Administrations in a top national-security role puts it this way: "What is needed is a counter to the parochially presented programs and decisions of the Defense Department. No other part of our society functions with so little check and balance. This is not a plot—it is the failure of the rest of our society to develop the expertise to permit reasoned decisions on basic policies."

Can this be done? Many people who know the problem firsthand are gloomy. But the effort is going to be made. A half-dozen proposals for study of the defense structure, and its implications for future national policy, are under way or about to start—including several in the Defense Department it-

self. The suggestions cover the waterfront and include privately financed research centers to review programs, a new joint Senate-House committee with a strong grant of authority to review national priorities, a new independent defense-review office to analyze military spending, expansion of the Budget Bureau's staff. Some think that a determined, open fight will have to be made on the floor of the House and Senate over every major defense issue.

Even with much stronger congressional control, the President will have the key role. "The question in defense spending is 'how much is necessary?'" President Nixon said in June. "The President of the United States is charged with making that judgment."

Still, questions of costs and priorities persist. None of the answers will come easily, especially in a world where nations build great military forces not to make war but to deter it—a world where weapons are built, as one scholar suggests, "not to be used but to be manipulated."

But however hard the questions, they are at least being asked, some for the first time in 20 years, some for the first time ever. Upon the course of the debate that has just barely begun, and upon the kind of answers that emerge, may depend the place of the United States in the next decades—or the next century.

DEFENSE CONTRACT: THE MONEY WEB

(By Gerald Astor)

The Pentagon has long been able to jet combat troops to fight 5,000 miles from American shores if a President decided to apply kill power there. But heavy equipment—tanks, cannons, helicopters, portable bridges and trucks—all traveled slow water freight. So the word went out from the Pentagon to U.S. industry: build us a really big bird.

Lockheed won, and the droopy-winged C-5A Galaxy, 247 feet in length, is the biggest bird yet to get off the ground. In one load, the four engines will lift an M-48 bridge launcher (128,420 pounds), four quarter-ton trucks with trailers, two ambulances, two five-ton trucks with trailers, two three-quarter-ton trucks with trailers plus 52 soldiers to erect the bridge and drive the vehicles.

The C-5A gives the U.S. armed forces massive airlift power, but when it grabs its maximum gross weight of 762,000 pounds and flings itself into the air, a lot more than military hardware goes into the wild blue yonder. In the three and a half years since Lockheed got the contract, it has added 10,000 workers to its Marietta, Ga., plant. Chubby C. U. Dixon, Jr., a mason who earned \$5.55 an hour, signed on for \$3.75 an hour to stuff C-5A wings with electrical gear. "Outside, there's no vacation, no retirement, no credit, and it don't rain in here," says Dixon pointing to the 76 acres of U.S. Air Force Plant B-1.

Perhaps another 9,000 Lockheed-Georgia people who worked on other projects have moved on to the C-5A along with the new recruits. In fact, of Lockheed's \$6 million weekly payroll, approximately \$4 million goes to C-5A workers. For 15 years Gene Amos has been drawing paychecks from Lockheed. "I'm one of the lucky ones, never been laid off," says Amos, a troubleshooter on the production line. "It's a funny thing," he goes on, "but when the union's negotiating a contract, businesses in the area all seem to raise their prices just before the contract's signed. So all you keep are the fringe benefits."

Employees of Lockheed-Georgia spend their money in 85 counties, and most of them pass along their dollars in the Atlanta area and Cobb County, where Marietta is. Gray-haired Len Gilbert, director of the Cobb County Chamber of Commerce, crosses one leg over the other and says, "What does Lockheed mean to us? A heckuva lot. In

1961, a low point when they had about 13,100 employees, the total wages for a quarter in Cobb County amounted to \$33 million." He paused to locate the figures. "In the last quarter of 1968, Cobb County showed a payroll of \$85 million." Corresponding figures for 1961 and 1968 show an increase in retail sales from \$133 million to \$368 million. "A payroll dollar turns over seven times," points out Gilbert, making the C-5A responsible for a big chunk of those sales. While the population of Marietta shows only a slight increase since the 1960 census figure of 25,000, suburban Cobb County has added 66,000 folks to the 114,000 that lived there then. Marietta Mayor L. Howard Atherton remembers when the former tenant of the factory, Bell Aircraft, stopped making B-29's in 1945, and 32,000 people lost their jobs. "It felt like the end of the world, but it wasn't so bad. When Bell shut down, the people left town. It was a transient population. Now, it's different. Lockheed is culturally and economically a part of Marietta. Lockheed people are much more solid, they pay their bills, participate in the community life. They couldn't just move away."

Atherton, who is a drugstore owner, believes that even in the unlikely event that Lockheed should go the way of Bell, his community would survive. "There's been so much building in the last few years, construction's had a bigger effect than Lockheed." In the next breath, Mayor Atherton calls the company "vital not only to Marietta but the whole state."

Some local citizens agree with him. The head of a jewelry outlet says business is up, and not just because of the aircraft workers. "But I often say if Lockheed goes, everything goes. Yet there is a helluva lot of new industry around." The manager of a small-loan company says, "We're not solely dependent upon Lockheed, and with Atlanta coming out this way, it wouldn't be that bad if there were a cutback."

The C-5A spins a web of money that touches far beyond Marietta-Atlanta or even the rest of Georgia. Through subcontracts, the money flows to people in 44 states plus Canada and the United Kingdom. One large satellite effort belongs to Avco in Nashville, Tenn., which builds the 223-foot wings. Avco also makes fuselages for Bell helicopters, wings for other Lockheed planes and metal office furniture. But the largest number of employees, 1,500, work on the droopy C-5A wing, making it, in effect, the largest project in Nashville industry. Few workers joined Avco for this particular job—most sifted over from other assignments.

Avco's \$125 million C-5A contract sounds like handsome business, but General Manager and Vice President Charles Ames says, "We couldn't live on programs like the C-5A." When and if Lockheed goes ahead with the L-10-11 air bus for civil transport, Avco expects to add workers.

One smaller subcontractor operates out of an abandoned shopping center in Caldwell, N.J. Nash Controls, Inc., a subsidiary of Simmonds Precision, turns out small actuating devices. Business dropped when the Pentagon canceled production on Lockheed's Cheyenne helicopter but picked up with the C-5A. Sensitive to recent congressional rumblings on the "overrun" in the C-5A price (perhaps \$2 billion extra), Lockheed officials blame the higher costs on severe inflation in their industry and production-capacity shortages.

Whether one talks to executives, assembly-line workers or local officials, the fears of the military-industrial complex get midget shrift. "We got enough problems building the C-5A," says Gene Amos, "without worrying about that." "It's all a lot of nonsense," says Avco's Charles Ames. "The civilians I know in the Department of Defense are very dedicated, have the highest integrity. There's no desire to perpetuate any military-industrial complex."

GENERALS FOR HIRE
(By Berkeley Rice)

For those who have trouble understanding the complexities of the military-industrial complex, one graphic illustration is the traffic in retired military officers who join the defense industry. More than 2,000 retired generals, colonels, Navy admirals and captains now work for the 100 largest defense contractors. Their numbers have tripled in the last ten years. The top ten firms employ more than half of the 2,000. Many of these had been involved in the contracting process on major weapons systems. Their decisions often meant millions of dollars to companies for whom they now work.

Sen. William Proxmire (D., Wis.) calls this a dangerous and shocking situation. While not charging anyone with corruption, he claims the trend represents "a distinct threat to the public interest." The threat, he says, is twofold: high-ranking retired officers may be using their influence at the Pentagon to affect decisions on contracts with their companies; active officers involved in procurement may be influenced by the prospect of jobs with companies they are buying from. Defense contractors, of course, deny the charges of influence-peddling, and insist they hire ex-military men because of their expertise, and not in reward for past favors.

Despite these denials, research on the employment of retired officers reveals some intriguing patterns. Take the Minuteman II missile program, which has climbed from an original price of \$3.2 billion to \$7 billion. One of the major subcontractors is North American Aviation (\$669 million in 1968 defense contracts). Its avionics division produces the missile's guidance system for the Air Force. Two Air Force plant representatives and a project officer for the contract recently retired and joined North American avionics, one as division manager. Lt. Gen. W. Austin Davis, ex-chief of USAF's Ballistic Systems Division, which handled the contract, is now a vice president of North American. His chief procurement officer also joined the company, which employs a total of 104 high-ranking retired officers, including several other Air Force generals.

Asked if this employment pattern is unusual, a senior Pentagon official remarked, "It happens all the time. Almost all the officers who have anything to do with procurement go into the business. Naturally, they go to the companies they've had the most contact with. If you check the history of any missile or weapon program you'll find the same story."

The story usually ends with the Defense Department paying far more than the original estimate. When the Navy contracted with Pratt & Whitney for 2,000 engines for the controversial TFX, or F-111, the original bid was \$270,000 per engine. By 1967, when production began, the price had risen to more than \$700,000 apiece. The man who signed the production contract was Capt. Patrick Keegan, the Navy's plant representative at Pratt & Whitney. Soon afterward, he retired from the Navy and joined P. & W. as special assistant to the executive vice president. Sharing his office was another special assistant, a former colonel who until his retirement had been in charge of engine purchases for the Air Force.

The problem of plant representatives is crucial, for they are the watchdogs who supposedly guard against delays, failures and cost overruns on a contract. At Marietta, Ga., where Lockheed Aircraft Corporation (\$1.8 billion in 1968 defense contracts) is turning out the giant C-5A jet transport, 230 Air Force officers watch over production. Despite all this supervision, however, the C-5A is well behind schedule, and the final price on 115 planes has climbed from the original bid of \$1.9 billion to \$3.2 billion. The fact that some of these Air Force production supervisors will probably join the 210 other retired generals

and colonels at Lockheed makes one wonder about their objectivity.

There are some limits on what kind of work these men may do when they retire. Federal laws prohibit retired officers from selling to the Department of Defense for three years after retirement and to their own service for life. However, the laws are vague about what constitutes "selling." Since 1962, the Department has taken action in only one case involving a major contractor. Asked why, a Defense Department legal officer comments, "I doubt if anybody here is vigorously beating the bushes trying to discover violations of the selling laws."

Since the purpose of defense companies is to sell to the Defense Department, some observers feel the question as to which employees are engaged in sales is ridiculous. Anyway, most large firms now call their salesmen "marketing men." As defense companies, many of the marketing men are retired officers, but they do not sign the contracts.

W. T. "Pete" Higgins, a former Navy officer, is "marketing manager for naval programs" for an electronics company. "I come with the team that makes the presentation," he admits, "but only as an adviser. With my background in naval electronics, I know damn well I'm helping the company get contracts." Does this mean using his influence? "That's nonsense," says Higgins. "Anything of significance goes through ten to fifteen levels in the chain of command before a final decision. Only peanuts are settled on a single level that could be influenced by personal interest."

Helping the company get defense contracts is a popular non-selling job for high-ranking retired officers. They usually have titles like "assistant to the president" or "director of advanced planning," but they are known in the trade as "rainmakers." Regardless of how much clout they have at the Pentagon, they bring to their companies valuable inside knowledge of service plans for future weapons systems. When a general or admiral who has been involved in planning or research on a big project retires, defense contractors bid for his services as eagerly as any professional football team after a top college quarterback. When Maj. Gen. Harry Evans retired in 1967 as vice director of the Air Force's \$3 billion Manned Orbiting Laboratory program, he was immediately hired as vice president and general manager of Raytheon's Space and Information Systems Division. In 1966, Bell Aerospace Corporation, the Army's largest supplier of helicopters, hired Gen. Hamilton Howze, former chief of Army Aviation, as vice president for product planning.

Most of the large defense companies have high-ranking ex-officers in their Washington offices. Everyone denies that they have any influence on defense contracts, but they are obviously there because they know their way around the Pentagon. One of them is Lt. Gen. William Quinn, former Army Chief of Public Information, and now in charge of "Washington operations" for Martin Marietta, which produces many of the Army's missiles. "We maintain liaison with Defense," says General Quinn, "but I don't go over to the Pentagon on any sales matters." Asked about using his influence, he admits he knows "half the people in the hierarchy over there," but claims he never uses his contacts for business. "Believe me," says Quinn, "this operation is as clean as a hound's tooth. Our real contribution is in maintaining a dialogue between our companies and the military people."

Just how retired officers can help to "maintain a dialogue" can be seen in the work of an ex-Navy officer who prefers to remain anonymous. He retired in 1968 from the Bureau of Naval Weapons, where he had been involved in the selection of contractors. He now works for one of them as a \$200-a-day consultant in Washington. "I know a lot of Navy people here," he says, "and I sort of help the company's men find their way

around. The salesmen take care of selling, but if you don't have an intro like me, you waste your time with underlings who don't have any power. If I want a contract, I know exactly who to go to. Some other guys may know the technical stuff, but I know the people. That's my expertise."

Such expertise may raise questions about conflict of interest, but not to most retired officers who have joined the defense industry. Says Pete Higgins, "You take a man who retires around 45 to 50, with his kids ready for college, and he's got a problem. He can't do it on his retired pay. He's got to have a second career. Many of these men have no other marketable experience. Where the hell else do you want them to go!"

No one seems to know, but as they continue to go into the defense industry the contracting process may suffer. One Defense official claims, "the fact that these lucrative job opportunities exist cannot help but influence those who deal with defense contractors. I remember trying to hold down costs on a large contract once, and a general working with me said, 'I must be out of my mind, trying to cut the overhead on this company. I'll be part of that overhead in a few years.'"

When military men spend much of their careers dealing with companies they may eventually work for, they naturally develop some concern for the company's point of view. When 90 percent of the major defense contracts are negotiated in such a congenial atmosphere, price and the public interest can easily become secondary considerations. A normal buyer-seller relationship has a built-in check against this sort of thing, because the buyer must spend his own money. The services do not, a fact which Pentagon officials and procurement officers often seem to forget.

Despite all the criticism of defense spending, most military men look on the growing traffic between the services and the defense industry as natural and proper. An admiral who has had the transition himself claims, "It's good for the military, it's good for the company, and it's good for the country."

It's certainly good for the companies thriving on defense contracts. It may be good, or at least comforting, for the military to deal with former comrades who understand their problems and look forward to jobs in industry. But as defense costs continue to drain funds desperately needed for domestic programs, some Americans are beginning to wonder if "it" is really good for the country.

THE WASTE

(By David R. Maxey)

Remember Robert Goodloe Harper? No? He's the prophet who said, in 1798, "Millions for defense, but not one cent for tribute." We haven't let Bob down. Harper's hyperbole, now puffed to \$80 billion annually, is still part of the American way of life. Congress has traditionally watched domestic spending like a hawk, but focused loosely on defense. Here are some examples of looseness that have stirred interest. How do you like them?

DIVE! DIVE!

In 1964, the Navy planned to buy 12 Deep Submergence Rescue Vehicles. Purpose: to lend aid to disabled submarines. Cost: \$3 million each. In June, hideous new cost estimates surfaced. Now, the Navy will buy six vehicles for \$80 million each. Cost increase: 2,666 percent. Since the 1920's, we have had one submarine accident at which the DSRV might have had a chance of being useful. One.

THE RUSSIANS WERE COMING, THE RUSSIANS WERE COMING!

The threat of Soviet bombers in American skies caused us to build a gigantic air-defense system. One estimate of cost: \$18 billion. The Russians failed to uphold their part of the bargain by not building enough bomb-

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ers to be a real threat. We should be grateful for that, because our air-defense system does not work very well. Now hear this testimony: Senator Cannon: "In other words, the Air Defense Command agrees that if the Soviets sent over (deleted) heavy bombers now, we would only knock down (deleted) out of the (deleted)?"

Dr. Foster [of the Defense Department]: "I cannot speak for the Air Defense Command, sir; but I am not the least bit surprised. (Deleted)."

Senator Cannon: "I am shocked at that." Senator Symington: "Incredible."

The system maligned above costs annually at least \$1.34 billion to operate, with outsiders betting on \$2 billion.

DISINGENUITY WALTZ

Gordon Rule, Director of Procurement Control and Clearance, U.S. Navy, told Sen. William Proxmire at a meeting of his subcommittee recently why defense-procurement programs so often cost much more than estimated: "We play games. The contractors know if they tell the Department of Defense how much a system will really cost, they'll scrub it. The Department of Defense knows if they tell the Congress the real cost, they'll scrub it. You start in with both sides *knowing* its going to cost more." Proxmire shouted that was dishonest. Rule replied that he preferred to call it *disingenuous*.

BALLAD OF ERNIE FITZGERALD

In November, 1968. A Ernest Fitzgerald, Deputy for Management Systems for the Air Force, told the Proxmire subcommittee he estimated the Lockheed C-5A cargo plane would cost about \$2 billion more than the Air Force had originally estimated. Pentagon executives became cross with Fitzgerald for his candor. Twelve days later, he found that his Civil Service status had been revoked. "Computer error" was blamed for giving him that status in the first place. Senator Proxmire then unearthed a memo to Assistant Secretary of the Air Force Robert Charles. The memo discussed ways to fire Fitzgerald. Fitzgerald still has a shriveled version of his job, but cost control on large weapons procurements is not part of it. The Air Force has since verified that Fitzgerald's estimate of a \$2 billion overrun on the C-5A is very close to right. Lockheed first estimated that it would lose \$13 million on the C-5A, then allowed it might make a few bucks.

THE LITTLE HELICOPTER THAT COULDN'T

Helicopters are crafts of real beauty only when they work. The Cheyenne helicopter was never beautiful. It was to be a gunship, built as such from the ground up. Willis Hawkins, then Assistant Secretary of the Army for Research and Development, supported the idea. Hawkins had come to the Army in 1963 from a vice president's job at Lockheed.

It took time to decide what firm should build the Cheyenne. Experts first rated Vertol, Bell, Lockheed and Sikorsky in that order. A Source Selection group of generals made changes, rating Lockheed first, then Vertol, Sikorsky and Bell. A final pick gave the contract to Lockheed. Why? "Stronger management." "What general," rips a critic, "could rate Lockheed's management anything but high when he knows that the Assistant Secretary came from Lockheed?"

On March 23, 1966, Lockheed got the research-and-development contract. Three months later, Willis Hawkins resigned and returned to Lockheed. The first Cheyenne appeared in May, 1967, followed by nine more. Test flights began. In March, 1969, a Cheyenne off California threw three rotor blades and plunged, killing the pilot. In April, the Army threatened to cancel the contract for lack of satisfactory performance. Estimated costs had soared all the way from \$138 million to \$186 million for 15 ships. In May, 1969, the Army canceled the Cheyenne, after spending \$159 million.

BUT IT WORKS ON PAPER

A study by Richard Stubbing of the Bureau of the Budget said we're getting worse, not better, in the design and application of electronics system for aircraft and missiles. Stubbing listed 13 major Air Force and Navy aircraft and missiles produced since 1955, pointing out that only four had electronics systems that were over 75 percent reliable. Eleven other systems, which cost \$25 billion, sputtered below the 75 percent standard. Four programs were either canceled or phased out for low reliability. Stubbing said we'd do better to ask systems contractors to build working models rather than promising reliability based on paper estimates. He also thought competition between contractors would concentrate their minds wonderfully.

THE HIGH COST OF ABORTED MISSILES

Sen. Stuart Symington of Missouri pointed out last March that over \$4 billion had been spent since 1944 for missiles that never got into position to be fired. They all perished during the research-and-development phase of their lives. Big as that figure is, it's smaller than if those missiles had been produced and deployed, then found to be technically sick or obsolete. Fifteen other missiles did get into position, then were scrapped. Cost: \$18.8 million.

HOW TO CUT THE BUDGET

Vietnam is a giant teaching machine. Without the mind-riveting pain it causes, we might still be leery of questioning the operations of the Department of Defense. We might still be dreaming that since our military establishment is the finest in the world, the running of it is better left to military experts, well-supplied with money.

Such dreams have faded. Congress, less afraid of being labeled unpatriotic, is asking penetrating questions. And the answers prove beyond imagining that if to err is human, the Pentagon is full of mortals. From that finding, it is only a step to asking whether we can't have sufficient defense at lower cost, and perhaps use the savings for programs with lower priorities, like healing our cities and making poverty an anachronism. The answer to the first part of that question is yes. The Defense budget can be cut without radically thinning our blood.

Some of the best thinking about the military budget has been done by Charles Schultze, former Director of the Bureau of the Budget and now a Senior Fellow at the Brookings Institution in Washington. Schultze, a rational man, hopes that our defense planning proceeds logically. First, we examine what our commitments around the world are. For instance, we now have in force better than 40 mutual-security agreements involving the U.S. in the defense of large chunks of Earth. Should we be all that involved? Do some pacts need rethinking? Given those commitments, what kind of fight might we get into? What threats should we plan for?

This June, Schultze reminded Sen. William Proxmire's Subcommittee on Economy in Government that our contingency planning now says that we should be able to start fighting, simultaneously, a major "NATO" war in Europe, a major war with China in Southeast Asia, and a minor scuffle in Latin America, such as our last trip to the Dominican Republic. Schultze pointedly said that the China war contingency, a \$5 billion assumption, was never debated in the Congress, even though the Defense Department has made it vrey, very clear that it is covering the possibility of such a war.

Once our contingencies are agreed on, Schultze said, we take the step of asking what force levels we need to handle them. How many men? Then, what weapons systems should we buy?

So. An orderly process, from commitment to contingency to force level to weapons

systems. Schultze cautions that every decision along the way needs fresh scrutiny, because, for instance, the decision to be ready for two and a half wars does not make the force level needed to fight them obvious and unchangeable. Schultze delights in the example of the Navy's aircraft carriers. Currently, the Navy has 15. Why 15? One reason is that the Washington Naval Disarmament Treaty of 1921 laddled out national quotas of capital ships. The U.S. got 15. After World War II, the Navy saw that the 15-battleship force was obsolete. The aircraft carrier became the new capital ship, but we cling to the magic number still.

Carriers are what one critic calls "hideously vulnerable" to air attack. They work best, when the U.S. has unquestioned air superiority, such as in Vietnam. But does their vulnerability, and the number of dry-land fields, justify having 15? If the force could be cut to 12, say, the U.S. would save about \$360 million. And the direct cost of building one new carrier is about \$540 million.

Schultze comes down hard on the military tendency, logical only in a world of limitless wars and money, to plan for every possibility, remote or not, and build forces and weapons systems to meet it.

Currently, we are planning AWACS, the Airborne Warning and Control System, to add to our existing air-defense system. The logic of air defense tortures the mind. We built the system to shield us from Russian bombers, which the Russians never really got around to building. Now, we spend to improve it in order to discourage Russia from getting around to building bombers. Proponents of AWACS say it will warn us of Kamikaze-style attacks from Soviet medium-range bombers. How likely is that? And would it feel better to know that if our cities crisp in a nuclear war, we'd be burned by missiles instead of bombers? There is, by the way, much reason to doubt that AWACS will work any better than the current system.

In June, 1968, *Congressional Quarterly*, putting civilian and military officials off the record to elicit candor, did an exhaustive reporting job on the Defense budget. CQ found Pentagon insiders estimating that, aside from savings on weapons systems we don't need, around \$4.2 billion could be excised by cutting the size of the armed services. That estimate did not assume an end to the Vietnam war, but only a reduction in the proportion of support troops to combatants (now about three to one), and a drop in the number of men in the "transient" category—men budgeted in excess of force requirements because they'll be traveling, not working.

Nine months later, Robert Benson, formerly of the Comptroller's Office, Defense Department, wrote in *Washington Monthly* that he saw another \$1.5 billion in savings from troop reductions in Europe. We have over 300,000 there now, plus 200,000 dependents. Benson argued that the U.S. will not send troops into Eastern Europe anyway (witness Hungary, Czechoslovakia), so the forces can be reduced without critically diluting the American presence.

Benson found further savings in people. He figures that if annual leave time for a serviceman were cut from 30 days to 20 (to more nearly match civilian vacations), it would slice manpower requirements enough to save \$450 million. Benson also proposed shortening basic training for soldiers not aimed at combat roles—that is, most of them. Saving: \$50 million a year. The Air Force and the Navy have already shortened basic training for their men. And why, asks Benson, should every Army officer be shuttled around as if he were in training to be Chief of Staff? Right now, men move on the average of once a year. Benson shows savings of \$500 million if assignment changes could be lowered by 25 percent.

Between them, Benson and the Congressional Quarterly staff agreed on a cut in the Defense budget of \$9 to \$10 billion a year, Vietnam or no Vietnam. Benson's estimate includes a 15 percent increase in the efficiency of defense contractors. That might take some doing.

In the broadest terms, and with examples almost too fierce to mention, the Proxmire subcommittee found that there never has been much interest in cost control, either on the part of contractors or their customers in the armed services. Ernest Fitzgerald, who first identified the \$2 billion cost "overrun" on the Lockheed C-5A jet transport that cost control is seen as "antiosocial activity." He cited the case of the Mark II avionics system, a "black box" for the navigation gear and radar on the F-111 fighter-bomber. Costs on the system, experts bet, have risen from a planned \$610 million to \$2.5 billion.

In June, Secretary of Defense Melvin Laird, doing some digging of his own, produced a study of 12 weapons systems that showed cost overruns ranging from 0.2 percent to 194 percent on nine of them. The latter increase was on SRAM, the Air Force's Short Range Attack Missile, now expected by the Pentagon to cost \$313.9 million more than was estimated. Outsiders bet the SRAM bloat is worse than that. Laird dryly noted that \$1.4 billion of the nine overruns was due to "optimistic original cost estimates" on the part of weapons contractors.

But contractors suffer from more than simple optimism. They sometimes underestimate their costs deliberately, in order to bid low and grab a contract. This practice is called "buying in." It is based on the assumption, valid historically, that the customer services will pay the costs no matter how they creep. Former Assistant Secretary of Defense Robert Charles could not recall for Proxmire when he'd last seen a major defense contractor lose money on a contract. That, in spite of the fact that over 90 percent of all weapons systems end up costing twice what the contractors' original estimate said they would.

Fitzgerald has some ideas of how to bring an atmosphere of candor and concern for cost into the military-industrial dialogue. In the process of explaining them, he has made public a privileged language. For instance, when a manager of a weapons-system procurement finds that costs are outrunning the money Congress gave him, he has a "funding problem." In other words, costs are not too high, his funds are too low. Fitzgerald reports that since he's been in the Pentagon, he has never heard of cost reduction as an answer to a funding problem. A "credible" cost estimate is one high enough so that actual costs do not produce an embarrassing overrun.

What Fitzgerald and others are telling us is that bargaining and cost control, twixt military and contractor, is not gimlet-eyed jockeying in the best sense of free enterprise. It is more the murmuring of lovers.

Fitzgerald would like to see the Pentagon use what are known as "should-cost" studies. These studies, sharp penciled by efficiency experts, try to answer what a weapons system should cost, assuming for one sweet, fleeting moment that the contractor operates in a reasonably efficient way. The Government would function as a management consultant to show the company how to hold costs down. Previous should-cost studies found considerable waste motion and superfluous workers, sometimes overstaffed up to 60 percent for the work needed. Taken together with hard-nosed devotion to economy on the part of top Pentagon officials, should-cost studies and other techniques, Fitzgerald thinks, could result in the saving of billions. Think that over. Billions.

We should lay to rest now the notion that defense cuts would damage the economy.

Arjay Miller, ex-Ford Motor Co. vice chairman, told Look Senior Editor Al Rothenberg: "I think a reduction in military expenditures . . . would have a plus effect on the economy. When rumors of peace break out, the stock market goes up. . ."

If the Pentagon moves sharply to slash costs, the size of the Defense budget will depend all the more on the decisions made in the White House and Congress about how ambitious the country's defense policy should be. Charles Schultze is not impressed with the idea that a well-organized military-industrial complex has been siphoning cash out of the Treasury with evil design. Rather, he said, the American people "have pretty much been willing to buy anything carrying the label 'Needed For National Security.'" Schultze talked about involving the Bureau of the Budget, traditionally the President's watchdog, more deeply in the writing of the Defense budget. Previously, the Department of Defense was less scrutinized than any other Cabinet department. President Richard Nixon recently took Schultze up on that, giving Budget Director Robert Mayo what Mayo called his "marching orders" to examine Defense thoroughly.

All the talk of cost-cutting now, of reducing the Defense budget, echoes down the road to a time when the bad dream of Vietnam will be over. Then, we will find out what kind of "peace dividend" we'll get, i.e., how much money will be available for use in domestic programs or for paying out to taxpayers in the form of lower taxes. Projecting tax gains from a growing economy and the savings from not being in Vietnam against the automatic increases in domestic programs and the growth in non-Vietnam defense spending, Schultze forecast a cumulative fiscal dividend of \$35 billion by 1974. That sounds large, until we note that increases in military spending *already planned* will use up the \$20 billion a year we save from leaving Vietnam. The Defense budget can go marching on without the war. Whatever fiscal dividend we do get will come from the gain in tax revenues from a full-tilt economy. And Schultze's projection does not include the costs of large new weapons systems, or an escalation in the arms race. Those would poison the dividend.

The Nixon Administration has already cut \$1.1 billion in expenditures from the 1970 Johnson Defense budget. Recently, the Manned Orbiting Laboratory, a project on everyone's list of extraneous matter, was unmanned. Future savings from that surgery will be at least \$1.5 billion, perhaps more. And Laird has given every indication that his study of nine weapons systems would not be the last hunt for waste.

But we also have the word of Robert Moot, Defense Department Comptroller, that the Pentagon expects no significant cutbacks below the \$80 billion budget, even after American forces move out of Vietnam. He guessed \$75 billion would be somewhere near right, unless "our commitments and our missions can be cut back." And the responsibility for thinking about that, aside from the President's, lies with a Congress now somewhat awake to the chances of saving some dollars for domestic consumption.

THE UNIVERSITY ARSENAL

(By Ruth Gelms)

Angry students and newly formed groups of concerned faculty are raising some tough questions on college campuses. The American multiversity, it seems, is fast on its way to becoming a docile Pentagon pet, dependent on military financing and deeply enmeshed in the defense establishment.

On March 11, more than 1,400 students crammed into Stanford University's Memorial Auditorium to demand the facts about that school's involvement in war research. (Stanford ranked 46th last year among the nation's defense research-and-development contractors.) The answers were to come from

five university trustees. One was William Hewlett, president of Hewlett-Packard, whose defense sales last year totaled \$34 million. Hewlett is also a director of Chrysler (\$146 million in defense contracts) and FMC Corporation (\$185 million). Another trustee was Charles Ducommun, a director of Lockheed (\$1.9 billion).

Among the trustees who were not there were the president of Northrop Aircraft and the chairman of General Dynamics.

A trustee began, "I don't think it's fair to say that the university is participating in the war." The audience groaned. He continued, "Many people within the university are actively opposing the war."

"It's very nice," a student shouted, "to view the university as an open place where I do my thing and you do your thing, only your thing happens to be doing research on weapons of destruction and death in the name of the university."

The two-hour confrontation turned very nearly into a rout, as the trustees' answers became progressively inadequate, irrelevant and evasive. At one point, Hewlett flatly denied a charge that FMC manufactured nerve gas. The students presented evidence; Hewlett countered that his source was the president of the corporation. Finally he admitted FMC had been making nerve gas up to six months earlier.

The trustees' performance at that meeting radicalized a good many students, including Mike Sweeney, a former editor of the Stanford Daily who was sufficiently respected by the administration to have been appointed two important student-faculty committees. Sweeney walked in a liberal and walked out a radical. Now he pickets and demonstrates. "I've lost all my credit with the Establishment. It doesn't matter; you no longer care that much whether your future is going to be destroyed, whether you're imprisoned, whether you'll be physically endangered—because there's no alternatives."

The Stanford University trustees appoint the Board of Directors of the Stanford Research Institute. SRI was created in 1946 as a nonprofit "wholly-owned subsidiary" of Stanford to "improve the standard of living and the peace and prosperity of mankind." It does nearly half its research (\$29.7 million) for the Defense Department. Ten percent of its work (\$6.2 million) is military research directly related to Southeast Asia. SRI operates top-secret counter-insurgency projects in Thailand, including a new \$1.8 million contract accepted last December. It has also done secret counterinsurgency research in Vietnam, Honduras and Peru. One classified project is summarized as "considering the advantages and disadvantages of providing U.S. operational assistance to the armed forces of the Government of Peru engaged in counterinsurgency operations."

SRI's board includes:

Ernest Arbuckle, chairman. Arbuckle is a Stanford trustee, a director of Hewlett-Packard and a director of Utah Construction & Mining. Utah built B-52 bases in Thailand, and its affiliate, Marcona Corp., mines iron ore in Peru.

Edmund Littlefield, also a Stanford trustee, and president of Utah.

Malcolm MacNaughton, president of Castle & Cooke, which owns 55 percent of Thai-America Steel and 84 percent of Standard Fruit. Standard Fruit imports bananas, nearly half its supply from Honduras.

Edgar Kaiser, chairman of Kaiser Aluminum, part owner of Thai Metal Works. Kaiser also has an 80 percent interest in the phosphate deposits of the Sechura Desert in Peru.

Fred L. Hartley, president of Union Oil of California, which has drilling rights off the Thai coast.

Gardiner Symonds, chairman of Tenneco, which now has extensive concessionary rights, in Indonesia.

Counterinsurgency is not the brainchild of these directors, but it protects their interests very well.

Jerry Dick, a young physicist and father of two, is opposed to the Vietnam war. In February, at a meeting sponsored by the Stanford chapter of the American Association of University Professors, Dick heard SRI President Charles Anderson argue that no researcher was forced to take on any project he found morally objectionable.

Dick stood up: "Sir, I was pressured into doing chemical-warfare research." That candor, he learned later, nearly cost him his security clearance.

I went looking for Dick, and an employee told me, "I think he's still here, but he may not want to see you." Couldn't I talk to him on the telephone? "Well, that might not work either. It's clear that they can bug the switchboard, and a lot of us here think they probably do."

I asked Weldon "Hoot" Gibson, executive vice president of SRI, if Dick was still working there. His face flushed with anger. "I don't know. I really don't. Have you seen him? Don't bother. . . . People like that have a decision to make—do they want to support the organization or not?"

When I found Jerry Dick, he'd been fired. William Rambo is associate dean of the Stanford School of Engineering and director of the Stanford Electronics Laboratories target of a nine-day student sit-in in April. The labs held \$2.2 million in classified contracts, primarily in electronic-warfare research, before the faculty senate directed on April 24 that the contracts be phased out. Shocked faculty members learned meanwhile, from the sit-in students, that contract titles and summaries had been carefully edited to delete military references, apparently to facilitate approval of the contracts by a watchdog committee on classified research. "Applied Research in Electronic Warfare Techniques," for example, became "Applied Research in Electromagnetics."

Rambo is on the board of, and holds stock in, Itek, an electronics firm that held over \$80 million in defense contracts at the end of last year.

He is also a member of several military advisory committees, including the Defense Department Advisory Group on Electronic Warfare and ECOM—the Army Electronics Command. In other words, he is called upon as an expert to advise the Defense Department on the usefulness of the kinds of equipment Itek supplies.

Rambo, in all sincerity, says he wonders "how much talent we are denying the Government by this sensitivity regarding conflicts of interest."

In a 1966 memo, Hubert Heffner, then Stanford's dean of research and now Nixon's deputy science director, acknowledged that it was "not uncommon" for faculty members to be directors of private firms, and, declining to set rules, urged teachers to be "sensitive" to potential conflicts of interest. Sensitive or not, professors across the nation sit on the boards of defense industries and advise military committees.

MIT's research budget for the academic year 1967-68 was \$174 million, and 95 percent of this came from the Federal Government, with \$120 million from the Defense Department alone.

Such heavy dependence on one source worries many university administrators, including Cornell's former president, James Perkins, who warned that the "acceptance of Government work and corporate donation has been known to result in a slowing down of the university's critical faculties."

One laboratory director may already be in trouble because of his cautiously critical views. Dr. Wolfgang Panofsky, who directs the AEC-funded \$30-million-a-year Stanford Linear Accelerator Center (SLAC), believes

university scientists ought to play a crucial role as an independent source of public review of defense policy: "It can't come from people who work directly for the Defense Department because they're obligated to live by official policy. It can't very well come from the contractors whose living depends on the Defense Department. So the universities are the only places with the technological expertise left. The real problem is how do you keep the universities from becoming captive in the process of furnishing this advice?" One answer, he says, is that "the livelihood of the university must in no way depend on Defense Department support."

A professor at the Center, arguing that "the director of a laboratory is not a free man," attributes SLAC's current funding difficulties to political reprisals. "This lab is not being pleasant politically anymore. Most of the people here have come out against the ABM, so the Center has begun to lose a few of its friends in Congress. And the way you get a budget increase is, you have friends on the AEC, friends on the Joint Atomic Energy Committee."

A few months ago, as if deliberately to substantiate that charge, Francisco Costagliola, who was at the time an AEC Commissioner, wrote to Stanford and MIT threatening that should the schools decide against doing classified research, he would press for withdrawal of all AEC research money.

Sidney Drell, another SLAC professor, found himself in an awkward position when he addressed the Stanford March 4 Convocation. (Stanford and more than 30 other universities held convocations that day to raise the issue of war research.) Drell carefully avoided taking a public stand on the ABM that day because he felt constrained by his position as a member of the President's Science Advisory Committee. He is an opponent of the ABM.

Money, or the lack of it, has boxed a number of university administrators into a corner. Some admit a desire to pull back from defense work and reorient research priorities, but complain there is simply no alternate source of comparable financing. The one agency specifically charged with supporting basic research, the National Science Foundation, has only enough in its till to support 12 percent of that research. But the Defense Department, NASA and the AEC do support a good deal of basic research, partly because they can more easily get appropriations.

When pressure on the Defense Department compelled it to cut back on some of its controversial foreign-country projects, it offered to transfer \$400,000 of its own \$7.8 billion research budget to the State Department. The Department of State's current budget for research contracts is \$125,000.

Stanford's President Kenneth Pitzer complains, "Our national priorities are wrong." But when he needs funds for university research programs or expansion, where is he to go? The new Stanford Space Engineering and Science Building, for example, was made possible by grants of \$2,080,000 from NASA and \$992,000 from the Air Force.

Universities have learned that it doesn't hurt to have a Pentagon man on your staff. When the president of the California Institute of Technology, Lee DuBridge, left for Washington to become Nixon's Science Adviser, he was replaced by Harold Brown, then Secretary of the Air Force. Last year, Caltech received \$3.5 million from the Defense Department, much more than its entire student tuition. NASA and the AEC supplied an additional \$5 million. Caltech also operates the nearby \$214-million-a-year Jet Propulsion Laboratory for NASA.

A year ago, the University of Rochester, whose defense contracts increased from \$1 million in 1966 to \$13 million in 1968, hired as its vice president and provost, Robert L. Sproull. Sproull is the current chairman of

the Defense Science Board, the top Pentagon science-advisory committee.

The University of California holds \$17 million in defense-research contracts and administers the \$250-million-a-year missile-development and testing laboratories at Livermore and Los Alamos. Its new president is a former Assistant Secretary of Defense, Charles Hitch. The university also maintains an \$80,000-a-year office in Washington.

MIT chose Jack Ruina to be vice president in charge of the Lincoln and Instrumentation laboratories, which do most of their business (\$92 million) with the Defense Department. A former Pentagon official, Ruina is a pragmatist: "You can say you'll withdraw the labs [from military work], but who's going to pay their salary?"

The heavy investment in military research has a snowballing effect. As one professor complains, "The trouble is, when you develop it, somebody will want to build it." The researcher who takes on a military contract because that's where he can most easily get funding, and then develops a new technique or weapon, frequently starts a new "spin-off" corporation to produce it. Route 128 around MIT and Harvard and the 900-acre industrial park owned by Stanford University are crowded with hundreds of aerospace and electronics spin-offs, most of them doing most of their business with the Defense Department. In recent years, 160 new firms have spun off from MIT alone.

The new corporations in turn hire university consultants (MIT professors may consult one day out of five) and graduating students. For that one-third of MIT's graduate students who support themselves as research assistants, future careers are determined by the kind of research they do while in graduate school. In 1968, 45 percent of MIT's industry-bound graduates took jobs with the top 100 prime defense contractors. Many still receive draft deferments for working in a defense plant.

Every new employee of a defense-oriented corporation has a vested interest in a swollen defense budget. His livelihood depends on it.

Half of all U.S. research and development is military in nature. Last year, the U.S. spent four times as much on chemical and biological warfare as it did on cancer research. The man who invented napalm was not a Dow employee but a Harvard professor working in a Harvard lab. Universities and nonprofit research institutes received \$665 million from the Defense Department in 1968, for work on the ABM and MIRV, for research on aerial-weapons systems, anti-personnel bombs, chemical and biological warfare, incendiary weapons, counterinsurgency, and such mind-teasers as the classified contract titled "Beliefs and habits of certain foreign populations of significance for psychological operations."

Talent and funds that could be applied to problems of urban blight, disarmament, pollution, poverty, and disease are drained into newer, bigger, better weapons systems.

Dr. James Killian, chairman of the MIT Corporation (he was the nation's first presidential Science Adviser), has recommended to a Senate subcommittee that an ad hoc task force be created to review our weapons technology and strategic policies. Scientists thus "free or organizational loyalties" could make recommendations "without being constrained by any departmental commitments or biases."

Such a task force is not even in the planning stage. Right now, if the President wants a detailed study of, say, Russia's strategic capabilities vis-à-vis the U.S., he asks the Defense Department to ask the Air Force to ask the Rand Corporation to do the study. There is no large-scale, civilian-supported "think tank" to which the public or Congress or even the President can go directly

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for advice on strategic policy. The scientist's voice is captive, reaching us only after it has been filtered through Pentagon agencies and distorted by military interpretation.

OUR SECURITY LIES BEYOND WEAPONS
(By W. Averell Harriman)

Like many other Americans, I am fearful about the present role of the military in our national life. Military men have as their primary responsibility the defense of the nation, and they are miscast when they are expected to be omniscient on other vital national concerns. It is in some ways unfair to ask them to accept responsibility for decisions on which they are clearly unqualified to give a balanced judgment.

I have worked closely with our military officers during the past three decades and respect them for their competence and dedication to our country. I have held many of them in the highest esteem, among them General Marshall. I vividly recall Marshall explaining to President Roosevelt that his advice was given purely from a military standpoint.

When military men advised extreme action in Vietnam, I am not sure that they fully realized the limited character of our objectives there. We are not there to win a war, but simply to stop the North from taking over the South by force, and to permit the people of the South to decide their own future. I am not sure that all those advising the President fully understand how limited our objectives are. Somehow or other, there is a feeling that we are fighting the international Communist conspiracy—rather than Vietnamese national Communists who do not want to be dominated by either Peking or Moscow. The international Communist situation is quite different today than it was in the early postwar period. During those days, I was always on the side of those wanting more arms for our nation. When South Korea was attacked, we had a military budget of only about \$14 billion, and we suffered greatly from it. But today, we have a military budget of almost \$80 billion, and have so many other requirements in our country that it is time to call a halt to our arms buildup. The war in Vietnam is an unfortunate drain on our resources, and will, I hope, be brought to an early settlement. The money we spend there is urgently needed now to reunite our own divided country.

It is not the military's job to know how that is to be done, and they cannot be expected to weigh the technological requirements of the military against the requirements in our cities. The military today are asking for new weapons that in my judgment are clearly less important than other national needs.

We obviously must maintain nuclear capability giving us a second strike force that would deter the Soviet Union or anyone else from hitting us. But that does not mean we have to be ahead in every aspect of nuclear capability, nor does it mean that we must have many times the power to overkill any enemy.

In 1941, I was in London as President Roosevelt's representative to Prime Minister Churchill and the British Government. Even then, I was struck by the difference in the role of the military in Britain and in the U.S. The British War Cabinet consisted of the political leaders of the country, and the ministers of the armed services were not even members of it. I am not suggesting that the British military leaders were not highly respected or that their views were not given full weight. But they were given weight within the Cabinet in balance with the other problems of the British nation. The military chiefs of staff were advisers to the Cabinet. The military establishment was integrated into the policy-making procedures of the British Government. They had no

contact with the Parliament, nor did they give any public expression of their views.

This is altogether different from our present procedures. Not only the Secretary of Defense but also the Chiefs of Staff go to the committees of the Congress and testify on all sorts of matters. As a result, a number of senators and congressmen get an unbalanced view of our nation's needs from military men who are responsible for only one aspect of our national concerns. What I am suggesting is that we have a group of senators and congressmen whose attention is concentrated on military needs. That is why we had one member of the Congress saying a short while back that if we turned over the Vietnam war to the soldiers, they would win it in a month.

Nothing could be more absurd than that statement. But it indicates the mind-set that some members of Congress get after steady bombardment by the views of our military. Their responsibility is the security of the nation, and they must look at the worst of everything. Those who see only the possible military threats would drive us into another world war. That is why isolated military judgments of political situations are not sound. Robert Kennedy wrote that during the Cuban missile crisis, he was struck by how often his brother's military advisers took "positions, which, if wrong, had the advantage that no one would be around at the end to know" how wrong they were.

All of us abhor Soviet repression of freedoms at home and in Czechoslovakia, and their support for Communist subversion in independent countries. But I decry the attempt that is being made today by some in the Defense Department and Congress to scare the American people into believing that the Soviets are scheming to attack us with nuclear weapons. No one knows the intention of the Kremlin, but I can speak from my Russian experience that dates back over forty years. I am convinced that the Soviets are as anxious to avoid destruction of their country by nuclear war as we are of ours.

It is particularly alarming that there appears to be a new policy in the Pentagon, to have the civilian-directed offices of International Security Affairs and Systems Analysis support the recommendations of the Joint Chiefs of Staff and not question them.

It is reassuring that the Congress is increasingly showing concern over military programs and exercising its independent judgments on decisions.

I believe that negotiations we are now starting with the Soviets to control the nuclear arms race are the most important we have ever undertaken. They can be successful if we act wisely.

From my talks with Mr. Kosygin and other Soviet officials, I am satisfied that they want to stop the nuclear arms race for two reasons. They don't want to divert further expenditures from their pressing internal needs. And they believe the U.S. and the Soviet Union should come to an understanding now to reduce the risk of nuclear war. This is a time of world opportunity—a split second in history. I have been told by my scientist friends that both sides can develop effective MIRVs (Multiple Independently-targeted Re-entry Vehicles) in a relatively short time. It is vital that agreement be reached before this occurs. We can each tell the number of missile sites the other has but we cannot know the character of warheads fitted to the missiles without detailed on-site inspection. I was very much shocked to hear that the military had gone ahead to order these multiple warheads without telling the Congress or the public that they had done so.

There are advisers in our defense establishment who are on record as opposing an agreement with the Soviet Union on nuclear restraint. They are entitled to their opinions,

but it would be inexcusable if actions were taken that committed us to the arms race without the widest possible discussion. I am sure President Nixon believes that an agreement on nuclear restraint is of vital importance to our nation, and most Americans share this judgment.

It is interesting that it took eight years for the Congress and the public to understand what President Dwight Eisenhower was talking about when he warned about the military-industrial complex. It is only recently that we have begun to question the new weapons programs, the wisdom of immediate deployment of the ABM, and testing of the MIRV. Until now, the pressure from the Congress has been to appropriate more money than the Administration requested for new weapons programs. Pressure comes now in the opposite direction. The turnaround is due largely to the unpopularity of the war and the urgency of domestic needs. We are beginning to recognize the danger of a militaristic attitude on the part of our country. Our security will not come from the number of our weapons. It will come from the strength of our moral force at home and abroad, from our economic and social strength, and from the unity of our people.

Mr. PROXMIRE. In addition, Mr. President, I call attention to two editorials, published in the New York Times of August 11, 1969, one entitled "Homage to the Astronauts," and the other entitled "Portrait of Mars." I read briefly from the first editorial, as follows:

This background makes it particularly unfortunate that the formal celebration planned this week has such a narrow, nationalistic cast. In the words of the plaque they left on the moon, the astronauts "came in peace for all mankind." Yet their visit to the United Nations next Wednesday will be very brief, while the rest of the day will be devoted to an American celebration of an American achievement.

Perhaps it is not too late for more imaginative planning to emphasize the role of the astronauts as envoys of all humanity, emissaries whose trip was made possible by contributions of knowledge from many nations over many centuries. Better than any men before them, after all, Armstrong, Aldrin and Collins know that this one planet is one world and that what unites men is far stronger and more important than the forces dividing them.

I also wish to quote briefly from the followup editorial, on where we go from here, entitled "Portrait of Mars." After discussing what the remarkable shot we have seen in the last few days has revealed about Mars, the article says:

Whether the Pimentel-Herr hypothesis is right or wrong, the case is strong for further intensive study of Mars by unmanned satellites—as against a precipitate switch to the much more costly alternative of manned exploration. A race to put men on Mars would be a moonoggle for which there is neither need nor justification.

I hope when we look at the space authorization bill, which I understand will be before us shortly after we return, we will keep that in mind. The National Advisory Council advised some time ago that we can save a billion if, for the next 3 or 4 years, we limit our space exploration to unmanned exploration. Our voyage to the moon is the most remarkable achievement in centuries. Having accomplished that, our next step should be unmanned space exploration,

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with less potential loss of life and a great saving in funds.

I ask unanimous consent that the New York Times editorials from which I have quoted be printed in the RECORD at this point.

There being no objection, the editorials were ordered to be printed in the RECORD, as follows:

HOMAGE TO THE ASTRONAUTS

By this morning, if all goes as planned, the three Apollo astronauts will have been released from quarantine and reunited with their families. Then they will begin receiving the world's homage for their historic accomplishment in a celebration that will start with Wednesday's grueling cross country parade.

Armstrong, Aldrin and Collins richly deserve the heroes' acclaim they will receive in the days immediately ahead. As no earlier feat has ever done, their successful trip to and return from the moon captured the imagination of men and women almost everywhere. In the universal glow produced at least briefly by their success, many of the normal divisive barriers among men broke down. They were hailed in Moscow as well as in Washington, in Cairo as well as in Jerusalem, in New Delhi and Karachi, in East Berlin and West Berlin.

This background makes it particularly unfortunate that the formal celebration planned this week has such a narrow, nationalistic cast. In the words of the plaque they left on the moon, the astronauts "came in peace for all mankind." Yet their visit to the United Nations next Wednesday will be very brief, while the rest of that day will be devoted to an American celebration of an American achievement.

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PORTRAIT OF MARS

On that eventual day when the first men walk on the surface of Mars, they will find much "magnificent desolation" akin to that seen by Neil Armstrong and Edwin Aldrin when they strolled on the moon last month.

That virtual certainty emerges from the brilliantly successful exploration of the red planet just completed by Mariners 6 and 7. Their expedition lacked the human drama of Apollo 11, but the scientific information they returned may well qualify the two Mariners as the most scientifically productive enterprise men have yet carried out in space.

Generations of science fiction writers—from H. G. Wells and Edgar Rice Burroughs to Ray Bradbury—were mistaken, it turns out, in their visions of human or nonhuman civilizations on Mars. On the contrary, Mars is a bleak, arid wasteland, a geologist's nightmare of twisted plains and innumerable craters whose typical landscape is almost indistinguishable from that of the moon.

True, Mars has a thin atmosphere—whose ground-level pressure is about that found twenty or thirty miles above the earth—but it is composed mainly of carbon dioxide, and could never support any complex life familiar here on earth. Worse yet, the Martian surface—or most of it anyway—is bathed daily in a deadly shower of ultraviolet radiation, and there is no equivalent of the life-saving protection provided by the atmosphere here. While Martian temperatures may

get up to a comfortable 70 degrees or so at best, they descend at worst to hundreds of degrees below zero. For lovers of comfort, Mars is as uninviting as the moon, and well over a hundred times as far away.

The irrepressible optimists who refuse to believe that earth alone has life in this solar system did get something to cheer about from Mariner 7. Professors Pimentel and Herr believe they detected methane and ammonia in Mar's south polar region, and they suggest this may have a biological origin, i.e., there may be some primitive form of life in that part of Mars.

It is an exciting hypothesis worth further investigation, but for the moment the idea must be viewed as an extremely long shot. Methane and ammonia can arise from non-biological processes. Moreover, there are serious contradictions between some of the Pimentel-Herr conclusions and those of other investigators using different data sent back by Mariner 7.

Whether the Pimentel-Herr hypothesis is right or wrong, the case is strong for further intensive study of Mars by unmanned satellites—as against a precipitate switch to the much more costly alternative of manned exploration. A race to put men on Mars would be a moonoggle for which there is neither need nor justification.

The fascinating close-approach photographs sent back by the two Mariners covered only 20 per cent of the planet, and they offered no explanation for the changing patterns of dark and light that telescopes have shown on Mars for centuries. Additionally, Mariner 7 has uncovered an intriguing mystery by demonstrating that the bright area called Hellas is decidedly atypical in not having craters. That revelation immediately raises the question of what processes have obliterated the craters that meteors must have created in Hellas too.

For the scientifically minded or even the merely curious, the rich harvest of the Mariners can only whet the appetite for more knowledge.

ADVANCE MANNED STRATEGIC AIRCRAFT

Mr. McGOVERN. Mr. President, the military procurement authorization bill, S. 2546, represents a significant increase for an advanced manned strategic aircraft.

In fiscal 1969 the approved program for this project was \$25 million. It is proposed that we spend \$100.2 million in fiscal 1970, for purposes outlined by Defense Secretaries Clifford and Laird in their respective posture statements.

Secretary Clifford raised the figure to \$77 million, to "continue the competitive design phase initiated with fiscal year 1969 funds and to advance the development of the long leadtime avionics and propulsion systems."

Secretary Laird added another \$23 million, to "shorten the competitive design phase and permit the start of full-scale engineering development in fiscal year 1970. While no decision on production and deployment must be made now, the accelerated research and development effort could advance the initial operational capability—IOC—of this aircraft by 1 year."

While we might take some small comfort from the fact that we can avoid a final decision this year on a system estimated to cost a minimum of \$12 billion, it is nevertheless important to recognize that present plans call for the ex-

penditure of at least \$2 billion on research, development, test and evaluation alone—before any of these aircraft enter our strategic arsenal.

I might say at this point, Mr. President, we are talking about this new bomber, that in talking about this new bomber, we are talking about a system the eventual cost of which could be as high as or higher than that of the Safeguard anti-ballistic-missile system about which we have just debated for some 5 or 6 weeks. Moreover, it is contemplated, according to a recent issue of Aviation Week & Space Technology:

Under the new schedule, USAF will select by November 1 a single contractor for the final development and production of the AMSA.

We are clearly at the threshold of a major new expenditure. We should not be drawn into it little by little without having a clear idea of where we are going and why. I believe, therefore, that the time is at hand for a thorough examination of our entire strategic bomber program.

With the cosponsorship of the Senator from New York (Mr. GOODELL), the Senator from Oregon (Mr. HATFIELD), and the Senator from Wisconsin (Mr. PROXMIRE), who have been leading the effort to review our military outlays, I have proposed an amendment to the pending bill which aims to hold AMSA to the fiscal 1969 spending level; in other words, to avoid an acceleration of work on the system. It would leave \$20 million in the pending authorization bill, to be combined with \$5 million in carryover authority from fiscal 1969.

Mr. President, this would be the effect of reducing by \$80 million the amount requested in the pending authorization bill for work on a new bomber.

In the meantime I hope we can initiate a more extensive review of the alleged need and justification for any strategic bomber force at all and for this elaborate new system in particular. I am especially interested in learning more about the administration's contentions in this regard.

For my own part, I must say that at the end of a substantial amount of study, including briefings from the Air Force officers in charge of the AMSA program, I have been unable to escape the conclusion that the many legs upon which the AMSA case rests, even in combination, cannot begin to support it. The case for retaining any kind of a bomber deterrent is almost as doubtful.

I will call up my amendment for active consideration shortly after the recess. In preparation for discussion at that time, and so that all of us can develop a clear understanding of the Administration's position, we have submitted to Defense Secretary Laird the following list of questions bearing on the strategic bomber program. Most of them have been discussed with Air Force officials in both classified and unclassified terms. I have asked that they be answered in writing for the public record, and that the response be supplied to me by the end of the recess.

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With these proposals, which I strongly urge the Congress to enact, we can enhance America's human resources. By opening up the opportunity for manpower training on a large scale, we build a person's will to work; in so doing, we build a bridge to human dignity.

RICHARD NIXON.

THE WHITE HOUSE, August 12, 1969.

MESSAGE FROM THE HOUSE

-A message from the House of Representatives, by Mr. Hackney, one of its reading clerks, announced that the House had agreed to the amendments of the Senate to the bill (H.R. 10107) to continue for a temporary period the existing suspension of duty on certain istle.

ALAN

AUTHORIZATION OF APPROPRIATIONS FOR FISCAL YEAR 1970 FOR MILITARY PROCUREMENT, RESEARCH AND DEVELOPMENT, AND FOR THE CONSTRUCTION OF MISSILE TEST FACILITIES AT KWAJALEIN MISSILE RANGE, AND RESERVE COMPONENT STRENGTH

The PRESIDING OFFICER (Mr. EAGLETON in the chair). The Chair lays before the Senate the unfinished business, which will be stated.

The ASSISTANT LEGISLATIVE CLERK. A bill (S. 2546) to authorize appropriations during the fiscal year 1970 for procurement of aircraft, missiles, naval vessels, and tracked combat vehicles, and to authorize the construction of test facilities at Kwajalein Missile Range, and to prescribe the authorized personnel strength of the Selected Reserve of each Reserve component of the Armed Forces, and for other purposes.

The Senate resumed the consideration of the bill.

Mr. MCINTYRE. Mr. President, I yield myself 40 minutes.

The PRESIDING OFFICER. The Senator from New Hampshire is recognized for 40 minutes.

Mr. MCINTYRE. Mr. President, I have a prepared statement here that defends and replies to the thrust of the amendment being offered by the distinguished Senator from Arkansas (Mr. FULBRIGHT).

I want to make it clear that I do not plan to yield for questions or any colloquy during the presentation of this proposed statement, with one exception. I shall be glad to yield to the distinguished Senator from Virginia (Mr. BYRD) who is a member of the Subcommittee on Research and Development of the Armed Services Committee, since I will be referring directly to actions which took place in that subcommittee and in the full committee.

Mr. President, this amendment would make a further reduction of \$45,614,000 of the R.D.T. & E. portion of the authorization bill. I would call the Senate's attention to the fact that the bill, as reported by the Armed Services Committee, has already reduced the \$8.2 billion request by \$1 billion and \$43 million. This represents a total reduction of some 12½ percent of the funds requested for R.D.T. & E.

The areas in the field of military research that the Senator's amendment seeks to reach and further reduce over and beyond the committee's recommendation are:

First, Federal contract research centers;

Second, DOD contracts with foreign research institutions;

Third, policy planning studies with foreign policy implications;

Fourth, the Themis program; and

Fifth, Project Agile—R. & D. on low level conflict.

The Armed Services Committee has already cut this overall field of military science research by \$50.5 million. Most of this cut will be absorbed by the five programs under attack in the Fulbright amendment—about \$40 million.

Mr. FULBRIGHT. Mr. President, will the Senator yield to me?

Mr. MCINTYRE. I have already indicated that I do not plan to yield.

Mr. FULBRIGHT. This is not for a question. I wanted to modify my amendment, so the Senator will know what I have in mind.

Mr. MCINTYRE. I yield for that purpose.

Mr. FULBRIGHT. Mr. President, I wish to modify my amendment on page 3, line 24, to add the following new section:

SEC. 205. None of the funds authorized to be appropriated by this Act may be used to carry out any research project or study unless such project or study has a direct and apparent relationship to a specific military function or operation.

The PRESIDING OFFICER. The amendment will be so modified.

FEDERAL CONTRACT RESEARCH CENTERS

Mr. MCINTYRE. Mr. President, let me first discuss the Federal contract research centers. These are the so-called "think tanks." These are one of the resources which gives the Department of Defense a capability to meet the challenging requirements for new system concepts and their orderly and timely development into operational military systems. Other parts of the mix of resources for doing this job include in-house laboratories and contracts with profit-oriented industry. During the past 5 years the R.D.T. & E. funding for the nonprofits or Federal contract research centers has been decreased significantly in an orderly, but programed fashion. I would caution against a precipitate reduction without proper planning and laying of the groundwork for transfer of tasks being performed by these FCRC's to other scientists and engineers—either in-house or contractor employed. Large reductions without preplanning will probably result in the disbanding of talented teams of scientists and engineers with a consequent serious impact on many high priority programs. The time lost and the added cost of recreating these teams at a later date would nullify the cost savings achieved by this reduction.

It was the feeling of the subcommittee that these nonprofit corporations serve a useful purpose in three areas: System planning and systems engineer-

ing and technical direction of system developments; operations analysis and long-range military planning; and general and continuing research and experimentation in support of military R. & D.

Our study of the nonprofits, including a Defense Department briefing, indicates that there has been a general tightening of management and control of the defense FCRC's, including a noticeable reduction in the fees which have been paid to the major FCRC's. However, the subcommittee took issue with the Defense Department criteria for determining the reasonableness of FCRC executive compensation rates. It does not seem appropriate to the subcommittee that executive salaries for these nonprofit, no-risk Government-sponsored and Government-funded activities should be equated to compensation for profitmaking organizations in private enterprise having the same operating budget or the same "sales." We found it difficult to justify a salary of \$97,500 for the chief executive of an FCRC when the salary of the Secretary of Defense is only \$60,000. That was the basis for the recommendation by Senator HARRY BYRD of the restrictive language in limiting such executive compensation. Senator BYRD's amendment is contained in section 204(a) of the authorization bill.

Mr. BYRD of Virginia. Mr. President, will the Senator yield?

Mr. MCINTYRE. I am happy to yield to my colleague on the Armed Services Committee and also my colleague on the Research and Development Subcommittee.

Mr. BYRD of Virginia. Mr. President, first may I congratulate the distinguished Senator from New Hampshire for the tremendous amount of work that he has put into the handling of this legislation as chairman of the Subcommittee on Research and Development. He has handled it with great ability and great industry.

In regard to the amendment the Senator from New Hampshire just mentioned, I think we should emphasize for a moment just what it will do and what it will not do.

It does not prevent the payment of salaries in excess of \$45,000, but it does make mandatory that any such salaries above the figure of \$45,000 must be approved by the President of the United States.

As it is now, the salaries for these Government-sponsored, nonprofit organizations are in effect determined by self-perpetuating boards of trustees, and then those salaries, set by the boards of trustees, must be approved by the Department of the Air Force or the appropriate department in the Department of Defense.

So this provision would take away from the Department of Defense the right to establish salaries in excess of \$45,000, and would require that they have the approval of the President of the United States.

The reason why both the subcommittee and the committee felt such a provision was desirable was that, as a practical matter, all of the funds for the Government-sponsored, nonprofit or-

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ganizations come from the American taxpayers.

That being the case, the committee felt that the salaries should be more in line with those paid by the Government for positions of great responsibility, such as the Secretary of Defense and other Cabinet officials.

But the committee recognized that there are many technical experts whose services are needed, and in those cases higher salaries may be set if they have the approval of the President of the United States.

I will take just one corporation, the Aerospace Corp. In fiscal 1969 its operating budget was \$74,272,000. Of that amount, it received its entire funding, \$74,272,000, from the Department of Defense.

In regard to Aerospace, the information submitted to the committee shows that there are 68 persons in Aerospace earning in excess of \$30,000 per year. There are 19 who earned in excess of \$42,500.

To give the Senate the range of salaries, the President was paid last year \$97,500. A senior vice president was paid \$66,000. A vice president for operations was paid \$65,000. Another vice president for operations was paid \$58,000. Another vice president and general manager was paid \$55,000. Another vice president was paid \$50,000. Another vice president was paid \$50,000. Another vice president was paid \$50,000. Another vice president was paid \$50,000. Another vice president was paid \$45,000. Another vice president was paid \$45,500.

The committee went into this matter very carefully. It felt that there should be some restraint with regard to what is done with respect to these 16 Government-sponsored, nonprofit research organizations.

With that in mind, the amendment which is included in the bill was developed and was approved by the committee.

I thank the distinguished Senator from New Hampshire for yielding to me at this point.

Mr. McINTYRE. Mr. President, I compliment the Senator from Virginia for his work, not only on the particular amendment he has been discussing, but generally for his help, counsel, and advice on the subcommittee, and, of course, his activities on the full committee. It has been a pleasure to be associated with him, particularly as we have delved into this matter of research and development during the past year.

Mr. BYRD of West Virginia. Mr. President, will the Senator yield?

Mr. McINTYRE. For what purpose?

Mr. BYRD of West Virginia. I wish to compliment the Senator.

Mr. McINTYRE. Oh, I always yield for that.

The PRESIDING OFFICER. The Senator yields for a compliment.

Mr. BYRD of West Virginia. Mr. President, the Senator yields for a compliment that is well deserved. I have been greatly impressed by the presentations that have been made during the debate on this bill by the able junior Senator from New Hampshire. I think that he has been exceedingly diligent in his work

as chairman of the subcommittee; and the statements that he has made, his participation in colloquies on the floor, and his answers to questions have indicated that he has a very thorough grasp of the subject matter. I know that one can only acquire the knowledge with respect to a bill that he obviously has acquired with respect to this bill through a great deal of hard work, effort, and diligence. It is gratifying to see Senators come to the floor who are so well prepared to present their case on a bill, and the Senator from New Hampshire has certainly set an extremely fine example.

Mr. McINTYRE. Mr. President, I thank the Senator from West Virginia for his very kind remarks, but I would add that, as one of the so-called junior Senators, I have learned much and have profited greatly from watching my distinguished colleague from West Virginia in his presentations, because I think it is generally recognized that there is no harder-working Member of this body than my distinguished friend from West Virginia.

Mr. BYRD of West Virginia. I thank the Senator. I think the Senate is indebted to him, and he has done a great service for the country, on the subject matter of the legislation which his subcommittee has delved into. It is a very difficult subject matter, and I have listened to his presentation with interest.

I wanted to pay him this tribute because I felt it was well deserved, and again I say the Senate is indebted to him. I congratulate him, and I know he will continue to do great work on the Committee on Armed Services.

Mr. McINTYRE. I thank the Senator very much.

Furthermore, the subcommittee felt that there should be a general reduction in the level of effort of FCRC's, particularly since we see an overall reduction in the total DOD research and development budget. In addition, we noted that the Defense Department has instituted a policy authorizing Defense-sponsored FCRC's to invite them to take up to 20 percent of their business from non-DOD sources.

The subcommittee recognized that the total operating budget of the Federal Contract Research Centers is not necessarily, indeed not usually, funded from a single account. For example, the line item for Aerospace Corp. under Military Astronautics and related equipment is \$24.7 million, whereas its operating budget planned for fiscal year 1970 is \$78 million. The rest of the funding is provided from various programs for which Aerospace Corp. provides system engineering and technical services. We recognize the difficulty of identifying appropriate accounts to which a reduction should be charged. It is expected that the impact on the FCRC's will be in excess of the recommended cut.

The efforts of the Federal Contract Research Centers are generally characterized by two attributes. First, each center has a "mission oriented" rather than a "scientific discipline-oriented" charter; that is, each center is given tasks directly connected to the Services' operational needs. To carry out these

tasks, an FCRC must involve many kinds of scientists and engineers. Thus, the contributions of any one center are quite varied—in terms of scientific disciplines and areas of technology, and in terms of the duration and scope of effort leading to a contribution.

Second, many investigations are conducted concurrently within each center, and the culmination dates of investigations are widely staggered. Thus, a small sampling of the contributions made by all FCRC's during a given short period of time is not representative of their long-term cumulative value.

Because of these two characteristics, what I wish to point out is: First, a rather detailed listing of some of the important developments from one FCRC, the Applied Physics Laboratory, Johns Hopkins University; and second, a sampling of illustrative contributions by other FCRC's. This should provide a "feel" for both the range of the center's activity as well as the larger range of work accomplished by this entire category of R. & D. organizations.

APPLIED PHYSICS LABORATORY

The Applied Physics Laboratory, Johns Hopkins University, working primarily for the U.S. Navy, has long been a productive member of the DOD's research and development team. The fiscal year 1967 DOD funding of this organization was \$31.4 million. The level of technical effort has been reasonably constant over the past several years. In return for this investment the Applied Physics Laboratory has:

Developed the basic surface-to-air missiles, Terrier, Tartar, and Talos, which are now deployed on upward of 60 ships and has undertaken the job of improving the capabilities of these systems against new threats, countermeasures, and other environmental factors.

Released to production, in December 1966, design modifications for the Terrier and Tartar missiles to extend the capabilities of the missile.

Mr. President, I am now talking about the missiles on our warships today, on the high seas of the world.

Formulated testing methods and developed the necessary ancillary test equipment to permit the rapid determination of the state of operability of the shipboard weapon systems of the Tartar and Terrier ships. A system dynamic tester has been developed that provides realistic target simulation for the fire control system and generates a test problem similar to that of engaging a stringent target. The functioning of the fire control system is automatically evaluated and a scoring is displayed. The first model of this equipment was successfully tested aboard the U.S.S. *Berkeley* in the fall of 1966. A further advance in operability testing involved the design of automatic equipment for the evaluation of the Navy tactical data system computer complex already aboard Terrier ships of the DLG-26 class. This computerized test program was successfully demonstrated aboard the U.S.S. *Wainwright* and work is proceeding for the installation of the test program aboard all the Terrier ships having the NTDS.

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system. The testing programs materially contribute to the online readiness of the shipboard weapon systems.

Conceived and developed the Navy navigation satellite system. This system provides extremely accurate navigation fixes for the Polaris submarine fleet, independent of weather conditions. The entire development, including the concepts, the computing programs, detailed satellite design, construction and checkout, the development of the shipboard navigation receivers and computers, and the development of the supporting ground system for tracking, commanding, and controlling the satellite was accomplished by the Applied Physics Laboratory.

AEROSPACE CORP.

Aerospace Corp.: They devised a program for modifying formerly operational Atlas E and Atlas F missiles into configuration suitable for target vehicle boosters for the advanced ballistic reentry system program and the Nike ABM test programs. The total projected cost saving of modifying 134 boosters over procurement cost of that many new target vehicle boosters is estimated at \$1.47 billion.

Within the past 2 years Aerospace Corp. has developed an analytic method for predicting radio frequency attenuation caused by the plasma-sheath surrounding reentry vehicles. This is a significant contribution in the efforts to overcome the problems resulting from radar and telemetry signal attenuation during a critical portion of the missile or space capsule flight profile.

HUMAN RESOURCES RESEARCH OFFICE

Human Resources Research Office, George Washington University: During the last 12 months they have conceived and designed a radically new training device for aviators. This device will reduce required instrument training flight time from the present 50 hours to 40 hours. The savings in projected flight costs are estimated as \$1,700 million per year.

MITRE CORP.

Mitre Corp.: They developed an interferometer radar technique to provide a capability for rapid and precise determination of satellite orbits and ballistic missile trajectories and information regarding the physical configuration of the target satellite or missile.

This gives an idea of some of the tremendous research advances that these so-called think tanks have come up with.

I now turn my attention to the Department of Defense contracts with foreign research institutions. This is another area that the Fulbright amendment attacks.

DOD CONTRACTS WITH FOREIGN RESEARCH INSTITUTIONS

The amendment by the Senator from Arkansas would reduce the authorization for Defense Department contracts at foreign institutions by \$2 million.

The Department of Defense has continuing priority needs for certain selected foreign research and development projects. One very important area is that of long-range radio communications required for our worldwide communications network. Interaction of solar radiation with the earth's upper atmosphere produces global extent ionization of the region called the ionosphere. The rapidly changing conditions of the ionosphere affect in a primary way Defense communications. For this reason we support ionospheric and radio propagation research in Australia, Canada, and Norway to acquire essential data not obtainable within the United States.

A second area of prime importance is that of military medicine in foreign countries where our American troops are stationed or operating. Many diseases are endemic to a specific geographic locale and their presence greatly affects the force strength of our command and force units. It is not desirable nor feasible to pursue stateside research on many of these diseases since it is not desired to bring them into the United States. Therefore Defense supports selected research projects in military medicine in such countries as Japan, Israel, Italy, and Brazil.

A third area of key importance is that of environmental and meteorological phenomena related to the land, sea, and air that our Defense units operate on or over the globe. It is simply not possible to carry out the required research from stateside alone. Foreign investigators having a daily presence and long established experience in specific geographical areas are important contributors to the basic knowledge that we require about terrestrial sciences in foreign lands, about the oceans and seas far distant from the United States and about atmospheric weather phenomena in foreign areas. To meet priority Defense requirements, selected research projects are supported in Berlin, Canada, Denmark, Greece, and other countries.

Defense has established stringent criteria for selection of research and development projects by foreign performers. All ongoing or further research and exploratory development by foreign performers shall be supported by DOD only when it has been determined that, first, it is clearly significant in meeting urgent defense needs of the United States; second, it cannot be deferred for later action; third, the proposed foreign investigator certifies that he is unable to obtain support from any other source for the

proposed project, and fourth, at least one of the following special conditions is inherent in the proposed work:

First. The research or development involves geographical, environmental, or cultural conditions, fauna, or flora not found and not feasible to duplicate or simulate within the United States and its territories.

Second. The work involves diseases, epidemiological situations, or availability or clinical material which are not present within the United States.

Third. The work involves a unique research idea highly relevant to DOD needs.

In this fiscal year 1970 budget the Department of Defense requested \$5,700,000 for work in this important field of research, the field of research which is devoted almost entirely to physical sciences, otherwise called the hard sciences. The Armed Services Committee has reduced this request by some \$513,000 leaving a total authorization of approximately \$5.2 billion. The amendment of the Senator from Arkansas calls for a further reduction of \$2,000,000 reducing this program to a figure of \$3.7 million or in effect practically gutting this type of work, for the reduction overall would be greater than one-third. The reduction of one-third of these high priority research investigations which can only be carried out abroad include, as I have said, investigation of parasitic diseases of relevancy to naval and military personnel in foreign areas, to long-range global communications and of environment in foreign areas of importance to our military. A reduction of this scope would eliminate further progress on more than 100 projects planned for foreign investigators.

Last year, fiscal year 1969, there were 451 research undertakings in 44 countries at a cost of \$9.2 million. The cost of this program of fiscal year 1970, after the committee reduction, has reduced it to \$5.7 million, in which there will be 207 projects. This is the present plan but not all the projects have been approved and there may well be some changes in these numbers because of the cut already made. Of the \$5.7 million only \$300,000 at the very outside that could possibly be labeled social and behavioral sciences and all these may not be programmed during the year.

I ask unanimous consent that a complete list of the projects planned for fiscal year 1970—their contracts for research—for foreign institutions along with the nature of the research and the amounts of funds be printed in the Record.

There being no objection, the material was ordered to be printed in the Record, as follows:

Military department and contract agency	Title	Funds planned for fiscal year 1970	Military department and contract agency	Title	Funds planned for fiscal year 1970
Argentina:			Chile:		
N Universidad de Buenos Aires	Development of effective protective and therapeutic drugs for radiation sickness.	10.0	A Comision Nacional de Investigacion	Structure function relationships in human and high elevation adapted mammal hemoglobin.	20.0
F Consejo Nacional de Invest. Cient.	X-ray spectrometry of galactic sources from Southern Hemisphere.	24.0	F Universidad de Chile	Form and function invariants in the visual system.	21.0
F National University of La Plata	Research in stellar spectroscopy.	12.0	F Catholic University of Chile	Nervous connections in the vestibular system.	8.0
F Consejo Nacional de Investigaciones	Molecular mechanisms of steroids action on respiratory systems.	16.0	F Catholic University of Chile	Studies in synaptic mechanisms.	7.0
Australia:			F Comision Nacional de Investigacion Cientifica y Tecnologica	Biochemical properties of nerve membranes.	8.0
A Monash University	Microbiological and immunological studies of pathogenesis and virulence in leptospirosis.	18.0	Colombia:		
N University of Queensland	Nature and pharmacological action in toxin from deadly jellyfish.	12.0	F Universidad Nacional de Colombia	Studies of ecology and disease transmission.	6.0
F University of Sydney	Study of cosmic radiations at extremely high energy.	50.0	F Universidad del Valle	Disease ecology of tacaribe group viruses.	30.0
F University of Adelaide	Research directed toward propagation of solar particles.	25.0	A University of Costa Rica	Physiological studies of leishmania.	7.0
F University of Sydney	Stellar intensity interferometer.	60.0	Denmark:		
Austria:			N Marine Biological Laborto	Ecological investigations on bottom living marine animals.	10.0
A Institute of Hygiene, University of Vienna	Epidemiology, virology, and immunology of tick-borne encephalitis and other tick-borne diseases.	20.0	F Danske Meteorologiske Institute	Ionospheric research using active satellite transmissions.	14.0
F University of Vienna	Composition and content of meteorites.	17.0	F Do	Arctic geomagnetic observations.	3.0
Belgium:			Ecuador:		
A Von Karman Institute	Flow characteristics associated with V/STOL model testing in wind tunnel.	10.0	F Universidad Central del Ecuador	Studies of psychotomimetics.	6.0
F Von Karman Institute for Fluid Dynamics, Rhode Saint/Genese	The influence of cross flow on 2-dimensional separation.	15.0	Finland:		
F Von Karman Institute for Dynamics, Rhode Saint/Genese	Application of the blunt-trailing edge blade concept.	20.0	F Institute of Occupational Health	Mathematical and electrical analogs of heat transfer in man.	10.0
F Von Karman Institute for Fluid Dynamics, Rhode Saint/Genese	Laminar separation in hypersonic flows	15.0	France:		
F Do	Low-density high-temperature gas dynamics.	15.0	A Ecole Pratique des Hautes Etudes-Sorbonne	Metabolic and sensory stimuli in the regulation of food intake—behavioral and electrophysiological study.	20.0
F Von Karman Institute for Fluid Waterloo/Genese	Experimental aerodynamics	20.0	A Institute for Cell Pathology	Laser action on living cells.	20.0
F University of Liege	High resolution atmospheric IR absorption and sky background emission interferometric studies.	30.0	N Campagne de Recherches et d'Etudes Aeronautiques	Rheo-electrical analogy: Supercavitating propeller design.	10.0
F Born-Bunge Foundation	Development of sleep patterns, women doctor expertise.	10.0	F Observatoire de Paris	Research directed toward the improvement of planetary photogrammetry.	18.0
Bolivia:			F University of Lyon	Neurophysiological mechanisms of the states of sleep.	10.0
D Colegio San Calixto	Spectral characteristics of infrasonic acoustic waves and related seismic research.	50.0	Germany:		
F San Andres University	Cosmic ray research at high altitude.	14.0	A Institute for Animal Physiology, J. W. Goethe University	Microcirculatory behavior in shock.	6.0
Brazil:			A Free University of Berlin	Daily analysis of circumpolar 30 and 10 mb maps E486.	20.0
A University of Sao Paulo	Control of ribonucleic acid synthesis in giant chromosomes.	15.8	A Research Office for Physical Bioclimatology	Atmospheric aerosols between 700 and 3,000 meters, E-1127.	10.0
A Minas Gerais University	Schistosomiasis drug screening	12.0	A Rheinisch-Westfalische Technische Hochschule	Measurement of thoron concentration of lower atmosphere.	15.0
A Federal University of Bahia	Pathogenesis of diarrhea in severe strongyloidiasis.	5.0	F Bochum Radio Observatory	Ionospheric studies using active synchronous satellite transmissions.	7.0
A Universidad Mackensie Do	VLF atmospheric studies LA 60	8.0	F Technische Hochschule Munchen, Munich	Investigation of spectral radiation properties of Atmosphere and earth.	10.0
A Institute Adolfo Lutz	Solar microwave radio emission LA61	5.0	Ghana:		
N University of Sao Paulo	Arboreal studies in Sao Paulo, Brazil.	15.0	F University of Ghana, Accra	Ionospheric studies using active satellite transmissions.	7.0
F Comissao Nacional De Atividades Espac, J Dos Campos	Mathematical investigations of problems of ocean surveillance of navigation.	20.9	Greece:		
F Fundacao Servico Especial de Saude Publica	Measurements of the earth's total magnetic field and its variations.	7.0	F University of Athens	Ionospheric research using active satellite transmissions.	15.0
Canada:			D Seismological Institute of Athens University	Aftershocks and crustal structure in Greece.	20.0
A York University	Kinetics of atmospheric constituents.	12.0	Iceland:		
A McGill University	Extremely low frequency electromagnetic phenomena.	15.0	N Surtsey Research Society	Ecological succession of biota on a newly formed oceanic land mass.	25.0
A Royal Victoria Hospital	Investigation of pathogenesis and treatment of shock.	25.0	India:		
A University of Manitoba	Study of factors influencing the passage of drugs into the malarial parasite plasmodium berghei.	20.0	A Bombay National History	Studies of the bionomics and taxonomy of the birds of India, taxonomy of the birds of Bhutan.	7.0
N McGill University	Electric properties of ice.	10.0	F University of Calcutta	Radio, astronomical and satellite studies of the ionosphere.	15.0
Do	Arctic plankton ecology.	15.0	Indonesia:		
Do	HF audio absorption in ice.	20.0	A Lembaga Biologi Nasional	Migratory animal pathological survey (Indonesia), avian studies in Indonesia.	6.0
Do	Energy budget and other tropical microclimatological research.	20.0	Iran:		
N Computing Devices of Canada	Automatic detection and classification.	150.0	D Pahlavi University	Nutritional studies—Iran.	50.0
A Manitoba University	Investigations of pheromones as chemosterilants for insects with special reference to synthetic queen substance and its analogs.	20.0	Israel:		
N Institute of Oceanography	Systematics biology and hydrographic relations of some species of calanus.	13.0	A Israel Institute of Applied Social Research	Investigation of leadership qualities of kibbutz-raised young men.	20.0
N British Columbia Research Council	Marine borer biology.	10.0	A Rogoff-Wellcome Medicine Research Institute	Isolation of snake venom toxins and study of their mechanism of action.	20.0
N York University	Brain nucleic acid changes during learning.	15.0	A Technion Institute of Technology	Photochemistry of antimalarial drugs.	15.0
N McGill University	Mechanisms of polymer degradation.	26.0	N Institute of Technology Technion-Israel	Cross-stresses in the flow of gases (Reiner-effect).	15.0
N McGill University	High magnetic fields and insulators.	11.0	N Hebrew University	Basic theories for nonnumerical data processing.	20.0
N University of Toronto	Very high altitude missile and decoy gas dynamics; missile aerodynamics for broad altitude ranges.	15.0	F Hebrew University	Effects of heat sources on planetary circulation.	20.0
N University of British Columbia	Fundamental air-sea exchange processes and their relation to wind wave generation: Oceanic turbulence.	50.0	F National Commission for Space Research	Ionospheric research using Satellites.	10.0
F Laval University	Neurohumoral control of thyrotrophic activity.	15.0	D Weizmann Institute of Science	Seismic source identification techniques.	20.0
D McGill University	Psychological processes of the central nervous system.	140.0	Italy:		
D Canadian Armament Research and Development Establishment	Hypervelocity Research program.	700.0	A Pharmacological Research Institute	Pharmacological and biochemical changes in animals made aggressive by isolation.	15.0
D RCA Victor, Limited	Radar backscatter studies.	100.0	A University of Genoa	Immunological reactions in viral hepatitis.	20.0
Ceylon: A Medical Research Institute	Leptospirosis-A serological survey of occupational groups in Ceylon.	1.0			

Military department and contract agency	Title	Funds planned for fiscal year 1970	Military department and contract agency	Title	Funds planned for fiscal year 1970
Italy—Continued					
A Chemical Institute of University of Rome	Individual activity coefficients of ionic species.	10.0	Peru:		
F University Degli Studi di Pisa	Comparative neurophysiology of vision.	15.0	A University Peruvian Cayetano Heredia	Physiologic changes in the cardiopulmonary system by ascending to high altitudes.	15.0
F University of Ferrara	Research on mechanics of breathing.	10.0	A Do	Endocrine alterations at high altitude.	8.0
F National Institute of Optics	Problems in visual performance of pilots.	6.0	A Do	Coagulation studies in newcomers to high elevations LA-134.	5.0
F University of Milan	Neutron flux of earth's radiation environment.	10.0	A Do	Hormone metabolism in men exposed to high elevation LA-128.	10.0
F University of Sassari	Identification of photodynamic systems in the retina.	3.0	A Do	Respiratory physiology on ascent to high altitudes.	15.0
F Arcetri Astrophysical Observatory	Solar radio spectroscopy and detection of sun spectral lines.	10.0	A Do	Role of adrenal cortex in process of acclimatization to high elevation.	20.0
F University of Milan	Physiology of cerebrospinal fluid.	15.0	F Instituto Geofisico Del Peru Lima	Equatorial ionospheric effects study.	10.0
Jamaica:			F Do	Research directed toward the study of the airglow at low latitudes.	20.0
F University of West Indies	Ionospheric studies using active satellite transmissions.	4.0	F Geophysical Institute of Peru	Radio solar measurements.	9.0
Japan:			F Instituto Geofisico Del Peru	Observations of earth magnetic field.	5.0
A National Cancer Center Research Institute	Measurement of human complement components in dengue shock syndrome.	10.0	D Instituto Geofisico Del Peru	Observation and study of infrasonic waves in the atmosphere.	30.0
A Kyushu University	Taxonomical and ecological studies on lung fluke, paragonimus in Pacific area; with special reference to Southeast Asia.	7.0	Philippines:		
A Institute of Microbial Chemistry	Microbial drug resistance (genetics and evolution of R factor and plasmids).	12.0	A Mindanao State University	Migratory animal pathological survey (South Philippines).	5.0
A Nara Medical College	Polymeric structure of hemoglobin and its relation to function.	3.0	A National Museum	Migratory animal pathological survey (North Philippines).	5.0
A Do	Localization by electron microscopy of several phosphatase activities.	3.0	A University of Philippines	Filariasis studies in the Philippines.	7.0
A Kitasato University	Nature and mode of action of local antibody in intestine.	7.0	A Do	Fluorescent antibody test in measurement of malarial immunity.	7.0
A Sasaki Institute	Investigation of cell component structural changes in homologous transplants compared with normal cells.	7.0	A National Museum	Ecology of Southern Samar.	15.0
A Nara Medical College	Electron microscope studies on several phosphatase activities in neurons and glia cells infected with Japanese encephalitis virus.	3.0	A University of Philippines	Determination of malaria vector on Pangutaran Island, Sulu Archipelago.	9.0
A Japanese Foundation for Cancer Research	Differences in antigenic specificity and immunogenicity of tissue transplants.	6.0	A Do	Determination of chloroquine resistant P. Falciparum Parasites Impalawan and other Provinces of the Philippines.	8.0
A Kitasato Institute	Cytochemical studies on ultrastructures of Toxoplasma gondii and allied organisms.	10.0	F Manila Observatory	Conduct radio observations of the sun.	30.0
A National Institutes of Health	Mode of infection of scrub typhus.	15.0	Spain:		
A Do	Immunological studies on scrub typhus and its control in Japan.	15.0	F Observatory of Ebro	Ionospheric studies using active satellite transmissions.	3.0
A Kitasato Institute	Studies on encephalitozoon (nosema cuculii) infections in man.	20.0	F University of Salamanca	Morphochemical correlations involved in the differentiation eye lens.	6.0
A Yamashina Institute of Ornithology	Migratory animal pathological survey.	5.0	Sweden:		
A Kanazawa University	Neuronal activities on the regulation of feeding.	8.0	A Sahlgrens Hospital, University of Goteborg	Newer advances in treatment of shock in man.	10.0
A Hokkaido University	Physiological activity of the brown adipose tissue.	6.0	N University of Goteborg, Medical	Effects of noise on inner ear cells.	30.0
A Kumamoto University	Biological reactions to cellular antibodies with special reference to their immunopathological and immuno-chemical properties.	6.0	F Stockholms Universitet Stockholm	Rocket sampling of solid particles in the mesosphere.	2.0
A Do	Endogenous mechanism of vascular response in inflammation, with special reference to biologic significance of specific permeability factors and their inhibitors newly isolated from inflamed sites.	12.0	F Kiruna Geophysical Observatory, Kiruna	Study of characteristics of auroral ionosphere and its irregularities.	10.0
A Kirume University	Interaction between arbovirus and myxovirus.	5.0	F Royal University of Uppsala	Research, design and development refraction and gravity experiments.	33.0
A Shi-Ehime Preparatory of Japan	Life cycle and control of paragonimus in Shikoku area.	5.0	F Do	Evaluation of high latitude cosmic ray data.	7.0
F Tokyo Medical and Dental University	Gamma-aminobutyric acid in sensory physiology.	8.0	F Kiruna Geophysical Observatory	High latitude geomagnetic data.	4.0
F Kumamoto University	Neural organization of sensory information for taste.	5.0	F University of Goteborgs	Integrated nervous control of the cardiovascular and gastrointestinal systems.	18.0
Kenya:			D University of Uppsala	Seismic body waves and surface waves.	15.0
F College of Nairobi, Kenya	Ionospheric studies of radio emissions.	10.0	Switzerland:		
Korea:			A University of Lausanne	Investigation on structure and biological activities of human immunoglobins M. & D. (IGM and IGD).	12.0
A Seoul National University	Multiplication and antibody formation of Japanese encephalitis virus in snakes.	13.0	A University of Basel	Variation-resistant matrices and related mathematical topics.	5.0
A Kyung-HEB University	Migratory animal pathological survey (Korea).	5.0	A Physikalisches-Meteorologische Observatorium	Measure of direct solar radiation and sky-brightness in UV and visible part of spectrum.	5.0
A Seoul National University	Ecological survey and mass chemotherapy of filariasis on Che Do, Korea.	15.0	F Universitat Bern	Pulmonary pathology of oxygen toxicity.	12.0
Malaysia:			F Universitat Zurich	Sugar and peptide intestinal digestion and absorption.	10.0
A University of Malaya	Mosquitoes of Malaysia.	20.0	Taiwan:		
A Do	Weathering of rocks under humid tropical conditions.	20.0	A Tunghai University	Migratory animal pathological survey.	5.0
Netherlands:			A Kaohsiung Medical College	Biochemical studies on toxic nature of snake venoms.	10.0
A International Training Center for Aerial Survey	Role of image quality of photogrammetric pointing accuracy.	4.0	A Tunghai University	Biology and pathophoricity of biting midges (Diptera: Ceratopogonidae) in Taiwan.	7.0
N Central Laboratory, T.N.O.	Mechanical strength of filled elastomers of the types used as solid propellants in rocket motors.	20.0	A National Taiwan University	Host-parasite relationships of Schistosoma Japonicum in Taiwan.	8.0
F Radiobiological Institute of the Organization for Health Research	Antilymphocyte serum, homologous bone marrow transplantation and irradiation.	15.0	A Do	Studies of cardiotoxin and vasoactive substance releasing components of cobra venom.	20.0
Norway:			Thailand:		
A Electroencephalographic Laboratory	Brain, behavior and intracerebral blood flow.	20.0	A Applied Scientific Research Corp.	Migratory animal pathological survey (Thailand FE 315).	8.0
A University of Oslo	Neuropsychological studies of mechanisms of visual discrimination.	5.0	A Do	Migratory animal pathological survey (Thailand FE 316).	5.0
A Do	Photochemical atmosphere model containing oxygen and hydrogen.	5.0	A Medical Sciences University Faculty for Tropical Medicine	Investigation of filariasis in Thailand.	10.0
N University of Bergen	Degradation of marine surfaces by salt requiring bacteria.	20.0	A Bangkok School of Tropical Medicine	Leptospirosis in Thailand, with special reference to epidemiology, pathology and C.	5.0
F Auroral Observatory	Ionospheric studies using satellite transmissions.	10.0	University of Medical Sciences	Investigations on the patterns of epidemiology and endemicity of diseases occurring due to largescale environmental changes in north-east Thailand.	10.0
F University of Oslo	The investigation of variable radio and optical solar phenomena.	13.0	A Do	Schistosomiasis in Thailand, studies on incidence, epidemiology, life cycles and its causing cercarial dermatitis (carry-on and redirection of above).	20.0
F University of Bergen	X-ray and particle radiations at high altitudes in the auroral zone.	15.0	D Applied Scientific Research Corp.	Research on tropical environmental data (trend) and basic environmental data (trend) in Thailand.	200.0
D University of Bergen	Detection seismology.	35.0	United Kingdom:		
D Norwegian Defense Research Establishment	Norwegian seismic system phase II.	675.0	A Liverpool School of Tropical Medicine	Chemotherapy of rodent malaria drug action against exoerythrocytic stages and drug resistant strains.	20.0

Military department and contract agency	Title	Funds planned for fiscal year 1970	Military department and contract agency	Title	Funds planned for fiscal year 1970
United Kingdom—Continued			United Kingdom—Continued		
A Maybridge Chemical Co.	Potential antimalarials based on quinoline-7-carboxylic acid.	10.0	N Royal College of Advanced Technology.	The absorption of sound by polymer solutions...	9.0
A Royal College of Art.	Experimental cartography.	20.0	N University of Keele.	Recombination reactions of importance to propulsion.	7.0
F U. College.	Research for determination of air density temperature and winds at high altitudes.	10.0	N Cambridge Language Res-ident Unit.	Semantic research for automatized language translation and information retrieval.	8.0
F Imperial College.	Origin of auroral primaries.	7.0	F University of London.	Ion mass spectrometry of the lower ionosphere.	50.0
N University of Cambridge.	Cryoprotective mechanism.	6.0	F Kings College.	Gravitational physics.	10.0
N Oxford University, Pharma-cology and Physical Chem-istry Departments.	Studies on decompression sickness and inert gas narcosis.	12.0	N Trinity College, University of Dublin.	Body temperature regulation.	10.0
N Sir William Dunn School of Pathology, University of Oxford.	Methods of protecting Navy personnel against biological toxins.	20.0	F University College, Dublin.	Radio and optical emission from high energy cosmic rays.	20.0
N University of Sussex.	Visual pattern recognition in naval tasks.	10.0	Uruguay:		
			A Universidad de la Republica.	Relationship between wild outburges and mycoses, especially S. American blastomy-coses.	4.0

Mr. McINTYRE. Mr. President, the subcommittee and committee have gone over this list and scrutinized it carefully and find strong justification for the continuation of this program at the level of \$5.7 million as approved.

Mr. President, I turn now to policy planning studies.

The amendment of the Senator from Arkansas is also aimed at policy planning studies with foreign affairs implications carried out by DOD. The total requested for such studies was \$6.4 million.

The Armed Services Committee has already recommended a cut of \$0.7 million from this amount. The additional cut proposed by the Senator from Arkansas would reduce the program to \$2.7 million, or a total cut of 58 percent. Clearly the cut suggested by Senator FULBRIGHT would severely curtail the policy planning effort.

Policy planning studies seek to insure that military strategy does not lag behind social and political change and behind weapons technology and weapons development.

Through it we try to better understand the circumstances, situations, and environments that may be controlling in the future application of military resources.

Because this is such a nebulous area, it requires particularly intense, professional exploration of the problems to arrive at judgments which materially enhance national capacity and effectiveness.

Yesterday and, I am sure, on many other days, we heard the distinguished Senator from Arkansas talk about programs, projects, and studies of the Turkish Revolution from 1916 to 1921, the Ataturk revolution. The Senator mentioned a program effort involving Ceylon.

In the colloquy had between the Senator and me, I tried to point out that he was really nitpicking, picking on what I call horrible examples so as to intimidate the opponents and picture the entire program in a manner that I consider to be completely unfair.

I point out for the Record that this is a sample I have chosen of some of the programs that would be considered under this area. The following are typical broad subject areas:

PROJECT TITLE
Japanese Rearmament, Nuclear, and Space Programs.

PROJECT DESCRIPTION

A study of factors and developments affecting the Japanese military contribution to the U.S. effort in Asia, including the security pact.

PROJECT TITLE

Soviet Military and Foreign Policy.

PROJECT DESCRIPTION

A continuing study of Soviet military doctrine, use of military strength for political purposes, foreign policy, and political institutions in the Soviet Union and East European states.

PROJECT TITLE

Strategic Analysis of Southeast Asia—1969 (SALA).

PROJECT DESCRIPTION

Includes analyses of Malaysian foreign policy, regional military cooperation, and Australian foreign and military policy.

PROJECT TITLE

Strategic Postures Study (SPOST).

PROJECT DESCRIPTION

Work supporting a continuing Army staff study effort to analyze and evaluate alternative postures for the US, the USSR, and CPR in the 1968-80 period.

PROJECT TITLE

Navy Policy Planning Study.

PROJECT DESCRIPTION

To identify tasks the Navy would be responsible for in the post-1975 period for improved inputs into the Navy Strategic Planning process.

PROJECT TITLE

Navy Role in Exploitation of the Ocean Resources.

PROJECT DESCRIPTION

To define the Navy's interests, objectives and options in the exploitation of the oceans' resources.

PROJECT TITLE

The Future Security Posture of Japan 1970-1985.

PROJECT DESCRIPTION

Assesses the likely security postures of Japan during 1970-85 and the implications for USAF long-range planning.

PROJECT TITLE

Strategy, Concepts and Military Objectives Studies to Support Air Force Long-Range Planning.

PROJECT DESCRIPTION

Analyzes future changing political economic and military trends to insure that the Air Force is responsive to U.S. security needs.

PROJECT TITLE

Sino-Soviet Economic Potential.

PROJECT DESCRIPTION

A continuing study of the economic background of Soviet and Communist Chinese military power. Presently it includes studies

of outlays, employment, and organizational problems in Soviet R&D, Soviet foreign economic relations and Chinese civil aviation.

PROJECT TITLE

European Security Issues.

PROJECT DESCRIPTION

An examination of a range of alternative security arrangements and the role of the U.S. presence in Europe.

PROJECT TITLE

Command & Control Problems for the National Command Authority.

PROJECT DESCRIPTION

A study of information and control facilities, systems and procedures required for management of crises and control of conflicts.

PROJECT TITLE

Communist China.

PROJECT DESCRIPTION

A broad effort to correlate and evaluate data on Communist China's political, economic, military objectives and to determine the foreign policy implications for the U.S.

These are the types of studies that chew up the money. These are not the funny, horrible examples that the Senator from Arkansas dragged out last year and this year. These are the types of studies and programs that I would think the present occupant of the chair or the Secretary of State would like to know are ongoing in the event a decision has to be made involving this area. I think I would want it.

I cite these in order to present a better idea of just what this program is about.

It was clear to the committee that most of these studies are more properly a responsibility of Federal agencies other than the Department of Defense. Specifically, most of these policy planning studies would appear to be more logically a responsibility of the Department of State. We have recommended that these projects be taken over expeditiously—this year—by the appropriate agency and that the Defense Department phase itself out of this area of research except in cases that are directly defense related. I think that the Senator from Arkansas should recognize that if the Defense funding for these studies is withdrawn the plans of the Armed Services Committee to transfer rather than eliminate these studies will be thwarted. There would be no funds with which to continue many programs previously initiated, since it is too late this year to include them in any other agency's budget.

As the Senator from Arkansas is aware, the Defense Department has made a

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variety of efforts to decrease its role in social science studies related to foreign policy and to increase the role of other agencies. These include cuts in the level of effort, curtailed field work overseas, offers to transfer funds to the Department of State, and proposals for a high-level interagency committee under non-DOD leadership to develop priorities and responsibilities for knowledge and analysis dealing with the external world. However, the ability of the Department of Defense to affect what other agencies do is appropriately limited.

I know that the Senator shares my belief that our foreign and defense policies need to be better informed about the external world, not less. In recent hearings under his direction, the important point was made that we need a strong effort to understand how the world looks to others and to avoid imposing our particular cultural views on others. I suggest that we miss the point when we limit our efforts to curtailing the activities of the Department of Defense alone. Instead, I invite the Senator from Arkansas to join with me and my colleagues on the Armed Services Committee to see to it that national needs for rational understanding of the world are met by the government as a whole with an appropriately diminished role for the Department of Defense.

THE THEMIS PROGRAM

Mr. President, on the subject of the Project Themis, which is the fourth area under attack in the amendment of the distinguished Senator from Arkansas, this is a recommended cut in this amendment of some \$8 million. I would want to put this proposed cut in the full context of what the Research and Development Subcommittee and full Committee of the Armed Services have already done.

This program is based upon a 1965 Presidential request to all executive departments requesting more emphasis on establishing new centers of research excellence at universities in fields relevant to the Department's missions. DOD's plan provided for starting 200 new university programs over the four-year period from fiscal year 1967 through fiscal year 1970, an average of 50 new programs each year. The university response was very enthusiastic; more than 1,000 proposals were submitted by universities in the first 3 years, from which 118 projects were selected and funded. In the fourth and final year of new starts in fiscal year 1970, 25 new starts are planned which require \$10 million of funds.

Since the cut in this amendment superimposes itself on a reduction of some 12 percent already made by the Armed Services Committee, this cut of \$8 million would cause:

First. The elimination—if it has not been eliminated already—of the 25 new fiscal year 1970 starts. This will defer the growth of research skills in the important defense-related areas of detection and surveillance, structural mechanics of defense vehicles, oceanography, and resuscitation and treatment of the wounded.

Second. Will also be the termination of approximately 10 of the 118 ongoing Project Themis contracts all of which

are progressing satisfactorily and contributing significant new knowledge and techniques to established defense requirements. This would diminish the contributive research efforts of approximately 60 university faculty members and 120 graduate students on important defense related research problems in 10 different universities and colleges.

The issue here is whether it is desirable to encourage new centers for research. A good start has been made in this direction by Project Themis, and the evaluation of results so far is promising. The Armed Services Committee did not believe that the Themis project should be completely canceled nor suffer such reduction as this amendment calls for.

The Themis program for fiscal year 1970 requested \$33 million.

A 12-percent reduction of the Armed Services Committee reduced this by approximately \$4 million. The Fulbright amendment would now add \$8 million to the \$4 million reduction recommended by the full committee.

This will reduce the program a total of about \$12 million, to a total of \$21 million, and would cut it 36 percent.

In view of the fact that this is the last year of new starts for the program, the total reduction of \$12 million will mean that there will be no new starts this year.

I wish to state, too—with emphasis—that the Themis program is concerned only with unclassified subject matter—and deals exclusively in basic research. It is the opinion of the committee that the Fulbright amendment is too drastic and should be defeated.

THE AGILE PROGRAM

The Senator from Arkansas would reduce Agile by an additional \$5 million. Agile is one of the elements of the budget activity which is "other equipment" in the Defense agencies budget. The Armed Services Committee reduced that budget activity by \$25 million. In making this reduction, the committee recognized that because this budget activity funds a number of very high priority programs—I am now talking about the category "other equipment"—the \$25 million reduction ordered by the Committee on Armed Services would be reflected by substantial cuts in the Agile program.

"Other equipment" includes such programs as intelligence data-handling systems, advanced sensors, cryptologic activities, and a number of classified programs which are vital to our national security. For example, one program which is included is the provision of \$74 million for nuclear weapons effects tests. Senators will recall that this activity is part of the program to provide safeguards to the Nuclear Test Ban Treaty. In 1963 when the Senate advised and consented to the treaty it insisted that these safeguards be instituted. I, personally, would not like to see our efforts in this field reduced by action of the Senate. The Test Ban Treaty requires these tests to be conducted underground, and underground nuclear testing is expensive. It is one of the prices we pay for the reduced tensions which grow out of limitations on atmospheric nuclear testing.

Some of the research and development

programs which would have to be reduced or cancelled in the event of an additional cut, which the Senator from Arkansas is suggesting, in the Agile funds include:

A reduction in vital equipment development and field experimentation in the Small Independent Action Forces. This is a system approach toward the need of patrol size operations being undertaken by Advanced Research Projects Agency jointly with the Army and Marine Corps.

The PRESIDING OFFICER. The time of the Senator has expired.

Mr. McINTYRE. I yield myself 5 additional minutes.

There is a great need for a systematic and integrated study of the small independent action force—the patrol—with a view toward making this most hazardous, but vital, military operation a more effective and less risky venture. This program is examining the various components of the Small Independent Action Force—the man, equipment, environment, techniques, and the interaction of these components to determine how they can be improved.

The proposed reduction would have a serious impact upon a major element of the Agile budget, namely border control systems. Research in this critically important area in order to advise friendly nations to effectively protect the integrity of their borders and desist from offensive actions is highly significant to the United States. For example, a major fraction of the current activity is related to Korea which is now facing increased North Korean infiltration attempts which, if not halted, could embroil the United States in an undesirable confrontation. This effort which ARPA recently initiated is a direct result of a request for assistance from General Bonesteel, Commander of U.S. Forces in Korea. The lessons learned could also be applicable to other areas in support of U.S. policy, if necessary.

A third example of research which would be adversely affected by a substantial Agile reduction is the study, in Thailand, of Communist terrorists' lines of supply and their mode of operation.

In conversation with Dr. Foster yesterday, which was substantiated today, Dr. Foster, who is No. 3 in the Department of Defense, the Chief of Research, Testing, Evaluation, and Development, assured me that if this further cut advanced by the Senator from Arkansas (Mr. Fulbright) is agreed to, it would have a substantial impact on the Agile program.

These are directly relevant and important applications of research to improving our ability to cope with existing threats to our Armed Forces. I believe this kind of research deserves our support.

Mr. President, the point here is that Agile has already sustained a reduction in its funding in this bill by action of the Armed Services Committee which reduced the "other equipment" category by \$25 million. This additional reduction now recommended would cut deep into valuable programs.

Mr. President, in summary, let me say that the amendment we are considering here would reduce research efforts by

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an additional \$45 million. These same research efforts have already been cut by the Senate Armed Services Committee by more than \$50 million.

Many of the programs which are of particular concern to the Senator from Arkansas will be cut in the reduction made by the Armed Services Committee.

It is my feeling, Mr. President, that further cuts in the Federal Contract Research Centers, beyond those made by the Senate Armed Services Committee including the efforts made by the Department of Defense to further reduce FCRC expenditures by taking more of their income from non-DOD sources, is as far as we should go at this time.

As with all of the questions raised in connection with the research programs we have under consideration here, the Research and Development Subcommittee, which I chair, is going to consider these programs in great depth during the coming year. We will be in a better condition at this time next year to provide the Senate with a more comprehensive understanding of these programs and their meaning to the total DOD mission.

But, continuing. This amendment would severely cut away great parts of the research at foreign institutions. Since 1968, the DOD has cut the funds for this research from \$13.1 million to the \$5.7 million requested this year. We need this research, Mr. President, because it involves conditions of geography, culture, disease and expertise which are not possible of study in the United States or not available in this country.

This amendment proposes a \$3 million cut in policy planning research. The DOD is quite willing to have much of this research done elsewhere but the imposition of the cut made by the Senator from Arkansas would eliminate the research and that would leave the DOD without much valuable information which is available in no other place.

The amendment by the Senator from Arkansas would kill all new starts in the Themis program and severely hamper some of the ongoing programs. This program was established to provide new centers of excellence with a broad geographical representation in fields relevant to the DOD mission. All of these advantages would be practically eliminated by the pending amendment.

The Agile program has received a major reduction from the action of the Armed Services Committee. The proposed amendment would reduce funds for Agile by an additional \$5 million. Since there is only \$27 million in Agile in the beginning, it is obvious that this additional cut will severely cripple a program dealing with counterinfiltration systems, new intrusion detection sensors, border control analysis, border area security systems, pacification efforts, and village defense corps selection and training.

Mr. President, I urge that the amendment by the Senator from Arkansas be defeated. We must be austere. We have been austere. We must not go beyond prudence.

Mr. STENNIS. Mr. President, will the Senator yield?

Mr. McINTYRE. I am happy to yield to the distinguished chairman of the Committee on Armed Services.

Mr. STENNIS. Mr. President, in spite of my contact with the subject already this year to some extent, I have been very much interested in what the Senator has had to say about these projects.

I do not see how anyone could listen to his statement of facts—and I know it is correct—without being most favorably impressed with these programs.

Like everything else these programs need regulation, they need thorough surveillance, and they need annual review. I appreciate the statement made by the Senator that it is his purpose as the chairman of the subcommittee to continue surveillance over the various programs and the multitude of other items that are not included in the amendment.

I thank the Senator, and I salute him and congratulate him for a very fine job in a tedious and sticky area where it is very difficult to get the real merits of the situation.

I also reiterate my interest with reference to all of these projects to see if the executive branch cannot review them, pick them out, and place some of them so that those they wish continued, can be placed somewhere else in the budget, in some other department, so that better surveillance over them can be had.

I thank the Senator.

Mr. McINTYRE. Mr. President, certainly under the leadership of the chairman of the Committee on Armed Services, the Senator from Mississippi (Mr. STENNIS), the committee has given this military authorization bill the best study in depth I have seen in the short time I have been in the Senate.

The Fulbright amendment attacks areas we have already acted on and where we continue to work, as the Senator has emphasized. It is apparent that these projects are being scrubbed down and scaled down. It is important that the Senator realizes that this matter has been looked into carefully.

Mr. STENNIS. I thank the Senator again. I express my regret that more Senators cannot be present to hear these matters discussed by each side in order to hear the arguments pro and con. I do not see how it is possible to vote on a matter so involved as this matter without having a chance to hear more of the arguments.

Mr. FULBRIGHT. Mr. President, will the Senator yield?

Mr. McINTYRE. I yield.

Mr. FULBRIGHT. Mr. President, I certainly agree with the Senator from Mississippi on what he has just said. Some Senators have reverted to their old customs too quickly. We were able to get quite a bit of interest in connection with the ABM discussion, but now we have the same attendance on these amendments that we used to have on the old bill. I wish Senators would remain in the Chamber. We would make much better progress. I share the Senator's regret that more Senators are not present.

Mr. STENNIS. I thank the Senator. However, I wish to add that they do have many other duties.

Mr. FULBRIGHT. The Senator is correct.

Mr. STENNIS. There really is not enough time. However, we cannot pass on these matters unless we hear the arguments.

Mr. FULBRIGHT. I think the Senator is correct.

Mr. McINTYRE. I yield the floor.

Mr. FULBRIGHT. Mr. President, I yield 5 minutes to the distinguished Senator from Michigan.

Mr. HART. Mr. President, first, I wish to repeat what I have said before the Senator from New Hampshire. He has done a magnificent job in scaling down or, to use his own expression, scrubbing out or cleaning up, some of the aspects of the bill. We are all in his debt. The taxpayers are in his debt. Having said that, I wish to disagree with his characterization of the action of our friend from Arkansas (Mr. FULBRIGHT) as "nit picking."

I disagree completely that the Senator from Arkansas yesterday, in commenting on some of the research projects, was trying to endanger the whole program unfairly. The programs that the Senator from Arkansas discussed are a part of the package. This is what we are being asked to authorize money for. If in the eyes of any of us some of the items make something less than good sense, then our responsibility is to talk about them.

Just as I have commended the Senator from New Hampshire for scrubbing up or scaling down, I commend the Senator from Arkansas for putting his finger on something that, to us, does not make sense. Nobody will be intimidated by that.

We are talking about an item of \$7 billion-plus. We are suggesting that in that reach of \$7 billion is some money that does not have to be authorized or some proposal that need not be undertaken.

Each of us has a family budget. Unless we are operating on the poorest poverty base, we all know that the budget contains some money that really does not have to be spent, and the survival of the family would not be destroyed or even seriously jeopardized if we did not spend some of the money that we have set aside to spend.

We might ask ourselves what it would be like if we had a family budget of \$7 billion. Is it not likely that somewhere there would be certain expenditures that really need not be undertaken? One does not have to be a Ph. D. in domestic science, home economics, or general economics to know that if we are given \$7 billion a year, we probably do not have to spend all of it, and that the economy might even be stronger if we did not spend all of it.

The Senator from Arkansas yesterday gave a list of some projects that struck him, and struck others of us, as examples of why it is not necessary to go all that way. I think it is not an unfairness to the program to hold that view.

Mr. McINTYRE. Mr. President, will the Senator from Arkansas yield to me on my own time?

Mr. FULBRIGHT. I yield.
Mr. McINTYRE. Let me try to give an example to the distinguished Senator from Michigan.

Mr. HART. Take the proposal that the distinguished Senator from Arkansas was discussing. Those are the ones I am saying were not used to intimidate anyone—

Mr. McINTYRE. I do not know—

Mr. HART. To respond to this.

Mr. McINTYRE. Here are some of the programs discussed yesterday by the Senator from Arkansas:

First. "The Attaturk Revolution in Turkey."

Second. "Gandhi, Nonviolence, and the Struggle for Indian Independence."

Third. "The Sinhalese Buddhist Revolution of Ceylon."

Fourth. "The Egyptian Revolution, Nasserism, and Islam."

Fifth. "Militant Hindu Nationalism: The Early Phase."

Mr. HART. Now, with respect to that—

Mr. McINTYRE. All right. Just a minute now. I have the floor. There is absolutely not one nickel in the 1970 budget for these programs. What is the Senator bringing them up for? What is he bringing them up for but to intimidate and scare the rest of Congress into thinking they are spending that money this foolishly? My statement has a number of examples in it of the type of ongoing programs and projects that we are making today; otherwise spotlighting these other programs the Senator from Arkansas has mentioned, in my opinion, is nit picking.

Mr. HART. I think we could more aptly say that he is talking about mistakes we have already made. Does not the Senator agree with that?

Mr. McINTYRE. I am not prepared to defend the 1968 budget here. I am here to talk about the 1970 budget.

Mr. HART. Maybe we cannot agree on the characterization of the studies the Senator has just enumerated and which were discussed yesterday, but if we had to do it all over again, would we really buy a book on Ataturk? If we had it to do all over again, would we really do any of those things which, in my book, represent the kind of thing that the national family budget really does not have to spend money on to get?

Mr. McINTYRE. I cannot judge what determination was made prior to 1968. Those we talk about now have not been funded at all since 1968. Maybe if it seemed important to study the theories of revolution. It may well be interesting to have some scholarly expertise study into the Ataturk Revolution, or the revolutionary process in Ceylon. The point I want to make is that we are here talking about the fiscal year 1970 budget. Why do we not talk about the programs in 1970 instead of pulling these things out of the past trying to scare the rest of the Senate into voting against the bill?

Mr. HART. What about providing empirical trade conclusions about ideological goals which support insurgency? We are funding that and that has been an ongoing one. That was mentioned.

Mr. McINTYRE. Insurgency has been quite a problem for the Department of

Defense during the past 3 or 4 years in a place called Vietnam.

Mr. HART. Does the Senator think that the University of Massachusetts under this contract will either get us out of Vietnam or keep us out of another one like it by this kind of study?

Mr. McINTYRE. I am not going to indulge in what the University of Massachusetts can do. The able Senator from Massachusetts (Mr. BROOKE) is now in the Chamber. Perhaps he can reply to that.

Mr. HART. No; if there is still time remaining—

Mr. FULBRIGHT. Mr. President, I yield 5 additional minutes to the Senator from Michigan.

The PRESIDING OFFICER. The Senator from Michigan is recognized for 5 additional minutes.

Mr. HART. Let me explain why I rose to react as I did. It is not nit picking. Whatever it is, it is a discussion of chapter and verse on projects which were authorized by Congress for the Department of Defense to undertake. There are those of us who hold a deep conviction that whatever else it is relevant for, or to, whatever agency of the Government, if any, should be buying the Military Establishment should not.

If there is any nit picking, it is nit picking of ourselves because routinely over the years we have said to them, "Go ahead, if you think you need it. Here is the money."

The Senator from Arkansas and others are saying, and I too think it is not inappropriate, in the review of military requests, to review what some of us believe to have been mistakes made by the military. Heaven knows, when we come in here looking for money for school feeding programs, or when we try to get aid started or even to maintain it, we are lectured at considerable length about what happened last year and the year before with some of the money we gave them then. In a sense, that is what we are doing with the Department of Defense right now. I think the Senator from Arkansas performs a very useful service in attempting to do just that.

Mr. FULBRIGHT. Mr. President, will the Senator from Michigan yield?

Mr. HART. I yield.

Mr. FULBRIGHT. I appreciate what the Senator has said. I repeat, I think the Senator from New Hampshire has done a good job in undertaking to criticize it at all. It has never been done before, to my knowledge. He has been a tower of strength in getting anything underway. But the situation here, as I see it, has been built up over a number of years before the Senator was even on the committee or even a Member of the Senate.

The PRESIDING OFFICER. The time of the Senator from Arkansas has expired.

Mr. FULBRIGHT. Mr. President, I yield myself, or the Senator from Michigan, 5 minutes and then I will let him yield to me because I want him to participate in this colloquy. I yield 5 minutes to the Senator from Michigan so that he may yield to me.

The PRESIDING OFFICER. The Sen-

ator from Michigan is recognized for 5 additional minutes.

Mr. FULBRIGHT. Does the Senator from Michigan yield to me for an observation?

Mr. HART. Indeed I do.

Mr. FULBRIGHT. Mr. President, the Senator from New Hampshire does not deserve any criticism at all, even though the Senator from New Hampshire did cut these programs by 8 percent from the budget request, I believe. But the budget went up on most of these items, contrary to most Government programs that I am familiar with on the civilian side.

The amount for Federal contract research centers, for example, in 1969, I am informed was \$263.3 million. The 1970 request is \$277.4 million. That is a 5-percent increase.

On social behavioral science research, the 1969 figure is \$45.4 million and for 1970 it is \$48.6 million, a 7-percent increase.

If I understand correctly, the Senator from New Hampshire did cut back the budget request, but actual cut over what it was in actual expenditures last year is not quite that much. But, in any case, I agree with the Senator that it looks like nit picking when we are talking about \$45 million in a budget of \$80 billion. But in practically any other program before this Congress, \$45 million would look like quite a substantial amount. \$45 million would be a great deal for a project on the White River or the St. Francis River in my State, for example. My senior colleague, Mr. McCLELLAN, and I—he in particular—have often put out a great deal of energy to get \$45 million for a natural resource development.

Just because this is only a small part in such a huge appropriation request, only \$45 million, we can call it peanuts or we can call it nit picking, but only in the sense that it is small in comparison to the total.

But it is not small relative to any other standard in this country but the standard of the Pentagon and the Defense Department.

In a letter which I put in the RECORD yesterday, dated July 24, and which is from John S. Foster, Jr., of the Defense Department, it was stated, after considerable discussion, that it is not possible to arrive at the cost of the projects. We are met with that argument very often. In reply to the Senator from New Hampshire's question as to why we do not discuss current projects, I asked Mr. Foster in my letter of June 10, why we could not get the cost. He said:

The funding of these projects is based on a total project cost, with such multiple outputs anticipated. Any effort to isolate a cost figure for a given report would be arbitrary and probably not represent the actual costs involved. Nor would such a cost estimate represent a measure of the payoffs from the research.

Then in the next paragraph, which is a significant one and which is the type of thing which is ongoing—I believe it is ongoing, in the words of the Senator from New Hampshire, and which I think ought to be stopped—Mr. Foster says:

August 12, 1969

In the case of projects not yet completed and for which only interim reports are available, significant results can be expected in the future. In the case of completed projects, the final report represents only a portion of the total output. For example, in one project funded over a period of nine years, a total of 29 technical reports, 12 scientific journal publications, and significant contributions to a book were produced in addition to the final report which you received.

That is the sort of thing which I think is beyond the normal or proper activities of the Department of Defense. It is not a literary institution created to produce books. In my view, it is not supposed to go out and produce research works on Atatürk or warlordism, or Islam, or the Sinhalese Revolution in Ceylon. These studies are irrelevant to and beyond the proper scope of the Defense Department. That is the main point.

Actually, the cut I am proposing is relatively very small as compared with the basic research total in the bill which is \$430 million. That is a large amount of money for basic research. By "basic" I mean not related to any specific project in the Defense Department. Of course, the nonbasic research is far greater than that. But basic research is the type of research we would expect to be done in a graduate school at Harvard or Yale or Princeton, and so on, generally. It is sometimes called pure science. It has nothing specific in mind.

The PRESIDING OFFICER. The time of the Senator has expired.

Mr. FULBRIGHT. I yield myself 5 minutes more.

I hope the Senator from New Hampshire and the Senator from Mississippi would inform me if there is anything that they especially do not like in the amendment. I would certainly entertain some revisions to it. Otherwise, I would like to have a vote on it. It is a worthwhile amendment.

As I said before, it is the first time in 25 years that we have made a serious effort to bring the whole authorization for the Pentagon under review.

I was just handed the annual report of the Rand Corp., for 1968. Over 10,000 publications have been produced, with some 500 new titles published each year. It sounds like a big publishing house such as they have in New York, publishing fiction and other paperback books. Most of these titles that I have read have nothing to do with the proper responsibilities of the Defense Department. So I hope the Senator from New Hampshire would consider going a little further in his cut.

Mr. HART. Mr. President, of course I share that hope.

The effort we are making to reduce the authorization for research and development and evaluation began actually more than a year ago. On April 18, 1968, the Senate defeated an amendment that I proposed reducing the defense authorization for those activities from the committee-approved total of \$7.8 billion to \$7.3 billion. That was a reduction of \$508 million. That defeat was on a roll-call vote, and we lost 28 to 30.

If the amendment had been approved, the Department of Defense would have had about the same amount of money

available for R. & D. this current year that it had the previous year.

Looking at the request the Department of Defense made for research this year, \$8.2 billion, apparently the Department does not understand the meaning of the close vote on that amendment. But, to its great credit, the Armed Services Committee has responded in, I think, as has been said several times before, very effective fashion.

The Defense Department this year requested an authorization of \$8.2 billion. The committee reduced the figure to \$7.1 billion, more than \$1 billion less than the Department sought, which is more than \$600 million less than authorized the last fiscal year and about \$400 million less than was appropriated last fiscal year.

Again I commend the committee for its review and its recommendations, but I think the further reduction, modest as it is, proposed by the Senator from Arkansas is possible.

None of us is sure what causes unrest on the campuses, but to the extent that the student knows that research and development by the Federal Government is overwhelmingly entrusted to the Department of Defense—

The PRESIDING OFFICER. The Senator's time has expired.

Mr. HART. Mr. President, will the Senator yield me 1 additional minute?

Mr. FULBRIGHT. Yes.

Mr. HART. That those engaged in research, contrary to general assumptions, are not the universities primarily, but the think tanks as the Senator from Arkansas has developed, if they see the ratio of the Federal Government's allocations of research and development for the military and then compares it to the amount of money the Federal Government allocates for research in new techniques for housing, for antipollution efforts, and so on, he gets a very obscure notion of our priorities. Perhaps, more correctly, such students get an illustration of priorities which offend them and outrage them.

The PRESIDING OFFICER. The Senator's 1 minute has expired.

Mr. HART. May I have 1 minute more?

Mr. FULBRIGHT. I yield 1 minute.

Mr. HART. When we say, "Let us put first things first," what do we identify in our minds as having first claim?

Look at this bill. Look at the bulk for research. Look at the bill in its totality. Then compare it with the programs, in some cases of long standing, intended to relieve hunger and to insure a broader availability of medical care. One does not have to be a member of the SDS to jump up and scream, "Your allocations and your priorities are all out of whack."

So can we not persuade ourselves, in addition to the reduction that the committee has made of more than \$1 billion for research, to add \$45 million for the reasons so eloquently assigned by the Senator from Arkansas?

The PRESIDING OFFICER. The time of the Senator has expired.

Mr. BROOKE, Mr. President, will the Senator yield?

Mr. FULBRIGHT. Mr. President, I yield myself 5 minutes.

Does the Senator from Massachusetts

wish to ask the Senator from Michigan a question?

Mr. BROOKE. No.

Mr. FULBRIGHT. I wanted, as a matter of fact, to continue a bit on what the Senator says, particularly as to university research. This is one of the large items. The budget request for university research for 1969 was \$254.4 million, and for 1970 \$305.9 million, which is a 20 percent increase.

As a matter of fact, we do know of, and there is a great deal of evidence of, the disapproval by many of the students of the intrusion of the military program into our universities.

I ask unanimous consent to have printed in the RECORD, because it is exactly on this point, an article entitled "Turned-Off Young Scientists Force Major Cutbacks in Military Research," written by Victor Cohn, and published in the Washington Post of May 12, 1969, which describes the attitude of young scientists in the various schools. Under the headline it says, "Caution: The military-industrial complex is armed and dangerous. ABM is an Edsel," referring to signs carried by physicists picketing the White House April 30.

There being no objection, the article was ordered to be printed in the RECORD, as follows:

TURNED-OFF YOUNG SCIENTISTS FORCE MAJOR CUTBACKS IN MILITARY RESEARCH—SCIENTISTS FORCE RESEARCH CUTBACKS

(By Victor Cohn)

"Caution. The military-industrial complex is armed and dangerous."

"ABM is an Edsel."—Signs carried by physicists picketing the White House April 30.

In a less violent, but equally radical way, science students, younger scientists and many older professors of physics and physiology have been raising their own hell on the campuses.

In the view of Prof. Don K. Price, Harvard political scientist, this is "a new kind of rebellion," linked only in part with the activist kids and college students in general.

It is a rebellion of young and discontented technologists—against the ABM and other costly military-technological systems, against "weaponizing" at secret laboratories on or near campuses and, in many cases, against doing any research, secret or non-secret, to help the military.

It is a rebellion against computer centers and social science projects serving the CIA.

It is a rebellion against what one young physicist called "the whole misuse of technology to spoil rather than save the country."

Sometimes painstakingly logical, sometimes only emotional and shrill, this rebellion has been increasingly effective. In the last few weeks it has:

Caused or helped cause giant Stanford University—derided by the new dissidents as the "Pentagon of the West"—to decide to phase out half the secret military projects at its Stanford Applied Electronics Laboratory. The Stanford rebellion was conducted largely by undergraduates, but sympathetic and vocal professors gave them vital moral authority.

Made Stanford's trustees place a moratorium on new chemical and biological warfare contracts at the nearby Stanford Research Institute, nominally "independent" but in effect owned by the university trustees.

Caused huge Massachusetts Institute of Technology to call a moratorium on taking any new secret contracts at a pair of crack radar and rocket guidance laboratories that have supplied much of the brainpower behind U.S. weaponry.

Forced American University in Washington to cancel a partly secret Army research contract with the University's Center for Research in Social Systems.

Seen physicists picketing the White House; professors buttonholing Senators and Representatives and organizations with many names but like purposes—Project Daisy, Ad Hoc Committee of Concerned Scientists—springing up at campus after campus.

This movement and student protests in general have in the past year forced the Defense Department to cut in half—from some 400 to 200—its "classified" or in common parlance secret research and development contracts on U.S. campuses.

REPORT ON CONTRACTS

This week Dr. John Foster, director of defense research and engineering, is expected to discuss the problem at a news conference. According to figures he has gathered, there are now such contracts or grants in effect at some 60 universities.

He will say they now represent about \$20 million worth of all the department's some \$250 million this year in 5500 campus projects.

In addition, the department finances what another official estimates to be \$200 million in work—most of it classified—at "research centers" like MIT's Lincoln Laboratory and Instrumentation Laboratory, Caltech's Jet Propulsion Laboratory and Johns Hopkins' Applied Physics Laboratory.

Most of these centers are operated by the universities on "not-for-profit" contracts, partly to keep secret work off the campuses themselves.

Foster may also report that the principal concentrations of classified research (according to one of his staff) are at:

MIT and Stanford. MIT's are entirely at the Lincoln and Instrumentation (or "I") Labs, neither of which MIT consider part of its teaching campus. There are no classified projects on the MIT campus proper, but the "I Lab" is on the campus fringe and both labs have close staff and graduate project connections.

University of Michigan, many at a university facility at Willow Run. Despite wrenching 1967-68 protests by students and faculty, the university this academic year has rejected just one classified proposal and approved 36 others.

University of California at Berkeley, University of Texas, Georgia Tech, Ohio State University and New Mexico State University.

For well over a year the Defense Department has been straining to reduce classified work on the campuses. "We still have some that need not be classified," an official reports, "mainly where a contracting officer has just used that as an easy way to give investigators access to classified material. This is not the only way to do this, and we want to reduce unneeded classification to zero."

There will then remain a hard core of still classified projects that both Defense officials and many professors and colleges consider proper and necessary. These deal with subjects like laser and maser detection (of distant objects like missiles), electronic counter-measures, advanced radar, underwater sound—"things that in the national interest need to be kept secret" and need to be done for the country's defense, in the view of Dr. Charles Kidd, a deputy to Dr. Lee DuBridge, the President's science adviser.

But DuBridge—though no activist—removed secret work from the Caltech campus as "inappropriate" 20 years ago.

ONE-DAY STOPPAGE

"Inappropriate" was a mild word on March 4, 1969, when MIT students—some of the country's brightest future scientists and advanced engineers—joined turned-off faculty members to hold a "one-day research stoppage to protest "misuses of science." The

University of Pennsylvania, the University of Rochester and some 30 other campuses saw similar demonstrations. And new organizations began to proliferate.

Some coalesced or merged loosely with a group started in New York City in February around a lanky elementary particle physicist from Stanford, Dr. Martin Pearl, as "acting secretary." This "Scientists for Social and Political Action" or SSPA quickly counted 500 or so members in "40 or 50" local chapters.

Pearl—at age 42, standing between the young and the old in science—bows to the "atomic scientists" who first attempted political action after World War II, and in bitter battle helped win civilian control of atomic energy. "But now," he says, "these men are the scientific administrators. They have to be careful of what they say. Now a second, fresh voice is needed."

NOT RESPONDING

A younger associate, Brian Schwartz of MIT, is blunter: "These older men have lost contact with the real world. They're not responding to the younger problems."

The younger problems exploded at Stanford in early April. For nine days, student dissidents occupied the Applied Electronics Laboratory, site of some \$2 million a year in defense research.

The younger problems were hoisted onto picket signs in Washington April 30, when for the first time in history, it was stated—first time or not, it was rare—175 pale, variously bearded, bookish-looking physicists picketed the White House. Their target: the ABM. Their leaders: David Nygren of Columbia and Tom Kirk of Harvard.

The physicists were here for the American Physical Society's annual meeting. This usually staid convention has boiled up into an indignation meeting over President Nixon's proposed Safeguard ABM system," said a news report. Wearing "Stop ABM" buttons, physicists prowled hotel and Congressional corridors. "Even the controversy over the security 'trail' of J. Robert Oppenheimer in the 1950s" wrote William Hines in the Chicago Sun-Times, "did not match this intensely political climate."

MORATORIUM ARRANGED

The younger problems boiled up again at both MIT and Stanford. At MIT, students marched into the office of President Howard Johnson for a sit-in and talk-out, especially about secret work on military helicopters and multiple-entry atomic missile guidance. All agreed to move to a lecture hall. Next the MIT faculty met. The upshot was a moratorium on secret projects until a special 22-man group studies the whole role of the Lincoln and "I" Labs, sites of some \$95 million a year in Pentagon contracts.

At Stanford too there were more demonstrations and faculty meetings. The upshots there: (1) a start on an "orderly" phasing out (or conversion to non-secret) of some \$2 million a year in secret contracts, representing about a third of the Applied Electronic Labs' defense work; (2) a pledge to end chemical and biological warfare research and counter-insurgency studies at Stanford Research Institute (worth about \$1.4 million a year).

At both Stanford and MIT many professors have balked. Someone must defend the country, they indignantly say. Someone must provide the knowledge. And many of the best minds are on campuses. If universities severed all Defense Department ties, says Jack Ruina, MIT vice president for the special laboratories, "the country would be left in the hands of the professional military and industrial group."

At Stanford, Prof. O. G. Villard Jr.—radar researcher and son of the late Oswald Garrison Villard, crusading editor of the Nation—said: "As the son of a liberal who was a

devoted pacifist, I have searched my conscience and always felt I have been completely faithful to the pacifist traditions of my family. I have always considered that my research was 100 per cent directed toward saving human lives. This development essentially brings my research here to an end, and I believe the decision will have a most unfortunate effect on the long-term viability of the School of Engineering and even of the university."

These men were talking mainly about classified and directly linked military research.

PENTAGON FINANCING

But there is still another trend, against even open, non-secret basic study financed by any military or para-military agency. The Defense Department finances much basic research in physics, chemistry, electrical engineering and the like, partly because it knows that almost all such knowledge is ultimately needed; partly because it wants to maintain contacts with bright scientist-consultants. Of some \$1.5 billion in Federal basic research money now going to colleges, some \$247 million (16 per cent) comes from the Pentagon.

Last month University of Maryland students picketed a computer center doing non-secret work on pattern recognition for the CIA. At MIT last week, disaffected students protested a Defense-financed, non-secret project to make new computer methods available to any social scientist—whether working on Vietnam peasantry or the succor of the American poor. At Stony Brook, the Students for a Democratic Society, stormed another computer center. The computer center may be fast becoming the American Bastille.

To most young or old scientists, if not to their students, this is illogical.

SYMPATHY FOUND

Still, there is great sympathy among them for these many youths who are coming to consider almost all research "complicit" war research "for the system."

An important answer to the very young, maintains Stanford's Martin Perl, is to turn much research to social purpose. "The uncontrolled spawning of technology has produced pollution and contributed to socially destructive conditions," says his new organization. "Yet there is no real attempt to apply technical skills to improve life."

"This is what we want to tell people," said one of the new scientists during the Physical Society meeting here. "We're not very violent types. We're not about to riot. We just want to exercise our democratic rights."

Is all this the high-water mark of a temporary scientists' movement or is it a beginning of something larger? Only time will tell, but if the young scientists keep talking, there may be a new element in the American political dialogue. After years of relative silence, says Dr. Charles Schwartz of the University of California, "a large number of scientists are coming out of their little dark laboratories," and things may never be the same.

Mr. FULBRIGHT. On May 1, 1969, the Washington Post published another article entitled "MIT Curbs Secret Military Research," written by Victor Cohn. It was the MIT delegation of students and a professor who came to call on me, asking me what they could do to disassociate to a much greater degree—they were not adamant that it be complete—the Massachusetts Institute of Technology from military research. They did not like their university being considered simply an adjunct of the Pentagon. I ask unanimous consent that

the article to which I have referred be printed in the RECORD.

There being no objection, the article was ordered to be printed in the RECORD, as follows:

[From the Washington Post, May 1, 1969]

MIT CURBS SECRET MILITARY RESEARCH
(By Victor Cohen)

Massachusetts Institute of Technology—the Nation's leading science and engineering university—has ordered a temporary halt on accepting new secret military research at two famous laboratories.

The action was in response to mounting student and faculty protests against military research by U.S. universities—and against big new weapons systems like the anti-ballistic missile.

As evidence of that growing movement, some 175 young anti-ABM physicists picketed the White House for 45 minutes yesterday, then presented Dr. Lee A. DuBridge, the President's science adviser, with a petition opposing the Safeguard ABM system proposed by President Nixon.

The petition was signed by nearly 1200 members of the American Physical Society now meeting here.

Other physicists went to Capitol Hill to give Congressmen anti-Safeguard petitions signed by 729 colleagues at many universities.

"A large number of scientists are coming out of their little dark laboratories" to give the public their opinions on weapons, Charles Schultz, a University of California physicist, told a group of House members.

Just such a coming out—starting with a one-day research stoppage March 4—culminated in MIT's decision to declare a moratorium, perhaps until fall, on new classified projects at the two laboratories.

A 22-member panel will review the labs' roles—and perhaps, said one MIT source, "recommend that they be sold or otherwise disposed of, to be operated with no MIT connection."

REPORTS SOUGHT

MIT President Howard Johnson asked the panel to make a temporary report by May 31 and a final one by Oct. 1. Panel Chairman Frank Pounds, MIT School of Management dean, said he will try to have the final report ready May 31.

All work on present projects will continue in the meantime and the laboratories may accept "contract modifications."

One of the affected labs is the Lincoln Laboratory, which has been doing missile detection studies important to ABM development, though not working on ABM system hardware. The other is the Instrumentation Laboratory, which is working on the guidance system for MIRV (multiple independently-targeted re-entry vehicles) warheads for the sea-horse Poseidon missile.

The Lincoln Laboratory (in buildings outside Boston and in Cambridge) was established 18 years ago at Defense officials' "urgent" request—so MIT recalled—to develop radar and associated air defense systems. Almost all its work is for the Defense Department.

CONTROLS FOR ROCKETS

The Instrumentation Laboratory (on the fringe of the MIT campus in Cambridge) works on guidance, navigation and controls for rockets and spacecraft. Three-fifths of its work is for the Defense Department, two-fifths for the civilian space effort.

Together, the two labs have 3700 employees and a current annual budget of \$116 million. Their scientists are not part of the MIT faculty, and MIT has labored to keep their secret efforts at arm's length; there are no secret projects now on the MIT campus proper.

Still the labs' staffs and MITs faculty have close links. And these links have been

given much of the credit for the labs' high-quality work and high-quality staffs.

MIT President Johnson initially named Pounds to head an 18-member panel including faculty, students, alumni, Lincoln and Instrumentation Lab staff members and MIT trustees. Among the panel members are Julius A. Stratton, former MIT president now board chairman of the Ford Foundation, and Dr. Victor Weisskopf, noted physicist and a member of the Union of Concerned Scientists that held the March 4 research stoppage.

FOUR PANELISTS ADDED

Pounds added four supplementary panelists, including Noam Chomsky, celebrated MIT linguistics professor and another March 4 protester.

Protest against the ABM has been the loudest item of unofficial business during American Physical Society meetings here this week. Some 3000 physicists and their wives jammed a convention hall Tuesday night to hear an anti-ABM debate, and 1216 voted overwhelmingly against Safeguard in an informal ballot (76 per cent opposed it, 21 per cent favored it).

Physicists have been visiting their Senators all week carrying anti-ABM petitions. "Every swing Senator has been visited," said Martin Perl, Stanford physicist and an organizer of Scientists for Social and Political Action.

The Physical Society officially said its members have voted 8559 to 6405 to meet next January in Chicago, despite many members' protests over police handling of disorders during the Democratic Convention. The society also named a committee to seek ways for concerned physicists to examine scientists' role in society—a lesser response to demands for a new division on science and society.

Mr. FULBRIGHT. I ask unanimous consent to have printed in the RECORD the following additional articles:

An article entitled "Defense Research: Pentagon Declassifying Projects Studied in University Labs," written by Richard Homan, and published in the Washington Post of June 23, 1969.

An article entitled "MIT Curb on Secret Projects Reflects Growing Antimilitary Feeling Among Universities' Researchers," written by William K. Stevens, and published in the New York Times of May 5, 1969.

An article entitled "Dissident Scientists Brew Defense Program Tempest," written by John Lannan, and published in the Washington Star of February 5, 1969.

There being no objection, the articles were ordered to be printed in the RECORD, as follows:

[From the Washington Post, June 23, 1969]

DEFENSE RESEARCH—PENTAGON DECLASSIFYING PROJECTS STUDIED IN UNIVERSITY LABS

(By Richard Homan)

Faced with the threat of serious disruption of its research activities in universities, the Defense Department is making a determined effort to adjust them to the changed atmosphere on the Nation's campuses.

Within the past year it has cut by half the amount of classified defense research—a particularly provocative reminder of Pentagon presence—done in universities.

As a matter of policy, basic research projects in universities are no longer classified and a program of high-level, stringent periodic review of applied research projects has been established to determine whether their classification is still justified.

Although the Pentagon does not expect to do away with all classification of defense

research—as Dr. Edward Teller suggested last week—it plans to almost eliminate it on campuses and diminish significantly in the off-campus university laboratories.

The Pentagon's concern about its university research program, which accounts for one-third of its entire research effort, was heightened last month when two of the Nation's most prestigious institutions—Stanford University and the Massachusetts Institute of Technology—decided to begin cutting back their Defense involvement.

In an effort to improve its image among the Nation's university students and younger faculty to ward off new and more serious criticism and protect its valuable relationship with the institutions, the Pentagon has begun looking for ways to make accommodations.

Under the guidance of Dr. John S. Foster Jr., director of Defense Research and Development, it has recently:

Cut its classified research projects in universities from 8 per cent of the total to 4 per cent and hopes to get down to 1 or 2 per cent.

Urged Congressional committees at every opportunity not to take punitive measures—such as criminal legislation or fund cutoffs—against student militants and radicals. Instead the Pentagon recommends "leaving the initiative for solving the problem with the university administration."

Emphasized that the scope of a university's defense research is a decision to be made independently by the university, and encouraged and aided universities in diversifying their research in non-defense areas.

Brought university scientists and administrators to Washington to explain campus problems to the Defense officials who oversee the research activities.

Accelerated the formerly cumbersome procedures for Pentagon review and release for publication of papers prepared by university researchers in Defense-sponsored activities.

The number of classified projects has been trimmed largely by declassifying, not by ending them.

While the Pentagon insists publicly that this declassification is purely the result of an accurate application of existing security guidelines in areas where there was too much caution before, it is nevertheless clear that some relaxation of standards is involved.

"We just make sure now that, indeed, the work is truly classified," one high Pentagon official said, "and that it's not a case where someone at a lower level decided to classify it just to be safe. Classified projects are reviewed now at the highest levels."

Foster, speaking to the American Nuclear Society in Seattle last Wednesday, said that "some applied research and development contracts funded by the Defense Department at universities—normally at separate off-campus labs—are and must remain classified."

While the Pentagon's classified projects are a handy target for campus militants, there is a question about how much of an issue they actually are.

Since only 4 per cent of the total is classified, Foster says, "I believe this issue is overrated, and many of the people at universities who have investigated the facts agree."

Rep. Lawrence Hogan (R-Md.), one of 22 GOP congressmen who toured campuses recently to determine the causes of student unrest, said the problem was never mentioned to him, although there was a broad dissatisfaction with professors who spend more time on Defense projects than in dealing with students.

A Pentagon official who deals with university research says there has been no change in the number of proposals received from the institutions themselves for projects. For every proposal it approves, the Pentagon receives eight.

One Pentagon official suggested that a small amount of classified work should be

kept on campuses—to provide a target for the most violent radicals so they wouldn't turn their attentions to unclassified projects.

Until the reassessment of Pentagon-sponsored activities by Stanford and MIT, only two serious challenges to classified research had arisen on campuses in more than a decade. In 1967, New York University and the University of Pennsylvania canceled projects dealing with chemical and biological warfare.

At a speech before the American Institute on Problems of European Unity last week, Dr. Teller, one of the world's foremost nuclear physicists, complained that security classification was "scattering our scientists away from defense work."

In a broad attack on all secrecy in research, Teller said, "we must adopt a policy of openness. We have classified everything; we have succeeded in a fabulous manner in confusing the American public, the Congress, by this secrecy.

"Secrecy has not succeeded in slowing down Russian research, even in the most secret areas such as my own, nuclear explosives. Secrecy does not hurt anybody except ourselves. I think a thorough review of secrecy is needed."

[From the New York Times, May 5, 1969]

M.I.T. CURB ON SECRET PROJECTS REFLECTS GROWING ANTIMILITARY FEELING AMONG UNIVERSITIES' RESEARCHERS

(By William K. Stevens)

The Massachusetts Institute of Technology, by declining temporarily to accept new programs of classified research from the Government, has spotlighted a new stage in the evolution of what might properly be called the Federal-industrial-academic complex.

This vast, interrelated social organism has been the main instrument of scientific inquiry and technological advance in the United States since the instrument was born of wartime necessity, in total secrecy, three decades ago.

Since then it has undergone successive mutations—first with post-World War II demobilization, then with the onset of the cold war and the start of the space age, and now with a rising tide of antimilitary feeling among university researchers.

That feeling coupled with a growing interest in how science and technology might serve the nation's social needs, is said to have lent urgency to M.I.T.'s decision, announced last week, to place a moratorium on new secret research projects.

PANEL TO REPORT

The moratorium will last until Oct. 1, when a 22-man panel is to report on its re-examination of the institute's relationship to two of its semi-independent divisions, the Lincoln Laboratory and the M.I.T. Instrumentation Laboratory, which are two of the country's major contractors for research sponsored by the military.

The study of the two laboratories' roles was undertaken, M.I.T.'s president, Howard W. Johnson, said in an interview last week, as part of a continuing internal reassessment of the institute. But he said the laboratories were made the subject of a special separate study because of "widespread concern" about secret military research among M.I.T. professors and students.

The ferment is rooted in fears of military-industrial dominance, in a deep sense of uncertainty about nuclear war as expressed in dissent over the antiballistic missile system and, especially, in the Vietnamese war, according to Dr. James R. Killian Jr., chairman of the M.I.T. Corporation, who was a science adviser to President Eisenhower.

"A SHIFT IN INTEREST"

"There is now a shift in interest," Dr. Killian said in an interview in his office at M.I.T. "There was a period when the cut-

ting edge of technology was in the areas of the military and space. But there is a feeling now that in terms of national need we ought to devote a larger proportion of work to other fields." He mentioned transportation, bioengineering, medical research and social problems generally.

"I would lay great stress on this shift of mood," he said.

Today's mood is far different from the one in which some of the nation's leading scientists found themselves in the fall of 1939 when Dr. James B. Conant, then president of Harvard University, invited them to his home to talk about the role of science and scientists in the war that had just begun.

KISTIAKOWSKY IN GROUP

"I was among them," Dr. George B. Kistiakowsky, the Harvard chemist who later succeeded Dr. Killian as President Eisenhower's science adviser, said in an interview last week. "We talked of the possibility of offering our services to the British. We would also be learning the problems of warfare in case the United States should become involved."

Separately, a group of American physicists had become concerned over the prospect of using nuclear fission to produce a bomb of vast destructive power.

"In view of this situation," Dr. Albert Einstein wrote to President Roosevelt on Aug. 2, 1939, "you may think it desirable to have some permanent contact maintained between the Administration and the group of physicists working on chain reactions in America."

After the fall of France in 1940, Mr. Roosevelt gave the concerned scientists official power by chartering the National Defense Research Committee, headed by Dr. Vannevar Bush. Its purpose: to organize American science and technology for war.

COORDINATED EFFORT

Expanded into the Office of Scientific Research and Development (O.S.R.D.), the Bush group coordinated the country's over-all scientific effort throughout the war and oversaw the initial development of the atomic bomb until the Manhattan Project was set up separately.

With the end of the war, O.S.R.D. was deactivated, and most universities got out of the business of secret research. But the country was left with an O.S.R.D. legacy that is the basis of the country's scientific and technological effort, and of the Federal-industrial-academic complex, to this day: the Government contract as the main mechanism for financing private research.

PATTERN ESTABLISHED

Basic research had all but stopped during the war, and Government contracts let mainly by the Office of Naval Research, underwrote its rebirth afterward. Had it not been for this, Dr. Bush said the other day, the result for scientific research "would have been a catastrophe."

Within a few years other Government agencies were financing research across the whole spectrum of scientific activities. For the most part, money to universities was for nonsecret basic research, and that remains the pattern.

The Federal Government during the current fiscal year is spending more than \$5-billion for the support of research and nearly \$11-billion for development, or the fashioning of new products based on the fruits of research.

Of the \$5-billion for research, about \$1.5-billion is going to the colleges and universities. Of this \$1.5-billion, \$247-million—or about 16 per cent—comes from the Department of Defense.

Of the \$247-million from the Defense Department, only about 4 per cent goes for secret research, Dr. Lee A. DuBridge, President Nixon's science adviser, told the Senate Government Operations subcommittee last

week. He said this was down from 8 per cent two years ago.

Since shortly after World War II, few universities have done secret research. And Dr. DuBridge said in an interview last Saturday that almost all the money going from the Defense Department to universities for nonsecret projects was for basic research.

He defined basic research as research in which the only goal is the pursuit of new knowledge, wherein "you can't tell in advance whether it's going to be socially useful or not."

Most of the disengagement from military-oriented research in the academic community, he said, is in the realm of applied science—that is, research directed toward a specific goal.

M.I.T. SHARE LARGE

However, most of the applied research in military matters is done in the Defense Department's own laboratories or by industrial contractors. The government this year is spending about \$1.3-billion in these two categories.

M.I.T. has a disproportionate share of military research contracts. Not only is it allocated more Federal research grants than any other university (\$96-million worth in the fiscal year 1967, the latest year for which comparative figures are available), but nearly half the amount—\$47-million worth—is from the Department of Defense.

By comparison, the recipients of the next four largest Federal allocations were: University of Michigan, \$56-million total, including \$13-million from Defense; University of Illinois, \$52-million, \$12-million Defense; Columbia, \$52-million and \$11-million; University of California, Berkeley, \$48.8-million and \$7-million.

M.I.T.'s high proportion of defense research funds can perhaps be traced to the Lincoln and Instrumentation laboratories. The Lincoln Laboratory—created in 1951, early in the cold war, to develop early warning systems for the detection of incoming enemy bombers and missiles—has spent \$65-million, of which \$64-million came from the Defense Department.

The Instrumentation Laboratory, which is the world's leading research center for self-contained missile-guidance systems, received \$30-million to develop the guidance systems for the Thor, Polaris and Poseidon missiles.

In the fiscal year 1968 it spent \$20-million for development of the guidance and navigation system of the Apollo spacecraft under a contract from the National Aeronautics and Space Administration.

Few of those interviewed believe the two M.I.T. laboratories will or should be closed down. The main point at issue is their future form and relationship to the institute at large.

"I hope this problem won't be solved by S.D.S. pressures," said Dr. DuBridge, referring to Students for a Democratic Society.

"It's important for universities to look at themselves when they're not in a period of crisis," Dr. Johnson of M.I.T. said, "and we're not."

[From the Washington Star, Feb. 5, 1969]

DISSIDENT SCIENTISTS BREW DEFENSE PROGRAM TEMPEST

(By John Lannan)

A new tempest is brewing in the national scientific community over whether the defense establishment absorbs too much of the country's scientific and technological energies.

In New York this week several groups of younger physicists are pressing a host of proposals for political activism and at the Massachusetts Institute of Technology an activist step has already been taken—a day-long "research stoppage" has been called for March 4.

In Manhattan, the calls for action were heard during the annual meeting of the American Physical Society. The research stoppage at MIT has been scheduled by a newly formed Union of Concerned Scientists, at the instigation of more vocal members in the physics department.

"This is not a strike in terms of the standard use of the word," said the union's chairman, Prof. Francis T. Low. "It's not directed against MIT. It's a psychological protest."

OTHER CAMPUSES PRESSED

The MIT group is seeking to spread its disaffection with the way things are to other campuses.

"We've made contact with 10 to 20 others already," said Murray Edson, a professor of electrical engineering. "We're sending letters to other institutions and maybe a couple of hundred are going or have gone out."

The letter-writing campaign, Low explained, is a person-to-person one, faculty members at one institution writing to colleagues at another. Though each union member's goals may differ, the basic idea is the same: That the nation is dissipating on defense its scientific capabilities for bettering human life.

The Vietnam conflict appears to be little more than a precipitating factor in bringing on the March 4 protest at the Defense Department's single largest research contractor amongst educational institutions.

"I think we're all very unhappy about the Vietnam war," said Low, "but that's not what we're protesting about."

CONFIDENCE SHAKEN

But the 42 faculty members who signed the original statement of purpose nearly a week ago said Vietnam has "shaken our confidence in (the government's) ability to make wise and humane decisions."

They also pointed out that "there is also disquieting evidence of an intention to enlarge further our immense destructive capability." They said the response of the scientific community to these intentions "has been hopelessly fragmented."

The union's proposals include a call to start "a critical and continuing examination of governmental policy in areas where science and technology are of actual or potential significance;" to turn research from defense-oriented to environmental-oriented projects, to start their students questioning their future professional commitments; to express opposition to the anti-ballistic missile system and, finally, to organize scientists into an effective and vocal political action group.

In New York, several groups of younger, concerned physicists are busily drumming up political activism. At least two and possibly three groups are bent on making the prestigious American Physical Society more responsive to what they say are the needs rather than the fears of people.

INVOLVEMENT SIGHT

One group is trying to change the society's constitution, (a move that failed almost two to one last year,) to get it involved with contemporary problems. AIP's constitution now limits its activities to scientific issues rather than public policy.

Still another is trying to broaden the AIP's role in the education of the public to the dangers as well as the benefits of scientific and technological advance.

Still a third is trying to establish some sort of an action group such as that spawned by the MIT faculty.

Mr. FULBRIGHT. Here is an area in which the evidence is quite clear, I believe, that it is not in the interests of our universities nor, I think, in the long-term interests of the Pentagon itself, to alienate the young scientists or the young people of this country. Yet there is a 20-percent increase in the budget request

for university research as between 1969 and 1970.

In Project Themis, which is generally called the Federal aid-to-education project of the Pentagon, there is a 13-percent increase in the budget request. I am unable at this point to estimate precisely what effect that has over the actual expenditure last year on these particular items. The Senator stated the overall amounts, but it was not broken down into specific items.

On this matter of social behavioral science research, the one which has attracted much of the criticism, there was an increase of 7 percent between the 1969 and 1970 budget requests. There was a specific reduction of \$1.5 million, as I understand it, by the committee.

As to the Federal contract research centers, there was a 5-percent increase. This represents a very large amount; the actual amount, as to these research centers, is \$263.3 million in 1969, and \$277.4 million in 1970, a 5-percent increase.

As I understand it, the committee action does not specifically cut these items; it provides for an overall cut, which may be applied, according to the report, in broad categories; and, of course, this is one reason why it is of no particular significance to say, when the Senator is defending this item, "you should specify the precise ones you have got." I do not know that the committee specified exactly what they thought. If I correctly understand the report, on page 49, the committee recommended reductions in the general areas as follows: The Army, \$10 million; the Navy, \$15 million; and the Air Force, \$12 million, which is very much in the same pattern as my amendment. We more or less used the same approach, but we went one step farther.

The PRESIDING OFFICER. The Senator's time has expired.

Mr. FULBRIGHT. I yield myself 5 additional minutes.

We went one step further in at least recommending, although the amendment itself does not require it, cuts of specific amounts within the categories.

I am not at all sure that it is wise practice for the Senate to go beyond that, other than as to some one very specific item that might be called to our attention, such as the ones we mentioned, the Ataturk study and some of the others. It is very hard to find out about those until after the studies have been authorized and are in process, or well along. In many cases, it is difficult to know what is being done until the study is completed.

On the "think tanks," the funding of the "think tanks," it seems to me, is extremely loose, Rand being one of the principal ones—a very large operation. I wish to explain briefly why I think that is a very loose way to control these operations.

The financing of these research centers, commonly called "think tanks" is not on a project-by-project basis at all, but under agreements by the various military agencies to provide long term support to the organizations they sponsor. The current Air Force contract with Rand, for example, covers the 5-year period from 1966 to 1971, and is for a minimum of 1,277.8 man-years of professional scientific effort, at an estimated

cost of \$71,600,000, which amounts to an average of \$59,000 per man-year.

That is quite a sizable sum to appropriate, to turn over to an organization for no specific purpose, in a sense to do with as they please, and at these rates.

Rand, in turn, agreed "to perform a program of study and research on the broad subject of aerospace power, with the object of recommending to the U.S. Air Force preferred methods, techniques, and instrumentalities for the development and employment of aerospace power."

I presume that out of that profound research they came up with a project like the C-5A. That is one example, I presume; I hope it was not, but I do not know what they produced that has been of great value.

We were told yesterday, much to my surprise, by some Senators, that our airplanes are inferior. One of the Senators, in the course of the debate, said they are inferior. I do not believe that, myself; but it seems that whenever there happens to be a problem and if they want more money, the argument is that the product is inferior. If we are talking on the Fourth of July, on the other hand, we have got the best planes and equipment in the world. It all depends on the circumstances how good the products are. My guess is that our planes are as good as anybody's. We certainly have spent as much money as anyone on them.

Mr. MURPHY. Mr. President, will the Senator yield?

Mr. FULBRIGHT. I yield.

Mr. MURPHY. Possibly the Senator is making reference to remarks made by me yesterday, in which I pointed out that we had not had a new model fighter plane laid down, I believe, since 1954, and that the B-52's being used so effectively—thank goodness we have them—are, many of them, 10 years old, and some of them older than that.

I do not think I used the word "inferior." I might have implied that we could have had better planes had we had better planing in the Department of Defense, in the background. I think somewhere along the line we have been negligent; and I know my distinguished colleague agrees with me that when we send our boys out to defend the security of the country, we do not want to give them second-class equipment.

Mr. FULBRIGHT. I agree with the Senator, but I have never been under the impression that they have had second-class equipment.

The PRESIDING OFFICER. The Senator's 5 minutes have expired.

Mr. FULBRIGHT. I yield myself 5 additional minutes.

The planes we have lost, for example, in Vietnam, were not lost because they were confronted by superior airplanes, but because they were shot down with ground-to-air missiles and other ground fire, which I do not think a better plane, if there was one, could have avoided.

They have not been outclassed in air battles. At least, such incidents have not been brought to my attention.

I read in today's newspaper that we have sent 72 more new Phantom jets to Spain to impress the Spanish with what good planes we have. They are more

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modern than the F-100's which they replaced. However, that is not exactly the point.

The Rand Corp., the "think tank," has a free hand to spend \$71 million during this period of 5 years at an average of \$59,000 per man-year.

I think this is loose accounting. And I protest strenuously under the present budget conditions and the difficulties we had in getting money for the education bill just recently passed, and for other bills.

Efforts are made to cut items out of the education bill and other bills.

I protest the disproportionate amount we are spending in these research projects which have very questionable relevance to the mission of the Defense Department.

They have nothing whatever, in my opinion, to do with the protection of the men in Vietnam. These are not research projects for a better plane.

That is not what the Rand Corp. is really doing. These are different projects. They fall under a different category. All these behavioral science research studies have nothing to do with the qualities of a plane or any other hardware. They have no relevance to the hardware used to fight. Some of the studies are designed, in my opinion, to assist in brainwashing either the enemy or our own soldiers or someone else, I guess, because they fall in the field of psychological research, which is an interesting subject but is unrelated to the mission of the Defense Department.

The university research is sort of in a class by itself. Regardless of what effect it may have upon the Pentagon activities, I do not want them to further undermine the integrity of our universities or schools.

This is a much more serious matter than whatever they may wish to do to the program of research of the Pentagon itself.

I feel the same way about research in foreign institutions. We are having enough trouble with our foreign relations. This is an area with which we are all familiar. We know about the protests all around the world at our foreign research activities and the difficulties we have had.

The President came back from one trip abroad and reported that everyone is enthusiastic about the United States. If everyone is as enthusiastic about the United States, I think the enthusiasm is limited to the moon shot. It would be very strange indeed that the attitude toward many of the policies we are following would be changed that quickly.

The important thing is that to intrude our defense-sponsored research into the foreign institutions harms our relations with the foreign nations.

There was a specific example of this in Sweden last year. The Swedes protested the program we had paid their universities to undertake.

We know what has happened in Japan. We know about the violence originating in university circles in Chile when the Camelot was brought to light. In India last year, approximately a year ago, we remember what happened there.

I have an article entitled "India Sus-

pects U.S. Scholars," written by Bernard D. Nossiter, who is one of the most receptive and able reporters the Washington Post has. The article was published in the Washington Post of August 15, 1968.

I read the first paragraph:

American scholars in India are again suspect after parliamentary explosion here over a Himalayan research program supported by Defense Department funds.

Here we have an actual injury to our relations because we intrude with Defense Department funds into foreign academic research. What we are doing is driving friendly countries away from us.

They certainly simply do not like it. I do not blame them for that. They do not wish to be an appendage of the Pentagon. I think they are quite justified. I think that that item, which is \$5.7 million, should be eliminated.

I do not see any excuse for our going abroad and subsidizing these people. I assume that originally there was some idea that we might cultivate them and that they would be ingratiated and would respond.

Domestically, when we give a contract to people, they usually respond and are appreciative of the money. Perhaps the specific professor who got the contract abroad might even have been appreciative. However, on balance, the people in the institutions and in the country do not like it. It is bad policy.

The PRESIDING OFFICER. The time of the Senator has expired.

Mr. FULBRIGHT. Mr. President, I yield myself an additional 2 minutes.

The PRESIDING OFFICER. The Senator from Arkansas is recognized for an additional 2 minutes.

Mr. FULBRIGHT. Mr. President, I ask unanimous consent to have printed at this point in the RECORD the article to which I have just referred and also an article entitled "India Still Wary on U.S. Scholars," written by Joseph Lelyveld, and published in the New York Times on August 14, 1968.

There being no objection, the articles were ordered to be printed in the RECORD, as follows:

[From the Washington (D.C.) Post, Aug. 15, 1968]

INDIA SUSPECTS U.S. SCHOLARS

(By Bernard D. Nossiter)

NEW DELHI, August 14—American scholars in India are again suspect after parliamentary explosion here over a Himalayan research program supported by Defense Department funds.

The incident centers around the Himalayan Border Countries (HBC), a project affiliated with the University of California at Berkeley. The nature of the research appears to be innocuous and of no military significance. But opposition politicians on the left and right have created a storm because \$282,000 is coming from the Pentagon.

In reply to questions in Parliament last week, Prime Minister Indira Gandhi said she would "very carefully look into" the project. Her Minister of State for External Affairs, Bali Ram Baghat, said that the government views the program "with concern" and is "reviewing the advisability of permitting" it to continue.

FOUNDATION ORDERED OUT

India has already ordered the Asia Foundation here to pack up because it received money from the Central Intelligence Agency.

In view of the rising wave of Indian nationalism, American researchers say they would not be surprised if the government now forbade them to enter the sensitive Himalayan region near China and denied visas to scholars supported by military or intelligence money.

The blowup was forecast last winter by a California professor of anthropology, Gerald D. Berreman. He resigned from the Himalayan project, writing its director, Leo Rose, a political scientist at Berkeley:

"It seems unlikely that one would be permitted by the governments of host nations to pursue anthropological research (and presumably most other social science research which takes place in the countryside) if it were known that the money came directly from the United States military establishment."

OPPOSED TO VIET WAR

Berreman also resigned on what he called moral grounds, citing his opposition to the war in Vietnam. He is now in India under a Fulbright-Hays fellowship, hoping to study urbanism in a northern city. Yesterday, officials in the Ministry of External Affairs questioned him about the Himalayan project.

The program began in the late 1950s, supported entirely by Ford Foundation money. When this source began drying up, Director Rose hunted up other outlets and found funds at the Defense Department's Advanced Research Project Agency, the Smithsonian Institution and elsewhere.

The project has produced analyses of the relations between Tibet, India and China; the political system of Nepal; and other studies in linguistics, ethnology and anthropology.

Berreman, who examined the Pentagon contract, says it places no curbs on the scholars. It enables them to choose their own projects and guarantees that none of their findings shall be classified.

FOES IN PARLIAMENT

The furor in Parliament was touched off by a member of the Revolutionary Socialist Party. Members of the Jana Sangh, a party of right-wing Hindu fanatics, and Communists suggested that the research is merely a cover for American espionage.

The National Herald, a daily that usually reflects the government's line, said that permission for the scholars to work in the Himalayas "should never have been approved by anyone alive to the nation's self-respect and security . . . Whichever organization in the United States finances it, research and intelligence have been inextricably involved during the postwar period."

Perhaps as a result of this affair, professors here say, there have been unusual delays in granting visas to other American researchers with grants from the Health, Education and Welfare Department's Fulbright-Hays program. Ironically, India appears to have discovered the military sponsorship of the Himalayan project from hearings held last May by Sen. Fulbright's Committee on Foreign Relations.

[From the New York Times, Aug. 14, 1968]

INDIA STILL WARY ON U.S. SCHOLARS— CONCERN OVER PENTAGON OR CIA INVOLVEMENT STRONG

(By Joseph Lelyveld)

NEW DELHI, August 13—Three months ago Prof. Gerald D. Berreman, a University of California anthropologist, applied for a visa to come to India for a year of research and teaching. Today he called at the External Affairs Ministry here to assure worried officials that he was not an operative of the Central Intelligence Agency.

It is an assurance that Indian officials now feel they must have from all American scholars interested in their country. But there was a special irony in Professor Berreman's case

because he helped to start the controversy that made the Indians edgy.

Last January he sent Senator J. W. Fulbright, chairman of the Foreign Relations Committee, a copy of a letter he had written withdrawing from participation in a research project on the Himalayas. He felt that the project had been compromised by financial support from the Pentagon.

The anthropologist wryly describes himself as a wild-eyed opponent of the war in Vietnam. His letter explained that this was the basis of his "moral objection" to taking the funds. It also cited what he termed a practical objection—that the project and all other serious academic research by Americans in India could easily become controversial here as a result of the Defense Department's involvement.

Dr. Berreman, who later got a grant from the Department of Health, Education and Welfare, discovered to his dismay how accurate his forecast was. In fact, the controversy that has blown up here has caused the Government to hold up on all visa applications from Americans with any kind of academic pursuit.

Indians became conscious of the Pentagon's support of scholarly research only a few weeks ago, when there were press reports of Congressional testimony by Adm. Hyman G. Rickover before Mr. Fulbright's committee. The outcry in Parliament was immediate.

One member charged that the Pentagon and C.I.A. were busy infiltrating spies into the Himalayas, not only as scholars but also as artists, bird-watchers and yogis.

Privately, Indian officials say they do not really suspect the scholars of being spies. But they make it clear that research underwritten by the Pentagon has no future here.

COOPERATION IN THE PAST

This is also ironic, for India's own Ministry of Defense has cooperated in the past with the Advanced Research Project Agency, which gave the Himalayan project a grant of \$280,000.

As Professor Berreman explains it, the project was not an integrated program of research but a pot-pourri of diverse studies in several disciplines thrown together for the specific purpose of attracting funds.

The anthropologist, who wrote an article last February for The Nation decrying the "moral imperialism" of the Peace Corps, was asked whether there was any clear moral difference between taking money from the Defense Department and taking it from the Department of Health, Education and Welfare.

"Oh, I know I can't be entirely consistent," he replied. "If I were to be entirely consistent, I wouldn't pay my taxes and I wouldn't be teaching at the University of California. It's not consistency that I want but impact—in the form of opposition to the war."

Professor Berreman, who is here on a two-month tourist visa now, hopes to return next month to do a study of urbanization in Dehra Dun, a town near the Himalayas but not in them. The author of a book called "Hindus of the Himalayas," he promised the officials he saw today that he would not try to do any further research in the mountains.

Among others waiting for action on their visas are a dozen graduates of professional schools at the University of California who should already have arrived here for a year of further studies. A University of Wisconsin student of linguistics who had hoped to study Tibetan and Sanskrit in Darjeeling has been asked to move from the Himalayan resort to Benares.

American officials say they are not unduly alarmed by the difficulties the scholars are meeting. "Remember," one said, "we've had our moments of xenophobia and obscurantism too."

Mr. HART. Mr. President, will the Senator yield?

Mr. FULBRIGHT. I yield.

Mr. HART. Mr. President, in the course of the discussion it has been suggested that there are certain research projects which more appropriately could be undertaken by other agencies and departments of the Government. However, they are not doing it. The Defense Department is. Without the Senator's amendment, some of these worthwhile things would terminate. A willingness to assist in the transfer from the Defense Department to department X has been voiced.

I ask the Senator if it is not true that if there are projects of a research nature which are trimmed back by agreement to the Senator's amendment, projects which are thought to be worthy as research projects, there is on the Senate calendar a bill to authorize appropriations for activities of the National Science Foundation. That bill in regular order will follow the disposition of this bill by the Senate.

I know of no way in which we can operate here as jugglers. We will have to take a stand here at some time, and I hope that it is now. We will have to say no to some of these rather esoteric and certainly not directly defense-related research projects and cut them off and, happily, we are in a point of time in relation to the Senate bill in which the measures that will follow have value, and something may be picked up in the following bill.

The PRESIDING OFFICER. The time of the Senator has expired.

Mr. FULBRIGHT. Mr. President, I yield myself an additional 5 minutes.

Mr. HART. We are ready to make the transfer. However, before we are in a position to be able to transfer, we have to saw off the defense from that kind of research.

Mr. FULBRIGHT. Mr. President, I agree with what the Senator says. I am a cosponsor with the Senator from Oklahoma of a measure to create a foundation for research in the behavioral sciences. That would be a perfectly proper place to transfer these behavioral projects, assuming that they are good projects.

Mr. HART. Mr. President, that bill will follow the pending bill.

Mr. FULBRIGHT. Mr. President, I agree with the Senator. I think that his point is well taken.

Mr. President, I ask unanimous consent to have printed at this point in the RECORD for the information of the Senate a list of a number of particular institutions.

This one is for the fiscal year 1968 from the Department of Defense. It gives the name of the contractor and location and the amount of money for the fiscal year 1968.

I also ask unanimous consent to have printed at this point in the RECORD for Project Themis, a list of the universities that consist of both private and public universities. The list gives the funding for 1967, 1968, and 1969. That, of course, is the latest we have. I do this to show how extensive is the intrusion of the Defense Department into practically all of the important institutions of the United States.

This again goes too far and lends credence to the allegations of those who say that we are becoming a militaristic nation and that our civilian government and civilian life is being subordinated to the overwhelming influence of the military.

There being no objection, the material was ordered to be printed in the RECORD, as follows:

SECTION II—NONPROFIT INSTITUTIONS, FISCAL YEAR 1968

[Excerpt from Department of Defense listing of 500 contractors according to net value of military prime contract awards for research, development, test, and evaluation work]

Rank	Name of contractor and location	Thousand: of dollar:
10	Massachusetts Institute of Technology.....	119, 171
	Cambridge, Mass.....	31, 66
	Lexington, Mass.....	87, 51
20	Aerospace Corp.....	73, 331
	El Segundo, Calif.....	73, 30
	San Bernardino, Calif.....	3
22	Johns Hopkins University.....	57, 61
	Baltimore City, Md.....	2, 71
	Silver Spring, Md.....	54, 90
30	Mitre Corp., Bedford, Mass.....	35, 71
36	Stanford Research Institute.....	28, 71
	Ethiopia.....	19
	Thailand.....	5
	Hammer Village, Alaska.....	1
	Menlo Park, Calif.....	27, 60
	Stanford, Calif.....	32
	Mercury, Nev.....	43
	Cheyenne, Wyo.....	7
40	Rand Corp., Santa Monica, Calif.....	19, 131
44	California, University of.....	17, 39
	Berkeley, Calif.....	5, 76
	Davis, Calif.....	127
	Irvine, Calif.....	6
	La Jolla, Calif.....	5, 61
	Los Angeles, Calif.....	1, 471
	Point Mugu, Calif.....	12
	Riverside, Calif.....	89
	San Diego, Calif.....	3, 182
	San Francisco, Calif.....	256
	Santa Barbara, Calif.....	870
	Santa Cruz, Calif.....	44
45	System Development Corp.....	17, 372
	Huntsville, Ala.....	414
	Lompoc, Calif.....	700
	Los Angeles, Calif.....	61
	Santa Monica, Calif.....	13, 120
	Washington, D.C.....	363
	Belleville, Ill.....	350
	Lexington, Mass.....	375
	Rome, N.Y.....	191
	Dayton, Ohio.....	303
	Falls Church, Va.....	1, 226
	Hampton, Va.....	234
	Norfolk, Va.....	35
46	Stanford University.....	1, 422
	Palo Alto, Calif.....	218
	Stanford, Calif.....	1, 204
51	Rochester, University of Rochester, N.Y.....	13, 182
55	Cornell Aeronautical Laboratory, Inc.....	12, 500
	Edwards, Calif.....	86
	Buffalo, N.Y.....	11, 889
	Wright-Patterson, Ohio.....	37
	Falls Church, Va.....	448
57	ITT Research Institute.....	12, 172
	Chicago, Ill.....	7, 017
	Annapolis, Md.....	5, 130
	Wright-Patterson, Ohio.....	25
60	Institute for Defense Analysis, Arlington, Va.....	11, 691
64	Pennsylvania State University, University Park, Pa.....	10, 513
65	Research Analysis Corp.....	10, 067
	Iran.....	155
	Vietnam.....	880
	McLean, Va.....	9, 273
	Various domestic.....	—241

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SECTION II—NONPROFIT INSTITUTIONS, FISCAL YEAR 1968—Continued

SECTION II—NONPROFIT INSTITUTIONS, FISCAL YEAR 1968—Continued

SECTION II—NONPROFIT INSTITUTIONS, FISCAL YEAR 1968—Continued

Table with columns: Rank, Name of contractor and location, Thousands of dollars. Includes entries for Columbia University, Michigan University, Illinois University, Battelle Memorial Institute, U.S. National Aero Space Agency, etc.

Table with columns: Rank, Name of contractor and location, Thousands of dollars. Includes entries for Carnegie Mellon University, Harvard University, Minnesota University, California Institute of Technology, etc.

Table with columns: Rank, Name of contractor and location, Thousands of dollars. Includes entries for Smithsonian Institution, Indiana University, American Institute of Research, etc.

SECTION II—NONPROFIT INSTITUTIONS, FISCAL YEAR 1968—Continued

SECTION II—NONPROFIT INSTITUTIONS, FISCAL YEAR 1968—Continued

SECTION II—NONPROFIT INSTITUTIONS, FISCAL YEAR 1968—Continued

Rank	Name of contractor and location	Thousands of dollars	Rank	Name of contractor and location	Thousands of dollars	Rank	Name of contractor and location	Thousands of dollars
341	Dartmouth College, Hanover, N.H.	652	390	Arizona, University of, Tucson, Ariz.	504	468	Tufts University	380
342	Arizona State University, Tempe, Ariz.	649	396	National Society Professional Engineers, Washington, D.C.	493		Boston, Mass.	41
348	American Society for Engineering, Washington, D.C.	621	418	Michigan State, University, East Lansing, Mich.	464		Medford, Mass.	339
351	Lowell Technical Institute	618	427	Boston College	455	478	Arctic Institute of North America	354
	BillERICA, Mass.	40		Chestnut Hill, Mass.	318		Canada	75
	Lowell, Mass.	578		Weston, Mass.	137		Washington, D.C.	279
352	Lovelace Foundation, Albuquerque, N. Mex.	613	428	South Dakota School of Mines and Technology, Rapid City, S. Dak.	454	479	Alabama, University of	351
354	Ohio University, Athens, Ohio	608	444	Nevada, University of, Reno, Nev.	426		Birmingham, Ala.	176
358	Northwestern University, Evanston, Ill.	590	446	Flight Safety Foundation, Phoenix, Ariz.	423		Huntsville, Ala.	102
357	American Institute for Research	569	462	North Carolina, University of, Chapel Hill, N.C.	390		University, Ala.	73
	Washington, D.C.	26	464	U.S. Interior Department	387	483	Utah State University of Agriculture and applied science	344
	Pittsburgh, Pa.	481		Denver, Col.	50		Bedford, Mass.	162
370	Mississippi State University, State College, Miss.	564		Washington, D.C.	37		Logan, Utah	82
371	Travelers Research Center, Hartford, Conn.	561		Bartlesville, Okla.	85	485	Iowa, State University of, Iowa City, Iowa	342
376	North Carolina State University, Raleigh, N.C.	551		Albany, Oreg.	50	487	Lehigh University, Bethlehem, Pa.	341
388	Massachusetts, University of	511		Pittsburgh, Pa.	165		Total	665,365
	Amherst, Mass.	493	467	Presbyterian Hospital, Chicago, Ill.	384			
	Waltham, Mass.	18						

PROJECT THEMIS

The list shows all the Themis projects funded through fiscal year 1969. The original 4-year plan called for 50 new starts for each of fiscal years 1967, 1968, 1969, and 1970 for a total of 200 programs. During the first 3 years only 118 of the planned 150 new starts were approved. The fiscal year 1970 budget request for \$33 million provides for (1) 25 additional new projects to be started during fiscal year 1970 which would require \$10 million, and (2) the renewal of the ongoing Themis programs which would require \$23 million.

PROJECT THEMIS PROGRAMS—FUNDING BY FISCAL YEARS (\$1,000)

Military Department	State and institution	Program topic	Fiscal year 1967	Fiscal year 1968	Fiscal year 1969
	Alabama:				
A	Auburn University	Information processing			
AF	University of Alabama	Structural mechanics	343	171	170
A	Alaska: University of Alaska	Human ecology			400
N	Arizona:		404	202	
AF	Arizona State	Human performance in isolation			
AF	Do	Detection devices, techniques and theory	380	190	
AF	University of Arizona	Precision optical systems		409	200
	University of Arizona at Tucson	X-ray and XUV radiation physics		409	203
AF	California:				400
N	University of California, San Diego	Transport phenomena in flow systems			
	University of California, Riverside	Solar radiation effects	398	200	522
N	Colorado:				400
N	Colorado State	Tropical weather disturbances, surface effects			
AF	Colorado State	Predictability of low-altitude winds		500	250
	Colorado State at Fort Collins	Effects of environment on sensors		430	215
AF	Connecticut: University of Connecticut	Structural fatigue			400
A	Delaware:				205
N	University of Delaware	Fluid mechanics and heat transfer		410	
	University of Delaware at Newark	Oceanography	563	281	280
AF	District of Columbia:				480
N	Georgetown University	Laser technology			
N	Catholic University	Vitreous state structure and dynamics	404	202	202
N	Catholic University	Dynamics of cable systems		386	193
N	Catholic University	Underwater acoustics		402	201
AF	Florida:				500
A	University of Florida	Solid state materials			
N	University of Florida	Logistics and information processing	400	200	200
A	Florida State	Geophysical fluid dynamics	340	170	170
N	Florida State	Prediction of tropical weather phenomena	600	300	350
	Florida State	Computer aided instruction		500	250
A	Georgia:				230
AF	Georgia Tech	Low-speed aerodynamics			
N	Georgia Tech	Interface phenomena	339	170	170
	University of Georgia at Athens	Statistical analysis and information retrieval	350	195	200
N	Hawaii:				215
AF	University of Hawaii	Astronomy research			
A	University of Hawaii	On-line computer systems	350	175	220
	University of Hawaii at Honolulu	Vector-borne tropical diseases		409	205
AF	Illinois:				400
A	Illinois Institute of Technology	V-STOL aerodynamics			
	Illinois Institute of Technology at Chicago	Degradation of structural materials		409	205
AF	Indiana:				400
N	Indiana University	Environmental hazards			
	Notre Dame University	Deep sea engineering	400	198	200
N	Iowa:				200
AF	Iowa State	Automatic navigation and control	400	200	200
A	do	Ceramic and composite materials	400	200	200
N	University of Iowa	Vibration and stability of military vehicles	449	224	225
	do	Application and theory of automata		500	250
A	Kansas:				490
AF	University of Kansas	Remote sensing instrumentation			
AF	do	Social and behavioral science	400	200	200
N	Kansas State	Performance in altered environment	400	200	200
	do	Nuclear radiation effects on electronic components	400	200	200
AF	Kentucky:				577
A	University of Kentucky	Metal deformation processing			
AF	Kentucky University at Lexington	Research in electrochemical processes		408	204
A	do	Environmental stress physiology			400
	University of Louisville	Performance assessment and enhancement			400
A	Louisiana:				200
AF	Louisiana State	Infectious and communicable diseases		399	200
	do	Digital automata	342	171	170
			398	400	200

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PROJECT THEMIS PROGRAMS—FUNDING BY FISCAL YEARS (\$1,000)—Continued

Military Department	State and institution	Program topic	Fiscal year 1967	Fiscal year 1968	Fiscal year 1969
N	Massachusetts:				
	University of Massachusetts	Deep sea structures	360	180	180
N	Boston College	Elementary chemical kinetics			440
	Michigan:				
AF	Michigan State University at East Lansing	Behavioral studies			400
N	Minnesota:				
	University of Minnesota	Infrared detector and laser technology	380	190	190
	do	Gas turbine technology	400	200	200
N	do	Organization performance and human effectiveness			415
A	Mississippi:				
	University of Mississippi	Rotor and propeller aerodynamics	278	139	140
AF	University of Mississippi	Biocontrol systems		409	204
A	Missouri:				
	University of Missouri at Columbia	Fluid transport properties	446		220
N	University of Missouri at Rolla	Aqueous aerosols in atmospheric processes		400	200
AF	do	Basic studies on electronic materials			400
A	do	Terrestrial science research			400
AF	Washington University at St. Louis	Control, guidance and information studies			400
AF	do	Optimum detection systems	399	199	250
AF	Nevada: University of Nevada	Cloud physics	460	290	290
AF	New Hampshire: Dartmouth College	Time-shared computing systems			
AF	New Jersey:				
	Rutgers University	Fluid flow aerodynamics	400	200	162
N	Stevens Institute	Nonlinear physics of polymers	324	162	170
A	do	Cryogenic sciences and engineering	342	171	200
A	do	Evaluation of terrain vehicle systems		460	
N	New Mexico:				
	New Mexico Institute M. & T.	Environmental sciences	406	203	268
N	University of New Mexico	Radiation effects on electronics	370	185	185
AF	New York:				
	SUNY-Albany	Modification of environment	399	199	200
N	SUNY-Buffalo	Environmental physiology	600	300	350
N	Rensselaer Polytechnic	Electrochemical power sources		460	230
A	do	Radiation effects		430	215
N	do	Optimum digital signal processing			400
N	Yeshiva University, New York City	Research on thin film materials			390
N	North Carolina:				
	North Carolina State	Materials response phenomena	400	200	200
AF	do	Digital encoding systems		396	200
A	North Dakota:				
	North Dakota State	Control of vectors of diseases of military importance		393	197
N	University of North Dakota	High pressure physiology		527	263
A	Ohio:				
	Case-Western Reserve	Research in R. & D. management	300	150	150
A	Ohio University	Low-level navigation	407	200	200
AF	Kent State University	Liquid crystal detectors		410	205
A	University of Cincinnati	Internal aerodynamics in air-breathing engines		400	200
A	Oklahoma:				
	Oklahoma State	Electronic description of the environment	482	241	240
N	University of Oklahoma	Mechanism and theory of shock	580	405	202
N	Oregon: Oregon State	On-line computer environmental research		290	290
A	Pennsylvania:				
	Drexel Institute of Technology	Powder metallurgy		510	255
AF	do	Forecasting by satellite observations		408	204
N	Jefferson Medical College	Pathogenesis of acute diarrheal disease		390	195
N	Lehigh University	Nonlinear wave propagation		400	200
N	do	Low-cycle fatigue in joined structures		400	200
N	do	Fluid amplification			520
N	Hahnemann Medical College	Bioamines in stress			400
A	Rhode Island: Rhode Island University at Kingston	Photoelectronic imaging devices		368	184
N	South Carolina: Medical College of South Carolina	Resuscitation and treatment of wounded	260	130	100
N	South Dakota: South Dakota School of Mines	Modification of convective clouds			
N	Tennessee:				
	University of Tennessee at Knoxville	Dynamic sealing	300	150	150
AF	do	Remote sensor research		408	204
A	University of Tennessee at Tullahoma	MHD power generation		400	200
A	Vanderbilt University	Coating science and technology		550	275
N	Texas:				
	Texas A. & M.	Optimization research	400	200	155
A	do	Meteorology research	430	215	215
A	do	Aircraft dynamics of subsonic flight		388	194
A	do	Human pattern perception	272	100	135
N	Texas Christian	Information processing	380	190	190
N	University of Houston	Coherent and incoherent EM radiation		350	175
A	Rice University	Remote sensing of gamma ray signatures			400
AF	do	Automatic navigation	400	200	200
N	Southern Methodist	Statistics in calibration methods		502	296
A	do	Performance and man-machine effectiveness		470	235
AF	Texas Tech.	Chemistry of combustion	398	200	200
AF	Utah: University of Utah	Isolation and sensory communication		410	255
A	Vermont: University of Vermont				
	University of Vermont	Learning control systems	342	171	170
AF	do	Atomic interaction in gases		408	200
N	do	Cryogenic instrumentation			400
N	do	Cryogenic instrumentation			400
A	Virginia Polytechnic, Blackburg	Vehicle engineering and control		416	208
N	West Virginia: West Virginia University	V-STOL aerodynamics			
Total			19,375	28,180	29,239

Mr. STENNIS. Mr. President, if it is convenient to the Senator from Arkansas, would he be willing to allow the Senator from Massachusetts to speak at this time.

Mr. FULBRIGHT. Mr. President, that is agreeable. I yield to the Senator from Massachusetts.

Mr. STENNIS. If the Senator from New Hampshire will yield time, Mr. President—

Mr. McINTYRE. I yield 12 minutes to the distinguished Senator from Massachusetts.

Mr. BROOKE. Mr. President, if I may take a somewhat different approach to the proposal as set forth by the Senator from Arkansas, let me first say that the policy and general philosophy as set forth by the Senator's proposal was shared and was considered by the Subcommittee on Research and Development of the Committee on Armed Services, under the able leadership of the distinguished Senator from New Hampshire. In fact, it is in keeping with the policy as mandated to that subcommittee by the distinguished Chairman of the

Armed Services Committee, the Senator from Mississippi. So the matters which the Senator from Arkansas raises are matters which the committee had before it in its deliberations and in its final decision, in its report to the full Armed Services Committee.

Mr. President, I should like to analyze very briefly the contentions of the Senator from Arkansas and then conclude by proposing certain questions to the Senator from Arkansas which I trust he will answer and which may be helpful in this debate.

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Mr. STENNIS. Mr. President, may we have order, so that those of us who wish to hear may do so?

The PRESIDING OFFICER (Mr. BELLMON in the chair). The Senate will be in order.

Mr. BROOKE. The Senator from Arkansas proposes a \$45.6 million cut, including a 10-percent, or \$27 million, cut in Federal contract research centers; a \$2 million, or one-third, cut in research by foreign institutions; a 20-percent, or \$5 million, cut in project Agile, counter-insurgency work, which includes largely technological work, not just social and behavioral research; \$3 million from other social science research; and \$8 million, or 25 percent, from project Themis, a program for university research.

If the Department of Defense distributes the committee's 12-percent cut in the research budget evenly across all categories, the Federal contract research centers will be reduced by more than Senator FULBRIGHT has proposed. All the categories that the Senator has mentioned are subject to the large cut the committee has imposed already, unless the Defense Department considers them of such high priority that other programs are reduced disproportionately.

Moreover, social and behavioral research on foreign military environments and policy planning studies are specifically cited by the committee as an area to be reduced by 12 percent, or by \$1.5 million of the \$13.3 million, and by the recommended transfer of approximately \$4 million in projects to other agencies with responsibility in these areas. For example, some policy planning studies might go to State, ACDA, and AID; and some more basic research might go to the National Science Foundation. Work in these areas already has been reduced by approximately 11 percent since fiscal 1968 and by the effects of inflation, which the Senator has not mentioned, and which I am sure he would want to take into consideration.

Thus, a thorough pruning of work in this area is already assured by the committee's action.

Apparently, Senator FULBRIGHT has several concerns: allegedly worthless research; defense connections with the universities; the supposed hazards of doing research under defense auspices in foreign countries, on the assumption that it may lead to engaging in military action there at some time.

Mr. President, many knowledgeable people agree that some of the research involved might better be carried out under other auspices, and the committee has provided for this. But unless the State Department and other agencies obtain greater authorizations, this of course, will be impossible.

Thus, the effect of adopting the Fulbright amendment simply would be to reduce further what is widely recognized as an inadequate national effort in social and behavioral research. Surely, we should first seek to create better mechanisms for funding work in this general field before we trim the limited effort already underway.

If it is insisted that all Defense research must be strictly tied to DOD mis-

sions, we would have to cut out all basic research in physical sciences as well.

Mr. FULBRIGHT. Mr. President, will the Senator yield?

Mr. BROOKE. I yield.

Mr. FULBRIGHT. Did the Senator hear the Senator from Michigan state a moment ago that on the calendar is the National Science Foundation authorization, and it will be up very soon, and we could authorize an increase to be taken up—all the items about which the Senator is talking? Assuming that they are justifiable research contracts, it would be a much more appropriate way to do it, it would seem to me. That bill is already on the calendar.

May I also say to the Senator that I told the Senate a moment ago—I do not know whether he heard it—that a delegation from one of the most prestigious institutions in the country, and certainly in his State of Massachusetts, waited on me with respect to the problem of the intrusion of the military. They are not antimilitary. They simply were making the point that they hated to see MIT become dominated or too dependent, I will say, upon a military appropriation. I believe that MIT last year had \$119,175,000. This is an awful lot of money. In one sense, of course, it is a great compliment to MIT. These students, I was told by the professor who brought them, were among the best students they had. They were not dropouts; they were not in that sense. They were serious, very intelligent young men who did not wish to see MIT be considered just a kind of dependency of the Pentagon. They had great pride in MIT's reputation as one of the world's great technological institutions.

Mr. BROOKE. Mr. President, will the Senator yield?

Mr. FULBRIGHT. I am sorry about it. I would have thought that the Senator, too, would be interested in preserving the great reputation of Harvard and MIT as among the leading educational institutions in the world. It was a great shock to me—and I think to the entire country—to suddenly see an eruption on the campus of Harvard University, the oldest and I would say probably the most respected institution in America. I cannot, of course, prove that it was just because of this.

Mr. BROOKE. Mr. President, will the Senator yield?

Mr. FULBRIGHT. I think it contributed to it.

Mr. BROOKE. If the Senator would yield, I would say that that was caused primarily by ROTC, not defense research, of which the Senator is well aware. There may have been some contribution. But I was about to say, before the Senator asked his question, that universities themselves are in the process of gaining better control of defense research programs.

I had a conversation recently with James Killian and Howard Johnson of MIT. They are well aware of this problem. What the Senator has said relative to the students at MIT is certainly shared by members of the faculty and of the administration.

Mr. FULBRIGHT. Yes.

Mr. BROOKE. They are aware of the

problem, and they are trying to get on top of the problem, and I think we should give them an opportunity.

I might also point out that the Defense Department is cooperating in seeking better balance and in reducing classified research to a minimum. These things are ongoing at the present time, as the Senator very well points out.

Of course, I am interested in maintaining the integrity of MIT, Harvard, and the other institutions of higher learning in the Commonwealth and throughout the country; but I think these programs are now being given close scrutiny by the administration and the faculty as well as the student body.

Mr. FULBRIGHT. If the Senator will permit me, I should like to read an AP dispatch from Washington dated May 15, 1969:

Dr. John Foster, the Pentagon's research chief, told a Congressional committee Wednesday that he saw "no evidence of major adverse impact from student demonstrations against defense research at universities."

Mr. President, I submit that Dr. Foster is just out of touch with the situation in this country. And it was not just Harvard. I mentioned Harvard because it is such a great institution.

Mr. BROOKE. The Senator mentioned Harvard specifically.

Mr. FULBRIGHT. The Senator will recall that at Berkeley, which is certainly also one of the great institutions, where there was a very clear protest about the participation at the university in IDA. The same situation prevailed at Cornell and at one university after another. I am not saying it is the only thing. The war is probably the greatest single contributor, but they were also protesting about the participation of the university in IDA. There are many aspects to it. It is not just the military. In many cases it takes the attention and time of their leading professors to go off on these highly paid research projects and leave the teaching of the students. In other words, the students are being shortchanged. I know they are correct because the attention and time of the finest university professors in many cases are directed and siphoned off in very large contracts that are given them.

Mr. President, I ask unanimous consent to have the article to which I referred printed in the RECORD.

There being no objection, the article was ordered to be printed in the RECORD, as follows:

FOSTER BACKS U.S. RESEARCH AT UNIVERSITIES

WASHINGTON.—Dr. John Foster, the Pentagon's research chief, told a congressional committee Wednesday that he saw "no evidence of major adverse impacts" from student demonstrations against defense research at universities.

Defending the research program, Foster said, "I hope you will not be misled by those who suggest that . . . academic research [supported by the Defense Department] represents a sort of sandbox for scholars, irrelevant to defense missions, unproductive technically and, worst of all, inimical to the best interests of universities. It is more fundamental.

"It is the great national advantage we possess because we are able to bring together essentially independent and well-informed people—from government, industries and

universities—over long periods for voluntary work on our tough problems. This is the core of our capacity for technological superiority."

As for demonstrations directed at Pentagon research, Foster renewed his argument of a year that responsibility for dealing with them should be left with university administrations.

While Foster regarded "some of the current turmoil as irresponsible action," he added, "I still have confidence in the ability of the academic community, in the aggregate, to cope ultimately with the situation."

Foster warned against congressional effort to curb such research at universities where demonstrations have taken place, saying, "We must not run the risk of eroding nationally important research by precipitate punitive action against features of university life that are essential to our future."

The PRESIDING OFFICER. The time of the Senator has expired.

Mr. McINTYRE. Mr. President, how much time do I have remaining?

The PRESIDING OFFICER. The Senator has 27 minutes remaining.

Mr. McINTYRE. I yield 5 minutes to the Senator from Massachusetts.

Mr. BROOKE. Mr. President, I would appreciate it if the Senator from Arkansas would allow me a little time. I think the colloquy was very helpful and I am grateful to him for joining in.

Mr. FULBRIGHT. I would be glad to do so.

Mr. BROOKE. I think this is a healthy trend and creates an awareness on the part of the administration, the faculty, and the members of the student body. The Senator referred to Dr. Foster.

Mr. FULBRIGHT. But he is not aware of it.

Mr. BROOKE. He is not aware of it. Mr. FULBRIGHT. But he is the head of research.

Mr. BROOKE. I think the Department of Defense is aware of the necessity for gaining better control of defense research on campuses.

Mr. FULBRIGHT. But this is the man who hands out the money. That is the trouble.

Mr. BROOKE. But he said this is not caused by defense contracts with the universities. I think he is attributing this to the war in Vietnam and the chemical problems and, as we are all aware, the ROTC matter.

Mr. FULBRIGHT. They all contribute. I agree that no one thing does it; they all contribute.

Mr. BROOKE. It is a healthy trend, but to carry it so far that university ties are severed would be, in my opinion, a very unwise move.

Mr. FULBRIGHT. By my amendment we would not sever them.

Mr. BROOKE. I think it would deprive the universities of work on national defense. I am sure the Senator would agree that it would weaken one of our best guarantees that open and objective research and counsel, not alleged pressures of a "military-industrial" complex are shaping the defense policy. I am sure the Senator would agree that thus, universities themselves should determine whether and under what circumstances they should engage in defense research. This is a matter we should leave up to the universities and not something we

should establish as a matter of policy or mandate. Such programs should not be terminated by congressional fiat.

Defense-sponsored social science research abroad is already down by 70 percent since fiscal 1968 and all proposals are now subject to thorough interagency review under State Department auspices.

It is a highly dubious and antiintellectual proposition to assume that research on foreign areas somehow increases likelihood of U.S. military involvement. With all due respect, I do not believe that is so.

Mr. FULBRIGHT. Mr. President, will the Senator yield?

Mr. BROOKE. I yield.

Mr. FULBRIGHT. The point I was making is that the intrusion of our military into university life is offensive and it creates ill will. I believe there is evidence of it in the articles which I have had printed in the RECORD. I was not making the point we were more likely to become militarily involved.

Mr. BROOKE. It could just as well decrease it as increase it.

Whether we involve ourselves militarily is a matter of policy, not research, and that policy can be most wisely shaped if careful preliminary research is done.

The reports submitted by the Senator from Arkansas yesterday, in my opinion, are hardly the whole story. Out of such policy studies have come many of the fundamental concepts and programs on which national security rests.

Concepts and rationale of stable deterrents, the first strike, second strike distinction, the rationale for security through arms control rather than arms competition, the most informed critics of MIRV and ABM, have all been influenced importantly by work done on these research efforts.

Economies are also realized. Overseas bomber bases were reduced at savings of billions of dollars a year after studies in the midfifties revealed their vulnerability to missile attack. These and other savings grew out of such analysis as the Senator from Arkansas attacks so categorically, analysis costing only a pittance of the savings from the basic studies alone.

If there is waste, payoffs from such research are sometimes so great as to compensate many times over, especially in view of the relatively small fraction of the budget in these categories.

It is also utterly misleading for the Senator from Arkansas to assert that no one knows the cost of studies he cites. As the letter of July 24, 1969, from the Department of Defense, printed in the RECORD at the request of the Senator from Arkansas at pages S9621-S9622, indicates, the cost of individual reports are not easily determined, but the costs of projects, from which many reports may emerge, are known.

The costs of the projects from which the Senator from Arkansas has selected certain reports to question are specified by the Department as \$11,530,408 over a period of 15 years.

Many of the concerns voiced by the Senator from Arkansas are shared by a number of us.

The PRESIDING OFFICER. The time of the Senator has expired.

Mr. BROOKE. Mr. President, I ask unanimous consent that I may proceed for 2 additional minutes.

Mr. McINTYRE. I yield 2 minutes to the Senator.

The PRESIDING OFFICER. The Senator from Massachusetts is recognized for 2 additional minutes.

Mr. BROOKE. Mr. President, that is why the Subcommittee on Research and Development and the Committee on Armed Services took strong action in these several areas. However, the committee's action is more than sufficient. Indeed, many observers will fear that too much damage has been done to the defense research effort by the reduction of more than \$1 billion, and we should not go further at this time.

Mr. President, it is for that reason that I urge that the Senate agree to the committee recommendation and reject the amendment offered by the Senator from Arkansas (Mr. FULBRIGHT).

Mr. President, I have some questions I would like to ask the Senator from Arkansas and I shall submit them to him inasmuch as the time of the Senator from New Hampshire is running out.

Mr. McINTYRE. Mr. President, I yield 10 minutes to the Senator from California (Mr. MURPHY).

Mr. MURPHY. I thank the distinguished Senator from New Hampshire.

I would like to speak momentarily on one aspect of the proposed amendment which has to do with the Federal Contract Research Centers. We have heard great approaches to many of these matters in terms of dollars. The understanding, the use of the dollars, and the complexity of the operations concerned, sometimes have not been fully discussed or fully understood.

I wish to express my appreciation to the distinguished Senator from New Hampshire for permitting me this time, and acknowledge the concern of the Senator from Arkansas about spending by our Department of Defense, which is widely known, and, of course, I join him. I think that great economies may be forthcoming in the future. I do believe, however, that some attention should be given to the kinds of Federal Contract Research Centers that we have, and the kinds of tasks that they perform. This is important since the Senator from Arkansas wishes to cut \$27 million from the funding for these organizations whether or not they are engaged in the area of social sciences.

As an example of the areas of responsibility in the FCRC's; eight are operated under the auspices of universities, each concentrating in the fields in which each respective university has specific strengths.

Three others do analysis work and, sometimes rather loosely, I think, are called think tanks, because they have a concentration of very expert brains.

In my hometown of Los Angeles, I believe there are more Ph. D.'s than any other place in the world accumulated under one roof. They perform valuable review of our posture on a continuing basis. Two other Federal Contract Re-

search Centers are engaged most specifically in the systems management field.

The latter two, it should be pointed out, were built up under the auspices of the Congress for the direct purpose of handling profoundly complicated technical programs on a nonprofit basis so as to be most scrupulous in avoiding conflicts of interest in all places wherever possible, in order to save the taxpayer's dollars. However, these and other FCRC's have been of other great benefit to the taxpayer.

Because of the kind of work the FCRC's do there have been tremendous savings of dollars which, this Senator is convinced, could never have been achieved in any other way. For instance, it was documented some years ago to the satisfaction of the Secretary of Defense and the Congress that the Aerospace Corp., acting with its military partner, the Air Force, had in fact effected a savings of a billion and a half dollars in its ballistic missile programs in its first 5 years of operation, and it is acknowledged that this same team has brought about the savings of at least another billion since that time.

While there are 16 FCRC's, I believe the success of Aerospace Corp., is typical of them all and, Mr. President, it is easily documented for the purposes of our discussion here today. One of the most successful programs conducted by the Air Force and Aerospace Corp. has been the Titan III project which has enjoyed a tremendous run at great savings to the Government. I have previously commented on this some weeks ago. The secret of this success has been outstanding, professional technical management which brought about a situation whereby our Nation was able to place operational payloads on Titan III boosters which were originally supposed to be R. & D. vehicles. In other words, they combined research and development with actual payloads at one time. Yet, and this is important, because of this professional management, about which I speak, the Titan III took on operational missions while still an R. & D. vehicle with enormous success and tremendous savings. I might add, parenthetically, that all of our space flights to date have been launched by boosters developed by or evolving from those built by the military.

Another of the most valuable Federal Contract Research Centers, the Rand Corp., which has been mentioned today, has been responsible for substantial savings in numerous areas. There are two, however, which are typical of the kinds of economy these groups do effect.

Rand's study of strategic air bases in fact developed a new concept of operations which, by the Air Force's own estimate, resulted in net savings of \$1 billion in installations alone, and was judged to provide the same or better security as other proposed systems costing from \$10 to \$22 billion more over a 4-year period. So this is really not wasted money. What we are doing is buying an accumulation of the very best brains possible.

In a second typical example, because of its noncompetitive status, the Rand Corp. was able to bring the industrial computer

groups together on common ground to exchange technical information and to initiate computer sharing among them. This cooperative pooling of programing techniques, known as Share, is estimated by the Department of Defense to have saved military installations and defense contractors, and therefore the taxpayer, approximately \$50 million.

There is yet another example of the kinds of vital work carried on by these Centers which must be given notice. The Institute for Defense Analysis completed a test and evaluation study in mid-1968 only 1 short year after it was undertaken. This project was a comprehensive analysis of the testing requirements for the Minuteman III and Poseidon weapon systems. The spectacular results showed how to determine the actual performance of these systems by testing without the enormously increased costs the Department of Defense feared might be needed through the use of what up to that time were the only known testing techniques.

This successful effort by the Institute for Defense Analysis was accomplished by forming a team of knowledgeable staff people along with military officers and highly qualified engineers from industry.

In other words, they put together the very best brains. The work of this team resulted in the resolution of a severe problem which the Government itself had been unable to resolve even after repeated attempts. In other words, Mr. President, if the Institute for Defense Analysis had not licked the problem, it probably would not have been done even today and I, for one, cannot put a price on that.

While I am mentioning this specific Center, I believe it is very important to note that of the total contract budget of the Institute for Defense Analysis, only 5 percent is allocated for foreign policy and social studies. Yet the Senator from Arkansas asks us to reduce the FCRC funding by 10 percent.

Mr. President, the Department of Defense, again with the consent of the Congress, years ago decided that it would be necessary to use the Federal Contract Research Center approach in extremely complex programs in problem areas.

The PRESIDING OFFICER. The time of the Senator from California has expired.

Mr. McINTYRE. Mr. President, I yield 3 additional minutes to the Senator from California.

The PRESIDING OFFICER. The Senator from California is recognized for 3 additional minutes.

Mr. MURPHY. Mr. President, if I do not finish my remarks in that time, I ask unanimous consent that the remainder of them be printed in the RECORD because, obviously, because of this protracted discussion which has taken place there will not be time for me to read it all. I ask this so that Senators who are not presently in the Chamber may have the benefit, if they so desire, of reading what I think has been a rather carefully prepared explanation of the exact purpose of these Centers, why they were put together and what they do.

The PRESIDING OFFICER. Without objection, it is so ordered.

Mr. MURPHY. Mr. President, as an example of the degree of expertise needed, the difference between the development of airplanes and large booster rockets applies. In the construction of an aircraft, you can always taxi it down the runway, lift off to an altitude of 1 foot and settle back to the runway subsequently analyzing problems within the machine and correcting them.

However, in the case of the booster rocket with its valuable payload, you have no such luxury. What is important here is the stark fact that the booster alone, without payload, frequently costs several million dollars. Therefore, it must work—and work right—the first time. The military simply does not have enough people trained in the management of such programs in-house to guarantee this kind of success. But, by using an FCRC's technical ability the job can be done, was done and must continue to be done.

Mr. President, so far I have mentioned the successful story of only three of our Federal Contract Research Centers. But, the story with the rest is pretty much parallel. Yesterday, the distinguished Senator from Arkansas introduced an amendment which if I read it correctly, would have the effect of reducing FCRC funding by \$27 million across the board. Yet the thrust of his argument centers on the activities carried out by these groups under contract to the Department of Defense in the social sciences and foreign affairs. I submit that this is dangerous because it uses the area of foreign policy and social sciences as the target, but, aims at all disciplines within the FCRC's with a shotgun or broadside effect. That is the great danger of generalizations.

There is an additional perspective to this question that has received too little attention here in this debate. It is the straightforward proposition that it is vital to our Nation's safety that the planners in the Department of Defense be aware of the far-reaching and serious military consequences of changes in foreign governments. Certainly, no one in the Department of Defense nor in the FCRC's has any wish to interfere with the prerogatives of the State Department and from my conversations with them and my study of their work I can say with certainty they want no part of it. Yet, military implications of foreign governmental change do exist—they are real. Mr. President, it would be folly to ignore them with possible serious miscalculations the result. It has been previously demonstrated to the satisfaction of the Congress that the very best way to analyze such situations is via the expertise offered by the FCRC's and, while regrettable, we must see today's world as it is and not as we wish it to be. Thus, we have an obligation to our own safety and security to have the advantage of just this kind of analytical review.

Perhaps, what the Senator is really saying is that these centers represent the military-industrial-scientific-educational complex which he so greatly deplores. We have heard much of this complex—I prefer the words "American team"—of late and we would do well to remember the gist of the thoughts of our

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beloved Gen. Douglas MacArthur who, as a part of his legacy, told us that the one great reliable strength of our Nation as it maintained its place in the world is our industry-military team which was and is called upon for our security every day of our lives. Certainly, by now it is not necessary to once again remind this body that retiring President Eisenhower actually pointed to this team with pride.

Furthermore, those who are so concerned about this team would do well to remember that the Federal Contract Research Centers do in fact serve as a buffer or governor on both the military and the private sector. They do not make a product. They pay no dividends other than to the taxpayer. The important safeguard which exists here is simple: Both military and industrial security in these installations are operated by the Department of Defense and because the Secretary has confidence in the FCRC's they are able to gather together all the very best proprietary data, glean and coordinating all the best information while protecting it from piracy, but offering it as an asset to our security.

Nonetheless, we are told here that this amendment will reduce the authorization for the Federal Contract Research Centers by \$27 million because the chairman of the Committee on Foreign Relations is concerned about their work in the social sciences. Again we have the generalization which is akin to the old apples and oranges—which is akin to lumping all the animal world together and saying all must wear horseshoes or—in this case—all will have their rations cut since there is a problem with horseshoes. Mr. President, what we are asked to do here is to consider the social sciences, condemn the work the FCRC's are doing in the social sciences, lump the social sciences together with architect engineering, weapons analysis, systems management, and cut back on the whole works.

Mr. President, I have the privilege of serving on the Subcommittee on Research and Development chaired by the very able Senator from New Hampshire. I can tell the Senate that under Senator McINTYRE's leadership, the subcommittee went into the question of the Federal Contract Research Centers very thoroughly. When the Subcommittee on Research and Development reported to the full Armed Services Committee on its work, my friend the distinguished Senator from Virginia offered an amendment which is included in the bill and would limit the salaries of FCRC technical and management personnel. I did not co-sponsor that amendment for numerous reasons, but, I certainly understand and congratulate Senator BYRD for his motives in offering it.

However, we should remember that the complexity and national importance of the work of the FCRC's require highly talented and competent management. The competition for top people in this field of endeavor is considerable. The major FCRC's are managed by people who would otherwise be serving as senior professional executives in industry or industrial laboratories, as university administrators or senior professors, or as

executives in enterprises such as the major management consulting firms and research organizations, both profitmaking and nonprofit. Many of these organizations do Government contract work, and compensation in excess of \$45,000 is common in most of these posts. Even in the case of university professors, there are a substantial number of senior people whose activities, including consulting, bring them incomes in the \$50,000 to \$60,000 range. Again, much of this consulting is paid for from Government contract funds, including Department of Defense funds. Profitmaking enterprises normally provide additional incentives, such as stock options, not available in nonprofit organizations such as the FCRCs, and universities provide other fringe benefits in many cases.

In the case of most of the FCRC's, the boards of trustees set the salaries of the top personnel. These trustees constitute an impressive roster of public-spirited citizens, including leading public figures, ex-public servants, university presidents and industrial executives. These men are acutely conscious of their policy responsibilities and of the public interest nature of the organizations. They are well able to judge the performance and quality of the persons whose salaries they set. These boards of trustees are keenly aware of the need to attract and to hold individuals of the highest caliber in the top management position of the FCRC's if these organizations are to be able to continue their effective performance in the national interest. The responsibilities are great; much of the work is pioneering and its quality is extremely important. Management judgment and talent is an absolute essential. For all of these reasons a limitation such as the one proposed appears inappropriate and in fact harmful.

The present language, left as is, suggests that in the absence of Presidential approval, some 20 officials of the FCRC's would have to take a cut in total compensation back to \$45,000, or leave their jobs, or the FCRC's affected would have to cease doing business with the Department of Defense.

Mr. President, I am reminded that many years ago I was called before a committee of this very body to explain just why the late Clark Gable could draw a salary of \$7,500 a week. Many on the committee asked "What does he do?" "How can he be worth \$7,500 a week for what he does?" My answer was that he doesn't do anything, but he has an expertise—he is an actor of supreme accomplishment and in free and open competition he can earn this much money. Clark Gable's name in lights over a theater sells tickets and offers an income to all involved as the result of free trade.

I do not mean that there is detailed commonality between the motion picture business and the FCRC's. I do mean, however, that these people about whose salaries we are so concerned are among the finest technical people we have and they are dedicated to their country and programs. Should they become discouraged, I can say for certain they will not go into \$40,000-a-year Government jobs.

They will go up the street to large private industrial concerns like TRW, Hughes, North American Rockwell, or Lockheed.

Surely, the distinguished Senator from Arkansas is well aware of the fees and salaries that ability and a good record can draw. The Senator from Arkansas, being the great lawyer he is, has received in his lifetime career special fees because of his expertise and knowledge of the law.

Mr. President, I believe there is another important factor worthy of our consideration today which applies to both amendments. I refer to the social and economic problems that loom so large in America now. It is acknowledged that the most competent and successful organizations created for the purpose of solving problems are those currently engaged in defense and space work. They have developed a whole new concept called systems management. Lately a new term has come into common use: I refer to "civil systems" which simply means the application of the systems management or systems engineering approach to those enormous problems which face us from within. The great organizations we have created to solve our defense problems since World War II are in being—they are operating and in place. They could, in fact, be our most important national resource when we turn them to the problems of pollution, waste disposal, communications, crime, delinquency, transportation, urban renewal, and the eradication of poverty, all of which are approaching crisis proportions as the distinguished Senator from Arkansas himself has often said.

So far, Mr. President, the potentially most promising approach to the solution to these problems is through the application of systems management or the systems approach or civil systems, if you will, by our great concerns in the aerospace industry of which the Federal Contract Research Centers are such a vital part. It may well be that other departments of the Government will want to use the abilities of these centers toward the ends I have just outlined—and this Senator believes they should. It may also well be that the Department of State could profitably use their services, since we all know how many problems that Department has had over the past 8 years, and the Committee on Foreign Relations would wish to consider appropriate funding.

However, it is extremely important that these organizations, these going concerns, not be impeded or reduced or discouraged here as we consider defense procurement. As a matter of fact, that so-called military-industrial complex we are supposed to be so concerned about could, through these self-same FCRC's, turn out to be the best friend our advocates of domestic priorities ever had.

The importance of independence and objectivity in these organizations is paramount, and has long been recognized as such. The FCRC's are for the most part engaged in highly important and complex research on matters of great significance to military planning and national security policy. More re-

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cently, because of the major contributions of these organizations in the field of national security, it has been urged by many, including the Secretary of Defense, that they apply their skills and experience to other important national problems such as those of the environment and the cities. A number of them are doing so, and this is becoming a significant portion of their work. It would seem unwise and inappropriate to inhibit the application of this national resource to domestic problems by placing special restrictions on them in a military procurement bill.

Mr. President, the distinguished and highly respected Director of Defense Research and Engineering, Dr. John S. Foster, stated in his recent testimony before the Committee on Armed Services that—

Second, we have reconsidered recently an issue which has been brought up from time to time for several years—whether or not these primarily Defense-sponsored organizations should be permitted or even encouraged to apply selectively their specialized capabilities to major domestic problems such as transportation, urban redevelopment, housing, and medical services. We have concluded that when an FCRC has capabilities suitable to a non-Defense client, it should be permitted to undertake non-Defense work. In short, we believe that the DOD has developed in the FCRC's a "national resource" which should be used as national priorities dictate, consistent with our needs in the national security area. Thus I have begun discussions with other parts of the Federal Government and with the FCRC's to introduce this concept of "selective diversification." I must add, however, that we do not intend to fund programs designed to solve domestic problems, nor do we intend to act as a permanent "middle man" in administering any such programs. Similarly, we do not intend to reduce or dilute our DOD funding to FCRC's for national security work, nor do we expect the FCRC's to reduce or delimit their contribution to defense needs.

Mr. President, it is important to this bill that there be no further reduction in funds authorized for Federal Contract Research Centers. I hope I have made some small contribution to erasing some of the misunderstandings that exist where they are concerned. I have seen first hand the work they are doing and I know the capabilities of their people. I can report with confidence, as can many of my colleagues, that many of our most advanced, most significant, and most successful new ideas for our security begin at these centers.

These Centers are vested with the tremendous responsibility for systems management, long range planning and the solutions to tomorrow's problems. While I wish today's problems made it possible for me to join with the Senator from Arkansas in his amendment, I believe the examples I have just cited are so compelling as to leave us with the clear responsibility to support the funding of these Federal Contract Research Centers as one of our great hopes for the future.

I depart from my prepared remarks for a moment to point out that during the committee hearings concern was expressed over salaries in the FCRC's. I attempted to explain the reason. When the Federal Contract Research Centers were put together, it was of extreme ne-

cessity that the very best and the very finest brains be obtained.

The PRESIDING OFFICER. The time of the Senator has expired.

Mr. MURPHY. May I have 1 additional minute?

Mr. McINTYRE. Mr. President, I yield 1 minute more to the Senator.

Mr. MURPHY. I know from practical experience that many of these scientists and administrators are working in these projects at a cost to themselves. I know they could go down the street from Air Research, for instance, and be hired at Thompson-Ramo-Woolridge at higher salaries. I know they could walk down the street and be hired at Hughes Aircraft or Hughes Tool and be paid a higher salary.

I also pointed out that to get the second-best brains would be a mistake, because these are the men who conceive the ideas, who draw the expert analyses for the Air Force and other services, to proceed at the greatest savings, in the most practical way.

Because of my knowledge of the performance of the Federal Contract Research Centers, notwithstanding that I dislike to be in opposition to the amendment of the Senator, I shall be forced to oppose it.

Mr. McINTYRE. Mr. President, I thank the Senator from California. He has been a very helpful member of the Research and Development Subcommittee and particularly with respect to this matter.

Mr. MURPHY. Mr. President, if the Senator will yield me 10 seconds, I have been on that committee, and I know the chairman of the committee agrees with me that there is a real lack of knowledge of what happens in these centers. I know he agrees with me that, as soon as we have the time, he will accept the invitation to come to my State. There are two of these Federal Contract Research Centers in my State that I think would be very good to visit. I am sure we would like to visit them and have a look at close range and ascertain what is being accomplished and exactly how the programs work. If we do that, I think we will have a greater understanding of what we are discussing.

I am extremely happy to be a member of the Senator's committee, where, for the first time I believe a great scrutiny of these matters is being had.

Mr. McGOVERN. Mr. President, will the Senator yield me a few minutes on another matter?

Mr. FULBRIGHT. First, may I respond to the remarks of the Senator from Massachusetts for a moment?

The Senator from Massachusetts wanted to conserve his own time. He was running short of time. He submitted in writing a number of questions to me.

Before I proceed to the questions, I wish to say that I have great sympathy for the attitude of the Senator from Massachusetts, because there are many research projects in the universities or educational institutions of his State.

It is my understanding that Massachusetts Institute of Technology, with over \$119 million last year, is the largest sin-

gle educational institution on the payroll of the Defense Department. Harvard, of course, has a much smaller allocation, but it is substantial, over \$2.5 million. The University of Massachusetts, under the Themis program, had a substantial amount, \$720,000. Boston College had \$440,000.

However, on the other side, in my view, is the impact these research programs may have on the colleges and universities. What I am more interested in is the preservation of the integrity of our educational institutions, whether they are in my State or in any other State.

The first question the Senator from Massachusetts asked was: Would the Fulbright amendment affect the \$4 million recommended to be transferred to the Department of State for foreign policy research—which is in the report?

It would not affect it. As far as I know, there is no evidence that the Department of State wants these programs, nor is there any evidence that the transfer of the projects are of projects which are worthwhile of themselves. My own guess is that it would be better that they be discontinued. In any case, there is no evidence it would affect it at all.

The second question of the Senator is: The Fulbright amendment would impose a further \$2 million, or one-third, cut in research by foreign universities and institutions. Is the Senator aware that this area has already been reduced by 70 percent since fiscal year 1968?

I am aware of that. I already congratulated the Senator from New Hampshire for reducing it, but we still have contracts in 44 different foreign countries. I have already given my reason why I think it is bad policy, and it ought to be reduced to a bare minimum, if not eliminated.

It is possible that there may be some unique situations in which a program would be justified, but I am quite confident there is no justification to have them in 44 countries. I am not sure our foreign policy can stand that much intervention by the Defense Department. It ought to be kept at a minimum. Besides, if there are some unique situations in which research and development would be justified, I would strongly recommend that it be sponsored by some other agency, the National Science Foundation, or the National Institutes of Health, or the Department of Commerce, some agency other than the military.

Surely, it ought to be obvious now to all Americans that military intrusions is offensive to small countries, or to any country. Military intrusion is much different from intrusion by cultural or other institutions, because people are suspicious of the military, as going to their own security. We always run into that danger. Tourists can go abroad without harm. People can live in another country. But when soldiers are stationed in another country, traditionally it has always caused suspicion. So I think there is a great difference, because it arises from fears of our own country, and I do not think it is good for our relations.

Mr. McINTYRE. Mr. President, will the Senator yield at that point?

Mr. FULBRIGHT. I yield.

Mr. McINTYRE. One thing that plagues me is that if the State Department and the Foreign Relations Committee of the Senate and its counterpart in the House, and the President of the United States have had something to do with setting the foreign policy of this country and setting out the goals and setting out the objectives, once those objectives are made clear, or at least scaled down to somewhere along the lines the distinguished Senator from Arkansas would like to see, I think it would be no trouble for the Department of Defense to scale back the activities the Senator complains about. But the State Department and the Senator's committee and the Administration set the pace, and the Department of Defense is only trying to carry it out.

Mr. FULBRIGHT. The other day I discussed the purpose of our country in this field in connection with the posture statement. I only wish to say that I have strongly disapproved of our tendency to intervention, and I have done that publicly, beginning with our intervention in the Dominican Republic in 1965.

I thoroughly disapprove of the ease with which we accept the responsibility to intervene in another country's affairs and tell them what to do and tell them what kind of government they ought to have, and so forth. The Senator is aware of my disagreement with our policy.

It is true that I am only one Senator, but the Foreign Relations Committee has gone through quite a change in its attitude toward that policy. The foreign policy I am really complaining about is that of the previous administration, led by Secretary Rusk in the State Department. I thoroughly disagree with his definition of the mission of the United States. This we have discussed. Now with a new administration and with new officials in the administration, I had hoped we would begin to follow a different approach.

This amendment is a small segment or part of that approach of downgrading our intervention and intrusion into foreign countries; to treat other countries more as equals, with greater respect, and, hopefully, to cultivate better relations with them.

The foreign programs I am talking about are one little aspect of it. I am doing my best to change our policy. I am doing the best I know how to get out of Vietnam and change our policy.

The hearing we had this morning is in connection with a situation which we are very fearful may become another Vietnam. All I can say to the Senator is that I am doing the best I can to change it. I have not been very successful, but that is all I can do.

Mr. McINTYRE. Mr. President, will the Senator yield briefly?

Mr. FULBRIGHT. I yield.

Mr. McINTYRE. I hope the Senator from Arkansas appreciates the position the Armed Services Committee, with this authorization bill, is in. Since the Senator from Arkansas does not set the foreign policy of the United States, and the State Department and the administration do, he will find that we, as we try to

answer the questions and try to help him in understanding this particular bill, more or less find ourselves in a bind between the position of the State Department and the attitude of the distinguished Senator from Arkansas toward the foreign policy of this country.

Mr. FULBRIGHT. Mr. President, I do not know whether the State Department has really approved these projects or not. On my inquiry last year, the Bureau of the Budget was not aware of most of the projects and had not examined them. They do not examine Defense Department programs as they do other programs.

I think the participation of the State Department in the program of the Department of Defense, if at all, is perfunctory. Even this contingency planning agreement with Thailand is not in the custody of the State Department. I requested it from the State Department, and they came back with the letter which I put in the Record the other day, saying, "We regret we cannot give it to you, because the Secretary of Defense is reluctant to allow it outside of his control," which meant, in effect, that here is an agreement between Thailand and the United States, and it is not even in the hands of the State Department.

So we have a lot of difficulties in this area, and I am not at all sure the State Department is a very free agent when it comes to such matters. The one agency, and the only agency in the Government, in my opinion, that can ever exercise any degree of restraint upon the Defense Department is the Senate, because of its peculiar characteristics, in that we are more independent than anyone else in the Government. We have longer terms, and that is why we were given longer terms. We represent our States, and thus represent larger constituencies than Members of the House of Representatives. I shall not describe our system of government further, but I think the Senate is the only agency that can possibly bring its influence to bear upon the military establishment.

It will be seen that this is not wholly imaginary, when you look around the world and look at all the other major countries, wherever they may be. Most of them are dominated by their military establishments. We have got to assume that the United States and the American people are gifted with some very special qualities, if we are to be able to avoid the same fate. The Senator can look at Russia, or at China, or where have you; Latin America, Brazil, Argentina, Peru, and so on. I shall not call the rolls, but most of them are largely under the influence of the military.

There is a reason for it. I do not know; perhaps in the long run it is better. I do not think so, with the present state of my information. I prefer to maintain the dominance of the civilian authorities; and our Constitution, I think, was intended to provide for that.

The next question the Senator from Massachusetts asked me is as follows:

Many of the examples of "questionable" studies cited by the Senator from Arkansas were contracted 3, 4 or 5 years ago. Since then, DOD research has been subjected to

much closer scrutiny. Does the Senator have any knowledge of current or projected studies which would substantiate his fears?

I may say that the studies I cited were the most current that the Defense Department would provide; and I will say again, as I have said often, that it is not easy to get some information out of the Defense Department. We are engaged, at the moment, as I say, in a very serious contest with them over this agreement with Thailand. In this case, we have used, in our statement and in the insertion, the latest information that the Defense Department was willing to provide. I do not have the power of subpoena on the Secretary of Defense or the Commander in Chief, and I cannot make them give me what the committee wants. I simply provided the best information we could get from them.

I think the Senator from New Hampshire will admit that it is not always easy to get, neatly and efficiently, anything you want out of the Defense Department. It is a huge bureaucracy of millions of people. The Joint Chiefs of Staff itself, I think, now constitutes some several thousand people. All I can say is that I got the latest information that was available. I asked for the latest, and this is what we were given.

The Senator next asks whether I have any views of universities regarding this amendment.

No, I have not submitted it to universities. I do have views of universities about the intrusion of the Defense Department into their activities. I have already talked about that at length. I have views as to the reactions of the students and professors as to the extent of the intrusion by both research projects, ROTC, IDA, and what have you.

The Senator's fifth question is as follows:

The Senator from Arkansas has cited many "horrible examples." Does he have any information as to what percentage of actual research programs this type of program represents?

No; I have no idea how to arrive at a percentage. The examples I put into the Record speak for themselves. Some people do not think they are horrible examples. I do not think they are horrible; that is not the word I used. I think they are wholly inappropriate to the functions of the Department of Defense. Some of them would be defensible as activities of the National Institute of Health, the National Science Foundation, or the Departments of Commerce or State, but they have no relation to Defense, and the only reason as far as I can see why they were sponsored by the Defense Department is that the Defense Department has no difficulty getting any amount of money it wants, for this or any other project. That is the situation we seek to correct.

Mr. President, I ask unanimous consent to have printed in Record a communication from the Department of Defense entitled "Behavioral Sciences Projects Proposed for Funding in Fiscal Year 1970," issued as of July 22, 1969. This request is partially in response to the Senator's questions; although the informa-

tion is not very specific, it gives some idea of the present attitude of the Defense Department in this area.

There being no objection, the statement was ordered to be printed in the RECORD, as follows:

BEHAVIORAL SCIENCES PROJECTS PROPOSED FOR FUNDING IN FISCAL YEAR 1970

ARPA behavioral science research can be understood most accurately as level of effort support for technical areas of special importance to the Department of Defense. Individual contracts vary widely in level of support and in duration. Frequently a contract is funded over a three-to-five year period, and rarely for a longer period of time. The best estimate of future support is a line extension of present level of effort for a technical area, recognizing that individual contracts will change according to research progress.

RATIONALE FOR MAJOR PROGRAMS

We are terminating almost all ARPA Behavioral Sciences research work outside the U.S. ARPA has reoriented its behavioral science research work into a direction where there is broad agreement in the research and defense community that more promise exists—the interdisciplinary combination of the computer and behavioral sciences in specific problem areas. The objective is to produce results to Defense user organizations within five years. Initially, we have extended support to three basic programs to be conducted at universities where unique talent now exists. Simultaneously, we began a management inquiry to determine how to use an applied research organization to apply the results of the basic research to specific and immediate DOD operational problems. As the work progresses, and to the extent that the results of our management analysis warrant, we plan to phase down ARPA sponsorship of university participation in the three programs.

The first university program is the Cambridge Project which seeks to provide tools needed to determine trend and interaction effects in complex DOD systems. System examples include designing hardware for effective human operation, training and educating personnel, organizing manpower, and allocating resources. We have more than enough data, but we lack tools to enable us to extract patterns and raw inferences from them. The work takes advantage of existing ARPA-funded interactive computing capability at MIT and will have wide participation by MIT and Harvard scientists. This effort will be supported at approximately \$2,400,000 yearly.

The second university program, the Center for Computer-Based Behavioral Studies at UCLA, seeks to construct a theory and practice of gaming in order to improve substantially its realism for training and prediction. As a good example, many vital DoD missions require that DoD people know how to bargain and negotiate effectively with counterpart members of other nations; help is needed in the appropriate training of military advisors, defense attaches, and staffs of alliance commands. Faced with analogous problems in labor relations, major schools of business administration and major corporations have turned increasingly to gaming (i.e., simulations) for training and prediction. This effort will be supported at approximately \$1,000,000 yearly.

The third university program, Quantitative Political Science, seeks to develop quantitative tools and unclassified data bases to improve our ability to predict national security needs. The work is accomplished at the University of Michigan, the University of Hawaii, the University of Southern California and Yale University. The data archive at the University of Michigan will be managed by the Inter-University Consortium for Political

Research which currently distributes other types of social science data to faculty and students at 120 member universities. If successful, the tools would help us to distinguish between likely and unlikely future conflict situations. DoD must try to predict future security situations and needs in order to plan for logistics, force structure, strategy, and research and development. Faced with analogous needs, government departments responsible for the domestic economy turned more than thirty years ago to the development of quantitative predictive tools and supporting data bases. DoD has made only fragmentary use to date of quantitative political science for conflict and sociology. However, even these limited efforts have been useful to JCS, DIA, and Service officials. The basic university work in building the tools will all be unclassified and the results freely available. The later applications of the tools to operational DoD problems will probably be carried out elsewhere. This effort will be supported at approximately \$850,000 yearly.

In addition, ARPA intends during FY 70 to support research in the following areas:

Teaching and Learning—The Department of Defense must maintain a vigorous and broad set of education and training activities for its personnel. As external threats become more complex, U.S. personnel increasingly require improved training to perform their jobs. Much of the new technology developed for other military purposes can also be applied to more effective training and education systems. ARPA sponsored research in computer assisted instruction has resulted in prototype systems which permit the instructor to manage teaching aids and resources with greater flexibility. These systems also promise to cut costs substantially under the terms of the instructional funds required for each student contact hour. The flexibility and economy of these systems will permit progress in developing techniques and methods of instruction which are most effective with students whose learning styles and abilities vary widely. Further research is concerned with the constraints imposed by different classes of subject matter and modes of presentation. Support during FY 70 will be approximately \$185,000. During FY 70 specific contracts will be funded at Bolt, Beranek and Newman, and the University of Texas.

Human Performance—The attributes and evaluation of individual and group performance is fundamental to the operations of the Department of Defense. ARPA's research in this area is primarily concerned with establishing rules to assess the relationship between human capabilities to perform military jobs and basic abilities such as signal detection, memory, information processing and perception. Support during FY 70 will be approximately \$860,000. During FY 70 specific contracts will be funded at the University of Michigan and the University of Oregon.

Human Communication—This research area is concerned with principles of human communication as they affect coordination of effort in the execution of military tasks. This effort is and will continue to include work on competence to learn and use foreign languages and second languages. The knowledge gained will then be used to develop and test educational materials to improve cross-cultural communication. Support during FY 70 will be approximately \$550,000.

ORDER OF BUSINESS

Mr. McGOVERN. Mr. President, will the Senator yield?

Mr. FULBRIGHT. I yield 5 minutes to the Senator from South Dakota.

Mr. McGOVERN. Mr. President, in view of the limitation on time, I should like to speak very briefly on two unre-

lated matters, the first having to do with the President's welfare message as it relates to our food assistance program, and, second, to make some remarks on the prisoner information policy of North Vietnam.

DOES THE NIXON WELFARE PROPOSAL WEAKEN THE FOOD ASSISTANCE PROGRAM?

Mr. McGOVERN. Mr. President, with regard to the President's historic message on last Friday, which he transmitted in greater detail to Congress yesterday, there is one matter of very grave concern to me, and that is the apparent intention of the administration, as outlined in that message, to phase out the food assistance program for those persons who choose to participate under the newly proposed family assistance program.

Mr. President, I have no objection—in fact I rather welcome it—to the replacement of some of our plethora of welfare programs with an income maintenance program as suggested by the President. But if in fact the administration proposes to offer a family of four a maximum of \$1,600 in cash, and then tell the family that chooses that option that they are excluded from the food stamp program, it will be, in effect, decreasing very substantially the amount of aid now being received by millions of Americans. My preliminary estimates lead me to believe that if this exclusion policy goes into effect, and we deny food assistance to those families who choose the income maintenance program suggested by the President, in 44 out of the 50 States we would actually lose, for many millions of people, the amount of assistance they are now receiving under a combination of food stamps or commodity assistance plus the welfare payments they now receive.

Mr. President, it is a fact that it requires almost all of the \$1,600 that the President has suggested for income maintenance to provide a family of four with an adequate diet. So it is my intention as the chairman of the Select Committee on Nutrition and Human Needs that has been looking into the problem of hunger and malnutrition in the United States to call administration witnesses before our committee at a very early date to clarify the matter.

I hope very sincerely that the President will press his proposal for an income maintenance program, but that he will not press it to the inclusion of the food stamp program.

We must do either one or two things. We must permit both of the programs to operate simultaneously or else we will have a very substantial increase in the income maintenance figure suggested by the President.

Mr. President, last May, President Nixon pledged that his administration would put an end to hunger in America for all time. He then moved swiftly to accomplish this goal by sending to Congress a plan to expand and improve the food stamp program.

In his historic welfare message of last Friday, the President added to his earlier pledge by proposing a family as-

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Three-stage decentralization of administrative responsibilities

First, State administration of 25 percent of apportioned funds when it designates a "lead agency" and develops comprehensive manpower planning capability and an approved manpower plan; second, State administration of 66 2/3 percent of the funds when it establishes (1) a Comprehensive Manpower Agency to operate the unified programs in accordance with an approved plan, (2) a State manpower planning organization to coordinate all manpower related programs, and (3) arrangements to designate Mayors as area prime sponsors; and third, State control of 100 percent of its apportioned funds when the State meets objective standards of exemplary performance in planning and carrying out its manpower service system.

Allowances and wages

The basic allowance to individuals enrolled in a manpower training program will be based on the average weekly wage in employment covered by the State's unemployment compensation law. In FY 1971 the basic allowance will be 40 percent of such average weekly wage, in FY 1972—45 percent and in FY 1973 and thereafter—50 percent. Trainees with family responsibilities will be allowed an additional \$5 per week for each dependent, up to six dependents. In lieu of such allowances, public assistance recipients will receive an incentive and expense allowance of \$30 per month in addition to their welfare payments during training.

A completion bonus equal to twice the individual's weekly allowance, will be paid upon the successful completion of an authorized training course of 15 weeks or more duration.

Workers employed in "work experience" programs will be paid wages at rates no lower than the lowest rate prescribed in the Fair Labor Standards Act. Workers undertaking employer compensated on-the-job training will be compensated at the higher of the applicable minimum wage rate or the prevailing wage rate for similar work in the locality.

State apportionment of funds

The Secretary of Labor would apportion at least 75 percent of the funds appropriated to carry out the Act (except its Job Corps, Job Bank and extended appropriation provisions) each year among the States in accordance with criteria which he would publish. Metropolitan areas within States (Standard Metropolitan Statistical Areas, or other designated areas) would be guaranteed apportionment of an amount in proportion to the numbers of persons in the labor force and number of disadvantaged individuals residing in the area compared with the State total of such persons. Federal funds apportioned to the States under the regular program would be available to pay 90 percent of program costs.

Incentive apportionment

An amount equal to 5 percent of the funds appropriated will be available for supplemental apportionments to States and areas which meet the exemplary performance standards. The Federal Government will contribute \$2 for every dollar of available State funds.

Federal program authority

The remaining 20 percent of the funds will be available for expenditure directly by the Secretary to carry out the purposes of the Act. The Federal Government would be authorized to arrange directly for all or a portion of the operation of program activities when a State failed to assure its responsibilities under the Manpower Training Act or when it was only in partial compliance with provisions of the Manpower Training Act. In addition, such programs could be conducted directly with funds not apportioned

to the States. In conducting research and demonstration programs under title III, the Secretary of Labor will consult fully with interested Federal agencies (including the Civil Service Commission with regard to the effect of the programs on the Federal service).

Manpower training as an economic stabilizer

In any fiscal year in which the national unemployment rate reaches 4.5 percent for three consecutive months, the Secretary of Labor could spend additional funds on authorized programs equal to 10 percent of the amount then appropriated under the Act for that year. When unemployment drops below the trigger level, remaining unobligated funds will no longer be available.

Computerized Job Bank

A National Computerized Job Bank would be established in each State, or on a regional basis where sparsely populated States can be grouped together, to facilitate the placement of persons in employment for which they are qualified. The Bank would be operated within each State by the State Employment Service. The Secretary would operate the interstate phase of the Bank's operation, collecting information from each State and making it available to all States. Information regarding both job applicants and job orders would be processed through the system. To the extent that Federal agency vacancy information may be required, the Secretary will consult fully with the Chairman of the Civil Service Commission in developing any reporting requirements. Federal vacancies will be filled in accordance with laws and regulations which apply to Federal employment.

Advisory bodies

The National Manpower Advisory Committee will be continued.

A new Intergovernmental Advisory Council on Manpower will be established. It will be composed of representative Governors, Mayors, and other elected local officials, and will advise the Secretary on the Federal-State-local partnership established to administer manpower programs.

Other acts affected

The Manpower Development and Training Act of 1962 and Title V of the Economic Opportunity Act are repealed and replaced by the manpower services provisions of this Act. The provisions of Title I-B of the Economic Opportunity Act are also replaced by the manpower services provisions of this Act. A new Title I-B of the Economic Opportunity Act authorizes the Office of Economic Opportunity to undertake experimental programs in the employment and employment-related problems of the poor. Title I-A of the Economic Opportunity Act (Job Corps) is transferred to the Manpower Training Act, and administration is placed directly in the Secretary of Labor.

AISM

AUTHORIZATION OF APPROPRIATIONS FOR FISCAL YEAR 1970 FOR MILITARY PROCUREMENT, RESEARCH AND DEVELOPMENT, AND FOR THE CONSTRUCTION OF MISSILE TEST FACILITIES AT KWAJALEIN MISSILE RANGE, AND RESERVE COMPONENT STRENGTH

The Senate resumed the consideration of the bill (S. 2546) to authorize appropriations during the fiscal year 1970 for procurement of aircraft, missiles, naval vessels, and tracked combat vehicles and to authorize the construction of test facilities at Kawajalein Missile Range, and to prescribe the authorized personnel strength of the Selected Reserve of each Reserve component of the Armed Forces, and for other purposes.

Mr. FULBRIGHT. Mr. President, I ask for the yeas and nays on the amendment.

The yeas and nays were ordered.

The PRESIDING OFFICER. Who yields time?

Mr. MCINTYRE. Mr. President, I yield myself two and a half minutes.

Mr. President, I should like to sum up the situation with which we are confronted in connection with the Fulbright amendment.

The first thing I wish to make clear to the Senate is that the Armed Services Committee already has cut research, development, test, and evaluation by over a billion dollars. The cut suggested by Senator Fulbright amounts to close to \$46 million, in an area in which we already have cut \$50 million, of which \$40 million will be falling on the same programs about which the Senator from Arkansas is complaining so strongly.

The committee has had the best of staff work, excellent staff work. This year, the chairman set up the R. & D. Subcommittee, and a hard and close scrutiny was conducted into these areas of the budget.

Sometimes when we approach a problem and try to cut in and reduce the expenditures, we suddenly become aware that if we cut too deeply, go a little too far, we may be doing more harm than good and may nullify any good that has been done.

In 1970, we have been able to reduce this budget. We feel very strongly that when Senator FULBRIGHT suggests that some of these small programs be cut by 58 percent, by 36 percent, by 33 percent, he is in effect reducing these programs more than he should. So when we consider our own cuts, which have measured anywhere from 10 to 12 percent on these programs, it seems that it is piling on too much and that, in the interest of good budgeting and forward-looking work for the research and development and in the area of military research, the amendment of the Senator from Arkansas should be defeated, and defeated soundly.

Mr. FULBRIGHT. I yield myself 3 minutes.

Mr. President, there is over \$400 million for basic research or nonmission research, in the \$7 billion research authorization for the Department of Defense. I am proposing the following: to cut \$45 million overall. It will reduce the funds for the so-called think tanks by 10 percent, or \$27 million, which is much the largest item. There are 16 of these research centers called think tanks.

It will reduce the research in foreign institutions by \$2 million, which is one-third, which is the point the Senator meant. I think it should be cut out. It will cut behavioral and social research performed in other places by \$3 million. An example of that is the Hudson Institute.

It will hold the line on new starts under Project Themis by cutting the budget request by \$8 million. It will reduce the counterinsurgency research, Project Agile, by \$5 million.

All this amounts to \$45 million. All I can say is that I apologize to the Senate for being so timid that I did not propose three or four times this amount, because

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several of these programs should never have been started and should be stopped.

The only excuse I can give for not proposing \$145 million or \$200 million is that, out of deference to the Senator from New Hampshire—he has made a good beginning—I thought I had better be as modest as I could and hope to get something beyond what he has done. He has done a good job, but not good enough, because a number of these projects should be discontinued. They are inappropriate for the Defense Department. It does not necessarily mean that all of them are inappropriate for other agencies, but they are not related to the mission of the Department of Defense. It is not a question of redefining the Department of Defense mission in this case. It is in other areas that we discussed the other day, particularly in the field of hardware, but not in these research projects, especially in foreign universities, in the behavioral sciences.

I hope the Senate will continue to take the attitude that from now on we are going to subject the Department of Defense appropriations or authorizations to the same kind of scrutiny which is given to other departments of the Government. I may say that \$45 million in any other department of the Government would not seem like a pittance. I agree that in this agency it seems very small.

The PRESIDING OFFICER. The time of the Senator has expired.

Mr. FULBRIGHT. I am proud that the Senator from Oregon has cosponsored this amendment with me.

The PRESIDING OFFICER. Who yields time?

Mr. STENNIS. Mr. President, a parliamentary inquiry.

The PRESIDING OFFICER. The Senator will state it.

Mr. STENNIS. What is the situation as to time?

The PRESIDING OFFICER. Each side has 3 minutes remaining.

Mr. FULBRIGHT. Mr. President, I will be pleased to yield to the distinguished chairman of the Committee on Armed Services the remainder of my time.

Mr. STENNIS. I thank the Senator for his generosity.

Mr. President, nothing has been gone over more carefully by a well-informed subcommittee, unusually well staffed, than the items about which we have been talking. That subcommittee recommended a 12-percent reduction in these items. That reduction was adopted and brought here before the Senate. It is about \$40 million.

The amendment of the Senator from Arkansas would reduce the amount around \$45 million more in those same categories. A great deal of what the Senator is talking about here is in the 1968 budget, or at least a part of it. A great deal of his criticism is that these items should be in some other departments of Government. We state in our report that some of them should be transferred to the Department of State. I suggested yesterday that the Senator pick out some of them and give them to

the committee. We thought it was too late in fiscal year 1970 to dump them out in the waste basket without anyone having jurisdiction over them. Therefore, we dealt with the situation as best we could.

In this group I am fully satisfied that the subcommittee intelligently and diligently made an effort to get a firm recommendation for the Senate. I hope the Senate takes the recommendation seriously and approves the work of the subcommittee with this understanding. We are sending a letter to the Department of Defense and any other department involved that all of these items are to be looked over and divided up and sent to us the next time so that they will come to us in more detailed form.

Mr. YOUNG of North Dakota. Mr. President, will the Senator yield?

Mr. STENNIS. I yield.

Mr. YOUNG of North Dakota. Mr. President, I wish to point out to the Senator that the Committee on Appropriations will also be making cuts.

Mr. STENNIS. Yes.

Mr. YOUNG of North Dakota. In the past the argument was usually made for the foreign aid authorization program that it could be cut later and it usually was by the Appropriations Committee. This is not the last committee that will review the matter.

Mr. STENNIS. I thank the Senator. Any information we have will be passed on.

Mr. FULBRIGHT. Mr. President, will the Senator yield?

Mr. STENNIS. I yield.

Mr. FULBRIGHT. What the Senator from North Dakota has said about foreign aid certainly does not apply to the Military Establishment and never has over the years.

Mr. YOUNG of North Dakota. We rarely appropriate as much as the authorization provides. Our committee cut \$1.5 billion last year over even the House action.

Mr. FULBRIGHT. Is the Senator saying the percentage of the cut on the Military Establishment has been comparable to that on foreign aid by the Committee on Appropriations?

Mr. YOUNG of North Dakota. Yes, it is for other than military personnel costs.

Mr. FULBRIGHT. I cannot remember that ever having been true.

Mr. STENNIS. Mr. President, there is one additional point. I know the Senators are busy, and I am also busy and I am not able to be in the Chamber as much as I would like to. However, it is tragic to me to see all the work that has been done by this subcommittee slashed to pieces when during the fine debate on both sides attendance was limited to three or four Senators. Many Senators have not heard the real facts.

I thank the Senator for yielding.

The PRESIDING OFFICER. Who yields time?

Mr. PASTORE. Mr. President, will the Senator yield to me for 1 minute?

Mr. FULBRIGHT. I yield all my time to the Senator from Mississippi.

Mr. STENNIS. I yield.

Mr. PASTORE. Mr. President, the thing that is confusing and puzzling in this matter is that it has been admitted that there are some research programs included here that are not connected with defense. For the life of me, I cannot understand in view of this fact how a cut of \$45 million is going to jeopardize the country. I am going to vote for the cut.

Mr. STENNIS. There is no mention of unworthy items in here.

Mr. BYRD of Virginia subsequently said: Mr. President, as a member of the Subcommittee on Research and Development of the Committee on Armed Services, I supported a reduction of more than a billion dollars in the funds requested by the Department of Defense for research and development. As a member of that subcommittee and as a member of the Armed Services Committee, I supported a reduction of 12 percent in funds requested by the Department of Defense for research and development. Some feel that these cuts were too heavy; others feel that perhaps some additional reductions might be made. I am a little inclined to the latter view. I am a little inclined to think that perhaps we could further reduce, in a small way, the remaining funds. But the majority of the committee felt that a 12 percent reduction at this time is as far as we should go. Most of the members felt that a billion-dollar reduction in these funds is as far as we should go at the present time.

So, Mr. President, on the matter of funds for the Department of Defense, I feel that there can be and should be reductions in the amount requested; and I feel that the Armed Services Committee has taken an important step in this regard when it has recommended to the Senate that the requested funds for research and development be reduced by \$1 billion, or 12 percent.

The PRESIDING OFFICER (Mr. Packwood in the chair). All time has expired. The question is on agreeing to the amendment of the Senator from Arkansas (Mr. Fulbright). In this question the yeas and nays have been ordered, and the clerk will call the roll.

The bill clerk called the roll.

Mr. KENNEDY. I announce that the Senator from Tennessee (Mr. Gore) is absent on official business.

I also announce that the Senator from Nevada (Mr. Biale), the Senator from Mississippi (Mr. Eastland), the Senator from Utah (Mr. Moss), and the Senator from Texas (Mr. Yarborough) are necessarily absent.

I further announce that, if present and voting, the Senator from Utah (Mr. Moss), and the Senator from Texas (Mr. Yarborough) would each vote "yea."

Mr. SCOTT. I announce that the Senator from Ohio (Mr. Saxbe) is necessarily absent and, if present and voting, would vote "yea."

The Senator from Illinois (Mr. Percy) is detained on official business and, if present and voting, would vote "yea."

The result was announced—yeas 49, nays 44, as follows:

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[No. 79 Leg.]
YEAS—49

Alken	Harris	Pastore
Bayh	Hart	Pearson
Boggs	Hartke	Pell
Burdick	Hatfield	Prouty
Byrd, W. Va.	Hughes	Proxmire
Case	Inouye	Randolph
Church	Javits	Ribicoff
Cook	Kennedy	Schweiker
Cooper	Mansfield	Scott
Cranston	Mathias	Spong
Dole	McCarthy	Symington
Eagleton	McGee	Tydings
Ellender	McGovern	Williams, N.J.
Fulbright	Metcafe	Williams, Del.
Goodell	Mondale	Young, Ohio
Gravel	Nelson	
Griffin	Packwood	

NAYS—44

Allen	Fannin	Miller
Allott	Fong	Montoya
Anderson	Goldwater	Mundt
Baker	Gurney	Murphy
Bellmon	Hansen	Muskie
Bennett	Holland	Russell
Brooke	Hollings	Smith
Byrd, Va.	Hruska	Sparkman
Cannon	Jackson	Stennis
Cotton	Jordan, N.C.	Stevens
Curtis	Jordan, Idaho	Talmadge
Durkin	Long	Talmadge
Eagleton	Magnuson	Thurmond
Dodd	McClellan	Tower
Dominick	McIntyre	Young, N. Dak.
Ervin		

NOT VOTING—7

Bible	Moss	Yarborough
Eastland	Percy	
Gore	Saxbe	

So Mr. FULBRIGHT's amendment was agreed to.

Mr. FULBRIGHT. Mr. President, I move to reconsider the vote by which the amendment was agreed to.

Mr. PASTORE. Mr. President, I move to lay that motion on the table.

The motion to lay on the table was agreed to.

AMENDMENT NO. 129

Mr. FULBRIGHT. Mr. President, I call up my amendment (No. 129).

The PRESIDING OFFICER. The amendment of the Senator from Arkansas will be stated.

The legislative clerk read the amendment, as follows:

On page 5, line 11, strike out the quotation marks and the word "Funds" and insert in lieu thereof the following: "Not to exceed \$3,000,000,000 of the funds".

On page 5, line 17, strike out the words "the Secretary of Defense" and insert in lieu thereof the words "the President".

Mr. FULBRIGHT. Mr. President, I yield to the Senator from Washington (Mr. JACKSON) without losing my right to the floor.

CONSTRUCTION, OPERATION, AND MAINTENANCE OF THE KENNEWICK DIVISION EXTENSION, YAKIMA PROJECT, WASHINGTON

Mr. JACKSON. Mr. President, I ask the Chair to lay before the Senate a message from the House of Representatives on S. 742.

The PRESIDING OFFICER laid before the Senate the amendment of the House of Representatives to the bill (S. 742) to amend the act of June 12, 1948 (62 Stat. 382), in order to provide for the construction, operation, and maintenance of the Kennewick division extension, Yakima project, Washington, and for other purposes, which was, on page 2,

line 4, strike out "fifty-six-year", and insert "fifty-year".

Mr. JACKSON. Mr. President, the construction of the Yakima project was initiated in 1905. There are presently six operating divisions in the project. The Kennewick Division is the most recently constructed, having been authorized in 1948. S. 742 would authorize an extension to the Kennewick Division and would bring 6,300 acres of land under irrigation and provide wildlife and conservation benefits.

When the Senate approved this bill last March, it was the fourth time the legislation had been passed by this body. The House of Representatives passed the legislation with minor amendments in June. However, at that time I received a communication from officials of the Yakima Indian Tribe expressing concern over whether this project, if approved and constructed, would jeopardize the water rights of the Yakima Tribe, and in addition, whether the construction of this project in any way would adversely affect proposed Indian irrigation projects on the Yakima Reservation.

I have discussed this matter with the Indians, and members of the staff of the Committee on Interior and Insular Affairs have reviewed the questions raised by the Indians. In addition, the Secretary of the Interior and his staff have gone into the issues very carefully to determine if the Kennewick Extension would adversely affect the Indian projects or impair the water rights of the Indians in any way.

By letter dated today, the Secretary of the Interior has assured me that hydrologically the authorization and subsequent construction of the Kennewick extension would not affect adversely the water available to the tribe for their projects. I quote from the Secretary's letter:

Further, in our view, the need for, and desirability of, the three Indian projects will not be affected by the Kennewick extension. These three projects must stand or fall on their own merits and justification. Finally, there is nothing in our opinion, in the language of S. 742 or its legislative history which we would construe as adversely affecting the Indian interests. We will, in the development of the project, make certain that any prior and superior water rights of the tribe are fully protected and will require that these rights be recognized explicitly in contracts entered into pursuant to S. 742.

Mr. President, I ask unanimous consent that the full text of the Secretary's letter appear at this point in my remarks.

There being no objection, the letter was ordered to be printed in the Record, as follows:

U.S. DEPARTMENT OF THE INTERIOR,
Washington, D.C., August 12, 1969.
Hon. HENRY M. JACKSON,
Chairman, Committee on Interior and Insular Affairs, U.S. Senate, Washington, D.C.

DEAR MR. CHAIRMAN: Your letter of June 4, 1969, enclosed for comment a telegram from Chairman Robert E. Jim of the Yakima Tribal Council which expressed concern regarding the effects of S. 742, a bill to authorize the Kennewick extension of the Yakima reclamation project in Washington, on Yakima Indian rights to the use of water for their reservation. The Department has received similar telegrams from Mr. Jim.

Since these telegrams were sent, the bill passed the House of Representatives with a minor difference—not in issue here—from the previously-passed Senate version.

The Kennewick project was authorized by the Act of June 12, 1948 (62 Stat. 382), which reserved capacity in the main canal for the future extension of irrigation to 7,000 acres of additional land. S. 742 would authorize this extension.

Mr. Jim and the Yakima Tribe are concerned that this project will impair the water available to the tribe and lessen substantially their chances of obtaining the necessary funding and authorization for three irrigation projects which they consider extremely important to the economic development of the reservation. We can appreciate their concern and, for this reason, we met with them within the last few days in order to obtain a more complete understanding of their position on the legislation and to try to alleviate their concern to the greatest extent possible.

The irrigation projects which the Yakima Indians wish to construct in order to utilize fully the water available to them are: the Wapato Satus unit, the Satus Creek project, and the Toppenish Creek project.

The Wapato unit is an authorized Indian project which would irrigate an estimated 5,000 acres at a cost of about \$500,000. No appropriation has been requested for this project. We have, however, agreed to review the project for the purpose of considering such a request in the near future.

The other two projects would be located on the Satus and Toppenish Creeks, respectively. Authorization for these projects has not been requested by the Department to date. We will review these projects and provide you with more information on them as soon as possible.

We have advised Mr. Jim and the tribe that the Department does not want to prejudice their ability to gain approval of all or some of these projects in the near future, nor do we want to do anything that would impair or infringe on their rights to water for all of these projects.

We are satisfied, based on information furnished by the Bureau of Reclamation, that hydrologically the authorization and subsequent construction of the Kennewick extension would not affect adversely the water available to the tribe for the above projects. The project is not dependent on water from the Yakima Reservation. Further, in our view, the need for, and desirability of, the three Indian projects will not be affected by the Kennewick extension. These three projects must stand or fall on their own merits and justification. Finally, there is nothing in our opinion, in the language of S. 742 or its legislative history which we would construe as adversely affecting the Indian interests. We will, in the development of the project, make certain that any prior and superior water rights of the tribe are fully protected and will require that these rights be recognized explicitly in contracts entered into pursuant to S. 742.

We hope that the expression of the Department's views herein will help to remove the deep concern expressed by the tribe and result in final passage of S. 742 as quickly as possible.

It should be noted that the tribe has indicated that their concern is caused partially by some statements made by the Department on the project a few years ago. If you find any such statements in the record of this legislation which may have contributed to the concern of the tribe, we will be glad to clarify them.

Sincerely yours,

WALTER J. HICKLE,
Secretary of the Interior.

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Mr. JACKSON. Mr. President, in view of the assurances provided by the Secretary of the Interior, I move that the Senate concur in the amendment of the House.

The PRESIDING OFFICER. The question is on agreeing to the motion of the Senator from Washington.

The motion was agreed to.

ABM

AUTHORIZATION OF APPROPRIATIONS FOR FISCAL YEAR 1970 FOR MILITARY PROCUREMENT, RESEARCH AND DEVELOPMENT, AND FOR THE CONSTRUCTION OF MISSILE TEST FACILITIES AT KWAJALEIN MISSILE RANGE, AND RESERVE COMPONENT STRENGTH

The Senate resumed the consideration of the bill (S. 2546) to authorize appropriations during the fiscal year 1970 for procurement of aircraft, missiles, naval vessels, and tracked combat vehicles, and research, development, test, and evaluation for the Armed Forces, and to authorize the construction of test facilities at Kwajalein Missile Range, and to prescribe the authorized personnel strength of the Selected Reserve of each Reserve component of the Armed Forces, and for other purposes.

Mr. FULBRIGHT. Mr. President, may I say that the next 2 amendments should not require over 5 minutes' discussion. I hope Members of the Senate will remain on the floor.

I yield, without losing my right to the floor, to the majority leader.

Mr. MANSFIELD. Mr. President, the Fulbright amendment which was just adopted by the Senate is in my opinion of a most significant nature. It should have far reaching effects on realigning the Federal sponsorship of research at all sources but especially at our academic institutions. I am particularly pleased with the adoption of that part of the amendment adding a new section 205. That new section should go a long way toward obtaining the needed readjustment of sponsorship.

I had prepared the following amendment in the event the Fulbright amendment were not successful:

On page 3, line 25, insert the following new section:

"Sec. 205. None of the funds authorized to be appropriated by this Act may be used to carry out any research project or study unless such project or study has a direct and apparent relationship to a specific military function or operation."

The amendment is identical with that part of the Fulbright amendment that adds a new section 205. That section 205 is now a part of this bill.

It should be emphasized again as the debate continues on this measure that the vigorous give and take displayed again today is not intended as an attack upon the military. Rather it is serving to raise and illuminate many important issues, one of which is the extent the Defense Department should fund research, particularly research not directly and visibly linked to present and foreseeable military needs and responsibilities.

The Nation's scientific community has a longstanding debt to the Defense

agencies. It was the Office of Naval Research that stepped into the vacuum left by the wartime Office of Scientific Research and Development to continue Federal funding of research at our leading universities. The ONR, the Army, and the Air Force all helped sustain the pace of postwar research and to build up the immense national resource now represented by our trained scientists and engineers, by our laboratories, by the distinguished science faculties of many public and private universities. This military support for research was in the national interest during the decade that saw the creation of the research programs of the National Institutes of Health, the Atomic Energy Commission, and the National Science Foundation.

Now the situation has changed. There exists today a whole panoply of Federal departments and agencies each with responsibilities for the funding of research. The Bureau of the Budget in its special analysis Q for the fiscal year 1970 budget lists 14 separate departments and agencies with such responsibilities. Their estimated obligations range from \$1.491 billion for NASA down to \$7 million for the Department of Justice. The range of their interests sweeps across the whole of the life and physical sciences and is beginning to extend to the social sciences. They represent an existing mechanism for civil agencies to assume more responsibility for the overall funding of research so that the military can concentrate upon its proper functions and responsibilities.

What is our present situation?

Yesterday, Senator PROXMIER inserted into the RECORD nine tables beginning at page S9629. Examination of these tables shows how much our research has come to depend upon the Defense agencies, particularly basic research of the kind that should be sponsored by civil agencies, especially by the National Science Foundation. If we look at table III, we see that the Defense Department for the fiscal years 1966 to 1969 has funded more research at colleges and universities than has the National Science Foundation. If we look at table IV, we see that over these 3 fiscal years, the Defense Department in virtually every field of science is a major Federal sponsor and far outspends the NSF. Table V makes the case even stronger, for here the Defense Department has been funding as much or more basic research than the agency which Congress established for this very purpose; namely, the National Science Foundation.

What has happened is that research has ridden on the coattail of military appropriations simply because that money was easy to obtain.

Take basic research as a case in point, which by definition cannot be closely, directly and visibly linked to a given need or problem. If the linkage is direct and visible, then the work is probably applied research, or engineering. A year ago last April, the Senate Foreign Relations Committee held hearings on Department of Defense sponsored foreign affairs research. At those hearings Admiral Rickover, who is given to calling a spade by its proper name, was asked about the

peculiar jurisdiction of the Department of Defense for basic research. The chairman, the Senator from Arkansas (Mr. FULBRIGHT) said to him:

It would seem that the National Science Foundation, NIH, or the AEC should have almost exclusive jurisdiction to do basic research as distinguished from applied research. Do you agree with that?

This is what the admiral replied:

I think the problem you have here is that the Department of Defense is able to get large funds for doing basic research while this is not possible for other Government agencies. I once had a discussion with Secretary of Defense McElroy on that subject, and this is the point he made. He said it is important that basic research be done in the United States. As I remember his words, he said it was not too important that the Defense Department do it, but that the work should be done, and since the Defense Department has the funds to pay for the work, it is therefore being done by them.

The ready accessibility of Defense funds for research has kept the Defense Department in the role of a principal sponsor or patron. This then is the issue: Should our research scientists and engineers continue to look to the defense agencies for \$1.3 billion out of a total estimate of \$5.2 billion of Federal obligation for research?

This is the issue that has attracted the attention of many college students and contributed to campus unrest.

Consider the recent first report of the MIT Review Panel on Special Laboratories, issued last May 31. Here the review panel clearly expresses its concern with heavy emphasis on defense-related research. It said:

We find today a heavy emphasis on defense-related research and development in the country at large, an emphasis which detracts from similar efforts aimed at other urgent needs of society. Although the emphasis on defense work came about as a response to perceived national needs, it has hampered the nation's ability to cope with the problems of the contemporary world. As far as M.I.T. is concerned, the nation's emphasis on defense produces a bias toward specific areas of research at the institute, and makes it more difficult to move in other directions. M.I.T. has a role to play in attempting to redress this balance, not only within itself but also at the national level.

Many of you will recall the request made last year for current information about ongoing research projects of Federal departments and agencies. The resulting 12 cartons have been mentioned many times in this Chamber. I must confess that trying to get an overall grasp of this massive outpouring of information has been no easy task, and I wonder, based on our experience, what mechanisms exist within the executive branch to grasp the whole of these varied, diverse research programs.

We have made two preliminary forays into this massive collection of project information. Taking one field of science, chemistry, we counted 1,988 chemistry research projects reported by eight departments and agencies. Of these, the top three agencies were DHEW with 617 projects, NSF with 458, and DOD with 392. The DOD projects represented costs of about \$17.4 million for fiscal years 1967 and 1968. Of these, 124 Air Force

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projects were with universities and 17 with industry; 157 Army projects were with universities and one with industry; 21 Navy projects were with universities and five with industry. Taken together, of the 392 chemistry projects reported by DOD, 302 were in universities and educational institutions, 23 were in industry, 53 were performed abroad, and 14 were with other kinds of organizations.

These figures reveal how much research in chemistry has come to depend upon DOD funding.

Turning to other fields of science, we looked at project information reported under the combined heading of behavioral and social sciences. Here we find 280 DOD research projects reported representing obligations of \$14.8 million for fiscal years 1967 and 1968 combined. Of these, 186 were going on at universities; seven were funded by the Advanced Research Projects Agency; nine by the Army; 63 by the Air Force; and 107 by the Navy. Our initial screening identified 11 subjects in which more than one Defense agency was sponsoring research; table I shows this information.

Going further, an admittedly subjective reading of these project titles for the behavioral and social sciences suggested that many could have been equally well funded by the National Science Foundation. In fact, of the 280 projects reported by DOD for behavioral and social sciences, as many as 212 representing obligations of \$9.7 million out of a total of \$14.8 million for fiscal years 1967 and 1968 combined, seemed appropriate for NSF and other civil agency support; table II gives the details. With the permission of the Senate, I would insert in the Record a list of the titles for Defense research projects reported in behavioral and social sciences that initial reading suggests are appropriate for funding by the National Science Foundation.

The members can judge for themselves how directly and visibly related to defense needs are such research projects as "rate-controlled speech and mediating variables in second-language learning," funded by ARPA; or "the socio-economic aspects of command control in developing nations" by Army; or "organ pathology and prenatal-postnatal biochemical responses associated with early social-developmental relationships" by the Air Force; or "organizational, cultural and personal factors influencing work productivity" by the Navy.

I cite these titles not to point a finger of ridicule, for we have no information as to the scientific quality of the work or the standing of the investigators. What I do intend is to question the relevance of subjects of these kinds to the military needs of the Nation, and to question why scientific research of this kind, if needed in the national interests, is not funded by other departments and agencies.

Mr. President, this body can long debate the issue of Defense support for research that is more appropriate to other agencies without ever affecting what is going on. Debate can frame the issues, but only action can produce change. The change that national interests dictates is to relieve the military of its present funding of research not clearly, directly,

and visibly linked to its responsibilities and functions. Whatever action we take will be painful, particularly if other members of this body who are concerned with funding of research by civil agencies under their jurisdiction are not persuaded to provide the funding so that DOD can transfer such work without disrupting too much of the ongoing research.

Despite the pains of reductions, or terminations, or transitions, I propose that our national interests require us to act now and at least to begin the disengagement of Defense from funding of research not closely related to its needs.

Mr. President, I ask unanimous consent to have printed in the Record three tables which bear on this subject.

There being no objection, the tables were ordered to be printed in the Record, as follows:

TABLE I.—RESEARCH SPONSORED BY MORE THAN 1 DEFENSE AGENCY

Project	Air			
	Navy	Force	Army	ARPA
Learning foreign languages.....	x	x	x	x
Pattern recognition.....	x	x	x	
Learning.....	x	x	x	
Visual perception.....	x	x	x	
Decisionmaking.....	x	x		
Teaching complex material.....	x			x
Effects of drugs on performance.....			x	
Behavior under stress.....		x		
Leadership.....	x	x		
Group interaction.....	x	x		
Memory.....	x	x		

TABLE II.—COMPARISON OF TOTAL NUMBER OF DEFENSE PROJECTS IN BEHAVIORAL AND SOCIAL SCIENCES FOR 1968 WITH THOSE POSSIBLY APPROPRIATE FOR SUPPORT BY THE NATIONAL SCIENCE FOUNDATION

	Fiscal year 1967			Fiscal year 1968					
	Number of projects	Number of NSF type	Per cent	Funding for all behavioral and social science research	NSF type	Per cent	Funding for all behavioral and social science research	NSF type	Per cent
ARPA.....	12	12	100	\$611,683	\$611,683	100	\$654,775	\$654,775	100
Army.....	22	18	81	849,045	744,673	87	341,825	340,242	99
Air Force.....	76	71	93	1,595,000	1,554,000	97	1,020,000	1,008,000	98
Navy.....	170	111	65	5,372,000	3,038,000	56	4,440,000	2,824,000	63
Total.....	280	212	75	8,427,728	5,948,356	70	6,456,000	4,827,017	74

PROJECTS IN THE BEHAVIORAL AND SOCIAL SCIENCES REPORTED BY THE DEFENSE DEPARTMENT IN 1968 THAT APPEAR APPROPRIATE FOR SUPPORT BY THE NATIONAL SCIENCE FOUNDATION

ADVANCED RESEARCH PROJECT AGENCY
 Research on the psychological origins of revolution, fy '67, \$39,000.
 Factors associated with cultural change in Middle Eastern countries, fy '68, \$238,000.
 Research on behavior in international systems, \$0.¹
 Experimental study of the psychological processes involved in the use of language, \$0.
 Handbook and casebook for practical evaluators, fy '68, \$32,000.
 Risk-taking and negotiation in leader and delegate groups, fy '67, \$36,483.
 On-line computer studies of bargaining behavior, fy '67, \$246,000.
 Computer recognition of patterns of behavior, fy '68, \$89,775.
 The characteristics of incentive systems and their effect on individual behavior, fy '68, \$95,000.
 Psychological processes of the central nervous system, fy '68, \$200,000.
 Modes of organizing and presenting complex educational material fy '67, \$110,800.
 Rate-controlled speech and mediating variables in second-language learning fy '67, \$179,400.

DEPARTMENT OF THE ARMY
 The relationship between subjective and objective assessments of fatigue, fy '68, \$7,850.
 The effects of psycho-active chemicals on cognitive social skills, fy '67, \$10,688; fy '68, \$1,840.
 Socio-economic aspects of command control in developing nations, fy '67, \$85,934; fy '68, \$74,000.
 Temporal orientation and task performance, fy '67, \$49,523.
 Comparative studies of the central mechanisms of sensory discrimination, fy '67, \$24,912.
 Performance: vigilance-factors influencing

¹ "\$0" means a project is on-going in fy '67 and '68 but was previously funded.

detection and monitoring, fy '67, \$30,667; fy '68, \$30,890.
 Effects of drugs on sensorimotor processes and mentation, fy '67, \$32,588; fy '68, \$30,321.
 Perceptual lag as a function of onset and offset visual stimulation, \$0 either year.
 Stimulus factors in human timing behavior, fy '67, \$1,899; fy '68, \$300.
 Remote detection of cortical unit spike discharge: is it possible? fy '67, \$18,689.
 Sleep and dream research, fy '67, \$28,063; fy '68, \$22,500.
 Analysis of visual and pupillary functioning, fy '67, \$14,338.
 Basic studies of psycho-physic measurement theory applicable to human sensory processes, \$0 either year.
 Adaptation to bodily rotation, fy '67, \$16,436; fy '68, \$1,791.
 Suppression and fusion in stereopsis, fy '67, \$44,856.
 Development of a psychophysical photo quality measure, fy '67, \$10,948.
 Interdisciplinary research in learning control systems and pattern recognition, fy '67, \$341,500; fy '68, \$170,750.
 Suppression and fusion in stereopsis, fy '67, \$33,634.

DEPARTMENT OF THE AIR FORCE
 An information system for an enclaved society, fy '68, \$89,000.
 Military contribution to modernization—Middle East and North Africa, fy '67, \$36,000.
 Decision making in situations of practical action, fy '67, \$57,000.
 Persuasive communication in functional organizations, \$0.
 Visual perception of movement, \$0.
 Research to improve language training/Western Europe, fy '68, \$49,000.
 Political development and modernization in Islamic countries—military planning, \$0.
 Measurements of attitude and attitude change, \$0.
 Ultrasonic determination of body composition, fy '67, \$28,000.
 An experimental study of the development of consensus, fy '67, \$21,000.
 Studies of uncertainty, information search and decision-making, \$0.

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- Theory and methods in the study of organizational stress. fy '67, \$22,000.
A model for stimulus relevance. \$0.
Performance and biochemical responses related to social changes versus chemotherapy. fy '67, \$38,000.
Organ pathology and prenatal-postnatal biochemical responses associated with early social-developmental relationships. \$0.
Spatial-temporal effects of high intensity point sources of light on the induction of apparent motion. fy '67, \$21,000.
Examination of short term and long term memory processes/role of temporal lobe. fy '67, \$16,000.
Study of the narrative review in programmed instruction. \$0.
Human selective learning. fy '67, \$18,000; fy '68, \$20,000.
Effects of physical and symbolic stressors on perceptual mechanism. fy '67, \$25,000.
Social-cultural aspects of development. fy '67, \$33,000.
Emergent leaders in developing nations. \$0.
Research in background imagery interpretation. fy '68, \$16,000.
Military implications of change: Communist China. fy '67, \$104,000.
Predictive model for intra-group negotiation. fy '67, \$26,000.
Methodology for analysis of internal social movements. fy '67, \$9,000.
Innovation, social exchange and institutionalization. fy '67, \$49,000.
Measurement of reactions to stress. fy '67, \$33,000.
Aerospace power and behavioral knowledge. fy '67, \$105,000.
Psycho-physiological measurement of response to information overload or complexity. fy '67, \$68,000.
Transfer of technology under military and related conditions—Japan and other countries. \$0.
Social psychological aspects of stress. fy '67, \$94,000.
Rational models for strategic behavior. fy '67, \$24,000.
Movement, learning and behavior. fy '67, \$30,000; fy '68, \$36,000.
Transformational and organizational processes in memory. fy '67, \$14,000.
Comparative study of normative behavior among Japanese and American youth. fy '67, \$34,000.
Social-psychological factors in the development of new nations. \$0.
Influence of memory factors on sensory discrimination. fy '68, \$15,000.
Leadership, organizational effectiveness, and human resources. \$0.
The desire for group achievement: origins and effects. fy '68, \$61,000.
Operational description of behavioral laws. fy '67, \$19,000.
Cultural differences in task approach and optimal performance in a transfer task. fy '68, \$400,000.
Simulation studies of organizational communication behavior under stress. fy '67, \$47,000; fy '68, \$43,000.
An analysis of group feedback effects. fy '67, \$30,000.
Allocation of resources in a multiman-machine system simulation. fy '68, \$40,000.
Elementary processes in pattern perception. \$0.
Social mobility and professional motivation-application to Air Force manpower pool. fy '68, \$11,000.
Speech characteristics as indices of attitude, mood and motivational state. fy '67, \$47,000.
Study of cognitive and affective attitudes. \$0.
Altered levels of consciousness and human performance. fy '67, \$64,000.
Psychophysiological baseline pattern analysis. fy '67, \$33,000; fy '68, \$32,000.
- Elite structure and elite transformation in totalitarian political systems. \$0.
Perception of dynamic stimuli. fy '67, \$38,000.
The prediction of subject motivatibility in laboratory experimentation. fy '67, \$29,000; fy '68, \$19,000.
A study in social science decision making. \$0.
Experimental study of the effects of surround brightness and size on visual performance. fy '67, \$29,000.
Organization of information about human learning transfer and retention. fy '67, \$25,000.
Criteria for the design of new forms of organization. fy '67, \$45,000; fy '68, \$65,000.
Remembering, forgetting and recovery of memory. fy '67, \$30,000.
Psycho-physical relations in perception of space, time and velocity. fy '67, \$3,000.
Executive decision making in organizations under stress and crisis. fy '67, \$47,000.
Operational analysis of behavioral situations. fy '67, \$20,000.
Political-ideological systems and hostility patterns. \$0.
Movement and perceptual-motor performance during atypical input conditions. \$0.
Individual differences in motor and verbal skills. fy '68, \$62,000.
Expectations of motivations related to power differences within groups. \$0.
Decisions and decision-makers: the effects of confidence, social risk and commitment. fy '67, \$29,000.
Effects of supportive, close and punitive styles of supervision. fy '67, \$5,000.
Improvement of learning capabilities. fy '67, \$87,000.
A systematic investigation of contrast effects related to vigilance tasks. fy '67, \$17,000.
Effects of task characteristics on performance. fy '68, \$50,000.
- U.S. DEPARTMENT OF THE NAVY
Human engineering guide to equipment design and evaluation. fy '67, \$15,000; fy '68, \$80,000.
Experimental techniques for predicting performance of electronics personnel. fy '67, \$20,000; fy '68, \$37,000.
Properties of visual displays and methods for evaluating the effectiveness of displays. fy '68, \$20,000.
Functional evaluation of electroluminescent pictorial status displays. fy '67, \$20,000.
Psycho physiological problems of pilot protection. fy '67, \$40,000; fy '68, \$30,000.
An integrated system for measuring diver performance. fy '67, \$26,000; fy '68, \$50,000.
Development of computer assisted instruction procedures to aid in teaching complex concepts. fy '67, \$70,000; fy '68, \$70,000.
Determination of the relationships between the electrical activity of the human retina and the perception of form. fy '67, \$15,000.
The role of motivation in Naval leadership. fy '67, \$57,000.
Investigation of habit reversal techniques of potential use with Navy personnel. fy '67, \$15,000; fy '68, \$14,000.
Image enhancement of Navy display systems. fy '68, \$11,000.
Inducing cooperation between adversaries. fy '67, \$41,000.
Psycho physics mechanisms of attention, memory, information processing and decision making. fy '67, \$31,000; fy '68, \$25,000.
Dynamics of conflict and cooperation in small groups, teams, and crews. fy '67, \$45,000.
Speech as an indication of stress. \$0.
Recognition and discrimination of complex visual stimuli in continuous motion. fy '67, \$55,000.
Pattern recognition of EEG to determine level of alertness. fy '68, \$46,000.
New techniques for presenting human-en-
- gineering data to design engineering. fy '68, \$20,000.
Effect of cold water on divers. fy '67, \$30,000; fy '68, \$37,000.
Systems analysis research on pilot landing performance. fy '67, \$40,000; fy '68, \$26,000.
Development of techniques for using computers to administer and score psychological tests to Navy applicants. fy '67, \$26,000; fy '68, \$26,000.
Computer-assisted instruction information exchange. fy '67, \$47,000; fy '68, \$56,000.
Diver performance measures. fy '67, \$30,000; fy '68 \$23,000.
Machine augmentation of human strength and endurance. fy '68, \$400,000; fy '68, \$167,000.
Improving intelligibility of divers using helium-oxygen breathing mixtures. fy '68, \$44,000.
Comparison of different organizational structures in terms of crew effectiveness. fy '67 \$10,000.
Psychological and physiological factors affecting team performance. fy '67 \$27,000.
Effects of perceptual isolation on the human subject. fy '67 \$26,000; fy '68 \$23,000.
Instructional strategies in computer assisted instruction. fy '67 \$57,000; fy '68 \$71,000.
Improving search and acquisition for targets in peripheral vision. fy '67 \$31,000; fy '68 \$20,000.
Computer classification of physiological responses in hazardous environments. fy '67 \$34,000.
Application of attitude change principles to equipment acceptance. fy '68 \$39,000.
Relationship between Navy vigilance tasks and body chemistry changes. fy '68 \$40,000.
The effects of persuasive communications on attitudes. fy '67 \$38,000.
Effects of drugs on stress and vigilance behavior of Navy operators. fy '67 \$35,000.
Drug enhancement of performance on Naval personnel under stress. fy '67 \$22,000; fy '68 \$22,000.
Electrical activity of human eye muscles under static and dynamic viewing conditions. fy '67 \$16,000; fy '68 \$18,000.
Special methods for resisting psychological warfare techniques. fy '67 \$26,000; fy '68 \$65,000.
Comparative study of electroencephal patterns. fy '68 \$14,000.
Determination of the relationships among sensory and display interpretation factors in man-machine information transfer situations. fy '67 \$35,000; fy '68 \$35,000.
Organizational, cultural and personal factors influencing work productivity. fy '67 \$131,000.
Determination of the effects of high intensity light flashes on the eye and on visual perception. fy '67 \$4,000; fy '68 \$15,000.
Survey of human factors and biotechnology research. fy '68 \$22,000.
Interaction of drugs with other factors determining human performance. \$0.
The measurement of stress and its relationship to and effects on human performance in mental and motor work. \$0.
Processing of information sequentially displayed by computer-driven cathode-ray tubes. fy '67 \$28,000.
Work producing capabilities of underwater operators. fy '67 \$31,000; fy '68 \$30,000.
Symposium on applied models of man-machine systems. fy '68 \$4,000.
Defining the conditions which control how well test material is learned and how long it is remembered. fy '67 \$32,000.
How human beings acquire and evaluate information in the process of making judgments and decisions. fy '68 \$30,000.
Military implications of modernization in the Far East. \$0.
The study of leadership effectiveness in complex situations. fy '67 \$15,000.

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Sound conduction in the ear affecting military communications. fy '67 \$26,000.
 Group information processing and decision-making in complex situations. fy '67 \$50,000.
 Military implications of social change. fy '67 \$440,000.
 Determination of the relationships between the responses of humans and the physical dimensions of stimulation for the sense of taste. \$0.
 Research to improve methods of training in foreign languages. fy '67 \$19,000.
 Helium speech distortion correction using an analog simulation of the human ear. fy '68 \$35,000.
 Development of classification procedures to identify pilot vertigo research. fy '68 \$50,000.
 Biophysical changes affecting behavioral performance. fy '67 \$20,000; fy '68 \$20,000.
 Consulting and advisory services for the social and behavioral science. fy '67 \$14,000; fy '68 \$17,000.
 Identification of variables which predict international conflict. fy '67 \$26,000; fy '68 \$24,000.
 Analysis of reward as a means of promoting adult learning. fy '67 \$29,000.
 Enhancement by drugs of Naval personnel performance under stress. fy '67 \$65,000; fy '68 \$49,000.
 Control of purposive movement through sequenced electrical stimulation of brain sites. fy '67 \$121,000; fy '68 \$51,000.
 Investigation of methods to reduce training failures among intellectually able students. fy '68 \$25,000.
 Effects of extreme environments on performance of Navy teams and groups. fy '67 \$5,000.
 Mechanisms of human auditory localization as related to Naval communications systems. fy '68 \$33,000.
 Techniques for improving human memory. fy '68 \$43,000.
 Neural mechanisms involved in the processing of visual and auditory information. \$0.
 Comparative studies of conflict and conflict resolution. fy '68 \$36,000.
 Analysis of the human behavior processes involved in solving complex problems. fy '67 \$22,000; fy '68 \$20,000.
 Basic mechanisms in attention and vigilance of human operators. \$0.
 Atlas of principles of group behavior for studies of crew isolation and confinement. fy '67 \$15,000; fy '68 \$33,000.
 Speech analysis of men under stress. fy '67 \$25,000; fy '68 \$25,000.
 Determination of the factors influencing the perception of form and distance of underwater divers. fy '68 \$7,000.
 Underwater work measurement techniques. fy '67 \$25,000; fy '68 \$34,000.
 Biophysics of vision for design of optimal target displays. fy '68 \$4,000.
 Attitude change for the enhancement of morale. fy '67 \$30,000.
 Improvements in underwater voice communication. fy '68 \$34,000.
 Research on psychiatric effectiveness of future weapon systems crews. fy '67 \$54,000.
 Research on physical and psychological factors involved in underwater speech communication. fy '67 \$50,000; fy '68 \$57,000.
 Effect of noise on inner-ear cells. fy '67 \$43,000; fy '68 \$28,000.
 Behavioral science inputs to the prediction of conflict. fy '68 \$275,000.
 Conference on psychological problems in large-scale change. fy '67 \$7,000; fy '68 \$24,000.
 Automatic teaching systems; man-machine interactions involving high speed digital computers. \$0.
 Effect of environmental restriction on performance. fy '68 \$4,000.
 Factors involved in modifying hostile attitudes. fy '67 \$2,000; fy '68 \$38,000.
 Comparative study of interaction between ideology and behavior. fy '67 \$50,000.

The measurement of speech intelligibility. fy '68 \$16,000.
 Leadership requirements in differing organizational settings. fy '67 \$23,000; fy '68 \$30,000.
 Experiments on leadership, authority and influence. fy '67 \$22,000.
 Theories and models of military group behavior. fy '67 \$37,000.
 Research on panic behavior. fy '67 \$5,000; fy '68 \$4,000.
 The influence of power on group productivity and morale. \$0.
 Reduction of hostility within groups to enhance team performance. fy '67 \$20,000; fy '68 \$20,000.
 Studies of computer-assisted instruction; instructional strategies and behaviorally oriented language. fy '68 \$68,000.
 Conference on group decision making. fy '68 \$8,000.
 Effects of group interaction on problem solving. \$0.
 Identification of factors influencing the effectiveness of management and leadership. fy '67 \$28,000; fy '68 \$45,000.
 Theory and measurement of international conflict. fy '68 \$165,000.
 Research on how visually patterned stimuli are classified by the nervous system. \$0.
 Undersea work performance and psychological adjustment. fy '67, \$22,000; fy '68 \$30,000.
 Research on factors involved in the detection and identification of visual and auditory signals. fy '67 \$35,000.
 Techniques of differential assignment of personnel. \$0.
 Comparative research on interpersonal perception. fy '68 \$15,000.
 Characteristics of Navy trainees that enhance or inhibit learning. fy '67 \$44,000.
 Comparative analyses of leadership practices. fy '68 \$31,000.
 Implications of organizational stability and instability for psychological operations. fy '68 \$150,000.
 Experimental analysis of aggressive behavior. fy '67 \$43,000; fy '68 \$26,000.
 Brain nucleic acid changes during learning. fy '68 \$26,000.

PROGRAM

Mr. MANSFIELD. Mr. President, for the information of the Senate, it is my intention shortly to call up House Concurrent Resolution 315, but if the distinguished minority leader, in the meantime, has any questions, I will endeavor to answer them.
 Mr. DIRKSEN. Mr. President, I would like to ask the distinguished majority leader about the program for the balance of the day, but more particularly about the program for tomorrow, and whether or not there may be recorded votes on any amendments that may be submitted, knowing, of course, that a substantial contingent will be going to the dinner in California.
 Mr. MANSFIELD. Mr. President, it is a good thing that the distinguished minority leader raised that particular question at this time. It is my understanding that the distinguished chairman of the Foreign Relations Committee, the Senator from Arkansas (Mr. FULBRIGHT), has two amendments which may not take too much time.
 It is my further understanding that there is a very strong possibility that a yea-and-nay vote on House Concurrent Resolution 315, the resolution to adjourn for 3 weeks, will be asked for; and, of course, if it is, it will be granted.

It is my further understanding that before the Senate concludes its business tonight, the distinguished Senator from Wisconsin (Mr. PROXMIER) will lay down his amendment on the C5-A; that we will come in at 10 o'clock tomorrow morning; that the Senator from Wisconsin and other Senators will lay the foundation for the amendment. The amendment, however, would not be voted on tomorrow, but would be the pending business when the Senate returned on September 3. It is a very important amendment, and it is hoped that a full attendance will be in the Senate at that time.

In other words, to those of you who are interested in attending the state dinner at Los Angeles—and that is only one factor among many others—if we go through with what I have just discussed, there will be no rollcall votes tomorrow; and all I can say, on that basis, is Godspeed.

ADJOURNMENT FROM AUGUST 13 TO SEPTEMBER 3, 1969

Mr. MANSFIELD. Mr. President, I move that the Senate turn to the consideration of House Concurrent Resolution 315, with, of course, the proviso that the Senator from Arkansas does not lose his right to the floor.

The PRESIDING OFFICER. The concurrent resolution will be stated by the clerk.

The legislative clerk read the concurrent resolution (H. Con. Res. 315) as follows:

H. CON. RES. 315

Resolved by the House of Representatives (the Senate concurring), That the two Houses shall adjourn on Wednesday, August 13, 1969, and that when they adjourn on said day they stand adjourned until 12 o'clock noon on Wednesday, September 3, 1969.

Mr. PROUTY. Mr. President, may we have order?

The PRESIDING OFFICER. The motion is not debatable.

Mr. STENNIS. Mr. President, who has the floor?

The PRESIDING OFFICER. The question before the Senate is an adjournment resolution, and is not debatable.

Mr. PROUTY. Mr. President, I ask for the yeas and nays, then, if I cannot speak.

The yeas and nays were ordered.

The PRESIDING OFFICER. The question is on agreeing to the concurrent resolution. The clerk will call the roll.

Mr. STENNIS. Mr. President, a parliamentary inquiry.

The PRESIDING OFFICER. The Senator will state it.

Mr. STENNIS. What are we voting on?

The PRESIDING OFFICER. The clerk will restate the resolution.

The legislative clerk read as follows:

Resolved by the House of Representatives (the Senate concurring), That the two Houses shall adjourn on Wednesday, August 13, 1969, and that when they adjourn on said day they stand adjourned until 12 o'clock noon on Wednesday, September 3, 1969.

Mr. MANSFIELD. This is a fulfillment of the pledge made by the joint

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leadership to all Senators, and about which all Senators were informed as long ago as last January, with no objection at that time.

The PRESIDING OFFICER. The clerk will call the roll.

The legislative clerk called the roll.

Mr. KENNEDY. I announce that the Senator from Tennessee (Mr. GORE), is absent on official business.

I also announce that the Senator from Nevada (Mr. BIBLE), the Senator from Mississippi (Mr. EASTLAND), the Senator from Utah (Mr. MOSS), the Senator from Georgia (Mr. RUSSELL), and the Senator from Texas (Mr. YARBOROUGH) are necessarily absent.

Mr. SCOTT. I announce that the Senator from Ohio (Mr. SAXBE) is necessarily absent.

The Senator from Oklahoma (Mr. BELLMON), the Senator from Utah (Mr. BENNETT), and the Senator from Illinois (Mr. PERCY), are detained on official business.

If present and voting, the Senator from Utah (Mr. BENNETT), and the Senator from Illinois (Mr. PERCY), would each vote "yea."

The result was announced—yeas 76, nays 14, as follows:

[No. 80 Leg.]

YEAS—76

Anderson	Gurney	Montoya
Baker	Hansen	Mundt
Bayh	Harris	Murphy
Boggs	Hart	Muskie
Brooke	Hartke	Nelson
Burdick	Hatfield	Packwood
Byrd, Va.	Hollings	Pearson
Byrd, W. Va.	Hruska	Pell
Cannon	Hughes	Proxmire
Case	Inouye	Randolph
Church	Jackson	Ribicoff
Cook	Javits	Schweiker
Cranston	Jordan, N.C.	Smith
Curtis	Jordan, Idaho	Sparkman
Dirksen	Kennedy	Spong
Dodd	Long	Stennis
Dole	Magnuson	Stevens
Dominick	Mansfield	Symington
Eagleton	Mathias	Thurmond
Ellender	McCarthy	Tower
Fannin	McGee	Tydings
Fong	McGovern	Williams, N.J.
Fulbright	McIntyre	Young, N. Dak.
Goodell	Metcalfe	Young, Ohio
Gravel	Miller	
Griffin	Mondale	

NAYS—14

Aiken	Ervin	Profty
Allen	Goldwater	Scott
Allott	Holland	Talmadge
Cooper	McClellan	Williams, Del.
Cotton	Pastore	

NOT VOTING—10

Bellmon	Gore	Saxbe
Bennett	Moss	Yarborough
Bible	Percy	
Eastland	Russell	

So the concurrent resolution (H. Con. Res. 315) was agreed to.

ORDER OF BUSINESS

Mr. MANSFIELD. Mr. President, will the Senator yield without losing his right to the floor?

Mr. FULBRIGHT. I yield.

Mr. KENNEDY. Mr. President, may we have order?

The PRESIDING OFFICER. The Senator will be in order.

The Senator may proceed.

Mr. MANSFIELD. Mr. President, for the information of the Senate, there may

well be one or two rollcall votes this evening before adjournment. I do not think that the debate on the next two amendments will take very long.

I would suggest that in the interest of better procedure and a more expeditious departure, Senators stay as close to the floor as possible so that we can dispose of the amendments one way or the other.

Mr. FULBRIGHT. Mr. President, I point out that my statement will not take over 3 or 4 minutes.

Mr. MAGNUSON. Mr. President, will the Senator yield me 1 minute?

Mr. FULBRIGHT. Mr. President, I yield 1 minute to the Senator from Washington.

JURISDICTION OF SENATE COMMITTEES ON MASS TRANSIT MEASURE

Mr. MAGNUSON. Mr. President, yesterday the administration sent up a proposed piece of legislation on mass transit that encompassed a great number of transit problems and rapid transit in urban areas.

It goes back in some instances to the proposal contained in the original mass transit bill, the jurisdiction of which lies in the Banking and Currency Committee.

Many of the suggestions contained in the bill are also within the province of the Commerce Committee.

The distinguished Senator from Utah introduced a bill and had it referred to the Committee on Banking and Currency. However, the distinguished chairman of that committee and the Senator from New Hampshire (Mr. COTTON) and I have an agreement that when they get through with that measure, it will be forwarded to the Commerce Committee so that we may consider the sections that properly belong within the jurisdiction of that committee.

This is an all-inclusive, pretty wide-ranging bill.

I wanted the record to reflect this situation.

PROPOSED MEETING OF FOREIGN RELATIONS COMMITTEE

Mr. FULBRIGHT. Mr. President, before I make my statement on the pending matter, there is one other matter that I should like to point out. Because of an unexpected emergency, we were not able in the Committee on Foreign Relations this morning to vote on a pending matter. There was a rollcall in the Senate much earlier than we had expected.

As soon as we dispose of the two amendments, if we can get a quorum, I would appreciate it very much if the committee members could come to the committee rooms so that we might have a very brief meeting. It should not take more than 5 or 10 minutes to dispose of the one remaining piece of business—the Peace Corps measure—before we adjourn.

Mr. President, I hope that the committee members can come to the committee room. I guarantee them that it will not take more than a few minutes.

We will either do it or not do it within 10 minutes. I would appreciate it if after the disposal of these two brief amendments the members of the committee would come to the committee room.

AUTHORIZATION OF APPROPRIATIONS FOR FISCAL YEAR 1970 FOR MILITARY PROCUREMENT, RESEARCH AND DEVELOPMENT, AND FOR THE CONSTRUCTION OF MISSILE TEST FACILITIES AT KWAJALEIN MISSILE RANGE, AND RESERVE COMPONENT STRENGTH

The Senate resumed the consideration of the bill (S. 2546) to authorize appropriations during the fiscal year 1970 for procurement of aircraft, missiles, naval vessels, and tracked combat vehicles and to authorize the construction of test facilities at Kwajalein Missile Range, and to prescribe the authorized personnel strength of the Selected Reserve of each reserve component of the Armed Forces, and for other purposes.

Mr. FULBRIGHT. Mr. President, amendment No. 129 does two things.

First, it makes clear that no more than \$3 billion of the funds appropriated for use of the Armed Forces of the United States may be used to support the forces of Vietnam and other free world forces in Vietnam, or local forces in Laos and Thailand.

Second, this amendment requires that the decisions as to the expenditures of these funds are to be the responsibility of the President rather than the responsibility of the Secretary of Defense.

My purpose in proposing this amendment is to tighten up the provisions of this authorization bill.

As it now stands, the Congress would be authorizing the Secretary of Defense "on such terms and conditions as he may determine" to spend, without any limitation whatsoever, an amount that could be as high as \$80 billion to pay the expenses of armed forces other than those of the United States.

This, I know, is preposterous. The Secretary of Defense would do not such thing. But that is precisely what the language of title IV authorizes as I read it.

There must be some limit on the amount we are expected to take from the use of our Armed Forces and give to other free world forces.

I guess I do not know what that limit is.

My amendment specifies that not more than \$3 billion may be spent on foreign armed forces. That is more than we spend for economic foreign aid and for many domestic programs. It is but 10 percent of the some \$30 billion which the Vietnam war costs the United States annually.

I know it will be said that there must be a broad delegation of discretion in the expenditure of these funds because we hope that South Vietnam forces will take over more and more of the burden. But I suggest that the Senate is entitled at least to have an estimate of how much next year is to be used to pay for the forces of allies fighting with us in Vietnam.

If the chairman of the Armed Services

Committee is not agreeable to the limiting figure of \$3 billion for this purpose. I would be interested in receiving some other estimate.

It does not make much sense to me to hold elaborate hearings on the Defense Department budget, to receive detailed estimates on the costs of various weapons systems, and then to adopt language in this bill which says in effect that notwithstanding any other law authorizing funds for the Armed Forces of the United States, the Secretary of Defense can spend whatever he desires to support other free world forces in Vietnam and local forces in Laos.

The Congress must be cautious of such wide open delegations of authority.

I hope the chairman of the Committee on Armed Forces will accept this amendment.

Mr. STENNIS. Mr. President and members of the committee, I call special attention to the situation with respect to title 4. It may be that a rollcall vote will not be required on the matter.

I will first make a brief explanation of title 4 of the bill. It covers what was once called foreign military aid or foreign aid for the military. But this section is limited to the South Vietnamese and other free world forces in Vietnam, local forces in Laos and Thailand, and for related costs during the fiscal year 1970 on such terms and conditions as the Secretary of Defense may determine.

Mr. President, that is the identical language that was used for last year in the authorization bill as brought forward without any change and also for the year 1968.

I am going to propose an amendment as a substitute to the amendment of the Senator from Arkansas. The funds now in the bill for this purpose amount to only \$147 million. That is in hardware. The authorization is merely for the Appropriations Committee, concerning such other amounts as they may appropriate and for whatever purposes they may appropriate. The Appropriations Committee now has authority to appropriate items except military hardware for our Army or Navy, but they do not have authority to appropriate even O. & M. funds—operation and maintenance funds—for the Army of South Vietnam. So this would be a general authorization.

When this matter came before us, my best recollection is that in looking at it, the Chief of Staff said that this is identical to the matter of last year, and that was correct. We did not get to the figures then, however, and they gave me the figures later, and showed how it was spent last year for this purpose—\$2.5 billion. For this year, it is estimated to be \$2.26 billion for this purpose.

On that point, I did not notice the open end clause in here, which is the three or four words on pages 12 and 15: "under this or any other act." That gives it an open end, unlimited authorization. I have not favored that since we built the Air Force Academy. I do not like us to make open end authorizations unless it is absolutely necessary. That is my record on it.

But I failed to point that out to the committee; I am sure I did. That is why

I want to offer this substitute amendment now. Instead of saying "not to exceed \$3 billion," I think we should put it at \$2.5 billion; and if more money is needed, they can get the authorization for it.

So I do not think we should try to step on the President of the United States by requiring him to issue a certificate.

My amendment, which reads as follows, is offered as a substitute:

On page 5, line 11, strike out the quotation marks and the word "Funds" and insert in lieu thereof the following: "Not to exceed \$2,500,000,000 of the funds".

On page 5, line 17, insert for the word "conditions" the phrase "under Presidential regulations".

That will put it forth in the register. The President is responsible for what it does, anyway. I think that will take care of the situation.

So I offer that as a substitute, and I thank the Senator from Arkansas very much for calling attention to that matter. This language, if it is going to refer to the other authorization bills, should have a limit on it, and it is limited. Let me repeat for clarity, that it is limited to the forces in Vietnam, other free world forces in Vietnam, and the local forces in Laos and Thailand.

Mr. FULBRIGHT. Mr. President, will the Senator yield?

Mr. STENNIS. I yield.

Mr. FULBRIGHT. Inasmuch as it does deal particularly with the local forces in Laos and Thailand, two countries in which, at least technically and legally, we are not at war, does the Senator not think it would be better that this responsibility be given to the President? We are now discussing before our committee a matter involving Thailand, and it seems to me that this is a matter of such consequence that it should be squarely the President's responsibility to make a decision on a matter of this kind, as distinguished from the ongoing war in Vietnam. That is the part of it that struck me—that it should be a presidential responsibility in the law.

Mr. STENNIS. I think it should be a presidential responsibility. He is responsible for it, anyway. Certainly, we can trust him to make the regulations about this matter, and then the Secretary of Defense, acting under those regulations and our law and restrictions, I believe—

Mr. FULBRIGHT. Customarily, I say to the Senator, under the foreign aid bill which my committee has handled, the funds are made available to the President.

Mr. STENNIS. Yes.

Mr. FULBRIGHT. That has been traditional, since the beginning. Actually, this is an item which has been in the foreign aid bill, in foreign assistance, in the past. In fact, some Members presently are considering taking it back into that bill.

Therefore, I would suggest—I do not know that it is all that important—that it would still be more appropriate for the responsibility to be given to the President.

Mr. SYMINGTON. Mr. President, will the Senator yield?

Mr. STENNIS. I yield.

Mr. SYMINGTON. Mr. President, there is a \$500 million difference here. As I understand the position of the distinguished Senator from Mississippi, he agrees with the principle of what is desired by the distinguished Senator from Arkansas. We are in a fight in Vietnam, and we are and have been taking military action in Laos and Thailand.

I would hope that the able chairman of the Committee on Foreign Relations would accept the proposal presented by the chairman of the Committee on Armed Services.

Mr. FULBRIGHT. I intended to do that when I rose. I certainly accept the amendment of the Senator from Mississippi as to the amounts. His explanation of it is understandable.

I say to the Senator from Missouri that the prosecution of the war, of course, is a military matter. But this involves far more than a military matter, as we found this morning; and it is the very matter into which the Senator from Missouri is looking. I think it is primarily a political matter as to how far we go in a commitment to support the local forces in Laos and Thailand in particular, as distinguished from Vietnam.

Mr. SYMINGTON. I know of the legislative background incident to the matter we were discussing this morning, and ascertained that the Secretary of Defense believes the matter we discussed this morning, if implemented, would necessitate the approval of Congress.

Again, it is my hope that the chairman of the Committee on Foreign Relations would take the language suggested by the chairman of the Committee on Armed Services.

Mr. FULBRIGHT. I am willing to accept the Senator from Mississippi's proposed amendment in place of mine and would, of course, support it. I merely brought that to his attention, in that I thought there might be a distinction between the significance of the local forces in Laos. But if the Senator from Mississippi feels that strongly about it, I am perfectly willing to accept his amendment as a substitute for mine.

Mr. STENNIS. It is my intention to have the presidential responsibility at the very peak, but I think he should be permitted to make the regulations, and then the Secretary can act on them.

Mr. FULBRIGHT. Mr. President, a parliamentary inquiry.

The PRESIDING OFFICER. The Senator will state it.

Mr. FULBRIGHT. Is it proper for me to accept the substitute or withdraw my amendment?

Mr. President, I modify my amendment as proposed by the Senator from Mississippi.

Mr. COOPER. Mr. President, will the Senator yield?

Mr. STENNIS. I do not understand.

The PRESIDING OFFICER. The Senator from Arkansas has modified his amendment.

Mr. FULBRIGHT. I modify my amendment in accordance with the suggested words of the Senator from Mississippi. It is his proposal, and that disposes of it.

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The PRESIDING OFFICER. The amendment is so modified.

Mr. STENNIS. I want to discuss it a little further, but I yield to the Senator from Kentucky.

The PRESIDING OFFICER (Mr. Spang in the chair). Will the Senator send the amendment, as modified, to the desk.

Mr. STENNIS. Mr. President, I yield to the Senator from Kentucky.

Mr. FULBRIGHT. Mr. President, will the Senator yield to me first briefly?

Mr. STENNIS. I yield.

Mr. FULBRIGHT. Did the Senator suggest to strike "any other act" and only confine it to this act?

Mr. STENNIS. No, that was done in marking it up.

Mr. FULBRIGHT. The Senator does not wish to strike out "any other act."

Mr. STENNIS. No, that is part of it. The ceiling is on it now.

Mr. FULBRIGHT. Very well.

Mr. STENNIS. I yield to the Senator from Kentucky.

Mr. COOPER. Mr. President, I did not wish to intervene until the Senator from Arkansas and the Senator from Mississippi had agreed upon the questions which the Senator from Arkansas had raised. Now, I wish to raise another question on this section. I hope I may have the attention of the Senate for just a few minutes.

When I first read title IV on page 5 of the bill, the thought came to me that it could be considered a commitment as defined in the national commitments resolution which was adopted almost unanimously by the Senate. I may attach too much importance to language, but I want to give the reasons for my thinking in this direction.

In Vietnam we are furnishing supplies and equipment to the South Vietnamese and to other free forces who are assisting the South Vietnamese. We are also using our troops in support of the South Vietnamese.

The same situation may prevail in Laos and Thailand, as far as I know. We have authorized the supply of equipment and materiel to Laos and Thailand. Until a few years ago such supplies were authorized under the military assistance section of the foreign aid bill; in 1967 the authority was transferred to the military authorization bill.

My question goes to the meaning of the word "support." Is it intended in this section that support of free forces in Laos and Thailand is limited to equipment, materiel, and supplies, or is it intended that word "support" shall include the use of our own Armed Forces in support of the local forces of Thailand and Laos.

Mr. STENNIS. No.

Mr. COOPER. If use of our forces is intended, article IV of the bill could be construed as a commitment of our Armed Forces.

Mr. STENNIS. Mr. President, the Senator presents a very good question but I do not hesitate for one moment in answering. It does not include troop personnel of that kind.

As a matter of fact, I shall have printed in the Record within just a few min-

utes an itemization of these very items for fiscal year 1968, fiscal year 1969, and fiscal year 1970, prospectively. We are dealing here with \$2,226,400 for fiscal year 1970 which includes no military construction at this time, but procurement for the Army, Navy, shipbuilding conversion, aircraft procurement, missile procurement, and other procurement, and the operation and maintenance for the Army, Navy, Marine Corps, and Air Force. So it is strictly military matters, and military matters alone.

Mr. COOPER. Mr. President, I accept, of course, as all of us do, the statement and intention of the Senator from Mississippi, about his understanding of the matter. But it is important that we know the intention of the language which speaks of itself. I would ask if the Senator from Arkansas and the Senator from Mississippi would be willing to modify paragraph (2) which now reads "(2) local forces in Laos and Thailand;" so as to insert before "local" the words: "to provide equipment, material supplies, and maintenance thereof to"; The additional language would remove any question of the intention—I do not know this is so intended; I hope it is not intended to use any of these funds for our forces to support the local forces of Laos and Thailand.

Mr. MILLER. Mr. President, will the Senator yield?

Mr. COOPER. I base my suggested language in part on a statement made by former Secretary of Defense McNamara when he asked that funds to assist Laos and Thailand local forces be taken out of the foreign aid bill and placed in the defense bill. He supported his request in a letter to Senator Russell, chairman of the Armed Forces Committee.

We are prepared to provide Laos and Thailand the equipment and supplies they require to combat the armed Communist forces which threaten their freedom. Therefore, the transfer itself implies neither escalation of conflict nor change in type or level of assistance; it merely reflects the most effective manner to handle the problem.

My amendment would limit the use of any of the funds, as far as Laos and Thailand are concerned, to equipment, material, and supplies.

Mr. STENNIS. The Senator might supply his language on that point. With respect to equipment and supplies there, we already have a list in the Record of what is represented.

Perhaps the language would provide this would not include any troops or U.S. forces. Maybe that would cover it.

Mr. COOPER. "Other than U.S. forces."

Mr. MILLER. Mr. President, will the Senator yield?

Mr. STENNIS. I yield.

Mr. MILLER. Mr. President, I would like to make a comment. Perhaps the Senator from Mississippi and the Senator from Kentucky might indicate whether or not this is within the scope of the Senator's proposed language. My understanding is that maintenance can be involved as well as the actual supplies and materiel.

Mr. STENNIS. Yes.

Mr. MILLER. If we are going to have

maintenance, this could indicate contract maintenance, or it could indicate modifications of equipment. So I certainly think maintenance should be in this language if we are going to use specific language.

Mr. STENNIS. The word "maintenance" is in the bill of particulars that I am going to have printed in the Record. It does include many things in addition to military hardware. It really has no place in this bill, strictly speaking, except \$147 million. As a matter of convenience we put it in 2 or 3 years ago.

I yield to the Senator from Arizona.

Mr. GOLDWATER. Mr. President, I am certain I know what the Senator from Kentucky is getting at. I find myself in favor of that but I have a question as to whether or not his exclusion would be so complete that we could not, for example, install radars in Laos or Thailand, or electronic detection equipment, or electronic relay equipment that would require, at least for a time, personnel from the United States. These people might not be in uniform. They might be South Vietnamese. Would the idea of the Senator from Kentucky go that far?

Mr. COOPER. Mr. President, I shall try to make myself clear. I do draw a distinction between operations, on the one hand, in Vietnam and in Laos and Thailand, on the other.

Whatever may be one's views on Vietnam, we are assisting Vietnam in at least two ways: one by the supply of equipment and materiel; and the other, and of greatest importance, by the use of our Armed Forces in support of Armed Forces of Vietnam and other free forces. I have never voted against funds for these purposes.

It has been said by former President Johnson that we have made a commitment for the use of our Armed Forces by the Gulf of Tonkin resolution. It has been debated and debated. In any case, we are in Vietnam, and we are at war. I do not know what is occurring in Laos or Thailand but I know it has not been declared either by the Executive or the Congress that we have a commitment in Laos and Thailand against the Pathet Lao, or any insurgents in Thailand, or Laos. The United States is at least not at war in Laos or Thailand. My purpose is to be sure that we do not provide funds for the use of our Armed Forces in support of the local forces of Laos and Thailand and thus run the risk of becoming engaged in war without joint authority of the Executive and Congress.

On June 25, the Senate passed a resolution which had been introduced by the Senator from Arkansas, which was later modified and passed almost unanimously by the Senate. It states:

Resolved, That (1) a national commitment for the purpose of this resolution means the use of the Armed Forces of the United States on foreign territory, or a promise to assist a foreign country, government, or people by the use of the Armed Forces or financial resources of the United States, either immediately or upon the happening of certain events, and (2) it is the sense of the Senate that a national commitment by the United States results only from affirmative action taken by the executive and legislative branches of the United States Government by

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means of a treaty, statute, or concurrent resolution of both Houses of Congress specifically providing for such commitment.

Mr. President, this bill when enacted will become a statute. It will represent the action of both Houses of Congress. It leaves no doubt that we are ready to provide financial resources of the United States to local forces in Laos and Thailand, but if we do not make certain by proper language that it does not provide funds for our Armed Forces to engage in fighting in support of the local forces of Laos and Thailand, it would be interpreted that this statute does provide such funds for such use of our Armed Forces. This may be said to strain language, but if it is strained, we become involved in Vietnam by strained action, by the strained premises by the evolution of events which, I am sure, no one in the early years intended or thought would bring us into that war.

I want to provide language in this section, that will insure that use of the funds involves only the financial resources of the United States. That means our money, our equipment, our materiel, our supplies and operations related thereto. It would prohibit the use of Armed Forces in support and combat support, of local forces fighting in Laos and Thailand.

Mr. SYMINGTON. Mr. President, perhaps we are missing a danger involved in all of this; namely, if we lend or sell equipment to the present Vietnam Government, it is very possible that in the not too distant future, the North Vietnamese and the Vietcong could well be using that equipment against some of the countries which today are on our side; specifically, Laos and Thailand.

That, I think, is a great danger, as evidenced by the fact that in the hearings conducted in the Foreign Relations Committee last year, relative to the sale of arms to other countries, we found there were some 6,000 American tanks which, in effect, were for sale if it could be arranged on the right basis to countries in other parts of the world where the tanks were not considered obsolescent.

With complete respect for the remarks of the distinguished Senator from Kentucky, there is no real secret about the fact that we have and are conducting military operations in Laos; also that we are conducting military operations from Thailand. I believe that it is important to recognize tonight if Americans are in danger in Thailand, or if Americans are in danger in Laos, because of actions taken over recent years, it is as important for us to work to defend them in those countries as to defend them in South Vietnam.

This morning, in a hearing conducted in the Foreign Relations Committee with respect to certain activities, the witness, not of high rank, testified that before anything occurred under the contingent agreement in question, the matter should be taken up with the Congress.

That, to me, made considerable impression, because at least up to this administration, many things took place in Laos and Thailand which were not taken up with the Congress. So I checked

the legislative history of the present Secretary of Defense when he was a Member of the other body, and found that he was forceful in stating such matters should be taken up with the Congress.

I also found to my satisfaction that the reason this witness stated it should be taken up with the Congress was probably because the Secretary of Defense believed it should be taken up with the Congress. I believe, therefore, that we are in a new era when it comes to the method and the nature of risking troops and utilizing equipment, in foreign countries. I would give full and great credit to the efforts which have been made by the chairman of the Foreign Relations Committee so as to clarify this matter in these hearings.

But, for these reasons and because of the position taken by the current management of the Defense Department, I would hope that we would see fit to pass title IV as it is now in the bill.

Mr. President, I regret implications—not made here on the floor of the Senate—which would imply that we have no military operations in Laos. We know we are having them there; and we know we have built six major bases in Thailand.

I believe that title 4 is all right. I think this discussion has been constructive from the standpoint of the future.

Mr. STENNIS. As it is, by adoption of the amendment of the Senator from Arkansas?

Mr. SYMINGTON. That is right; the amendment of the able Senator from Arkansas, as modified by the amendment of the distinguished chairman of the Armed Services Committee. We will have both committees working together, and this part of the bill will be settled.

Mr. STENNIS. Mr. President, the Senator from Texas had asked me for recognition. I yield to him.

Mr. TOWER. Mr. President, I would like to associate myself with the remarks of the distinguished Senator from Missouri. I think the thrust of the amendment of the Senator from Kentucky would be to deny involvement of American personnel. It should be roundly defeated. To begin with, what we are talking about when we talk about Thailand and Laos forces is paramilitary forces, regarding counter-insurgency work. We are trying to give them the sophisticated equipment to do anything, for example, airlift and radar. If we cannot train them to use the equipment, it is pretty useless to give it to them.

I might say that our bases in Thailand are defended by Thai troops. Is it proposed that they get no personnel support from the troops in Thailand? Are we going to get no support for the air bases that are supposed to be defended?

The thrust of the amendment of the Senator from Kentucky would be to necessitate using American personnel for work that they would not have to do if we were to allow some support of Thai troops or paramilitary troops.

Mr. COOPER. Mr. President, I would like to hear from the Senator from Arkansas.

Mr. STENNIS. Mr. President, if the

Senator will excuse me just a minute, the Senator from Arkansas and the Senator from Indiana asked me to yield to them. I believe the Senator from Arkansas asked me first. I yield to him.

Mr. FULBRIGHT. Mr. President, as I said a moment ago on this particular amendment, it seems to me that, with the amendment of the Senator from Mississippi, it would be satisfactory. I think the matter raised by the Senator from Kentucky, however, is a very significant one, and I do not want, in any offhand way, to make what might be called a national commitment with regard to Thailand.

In my next amendment as printed, No. 111, which deals with the question of the Secretary of Defense making available reports prepared by outside organizations, I have in mind such things as "think tanks," and so on. That amendment is before the Senate.

I have also prepared another section which I want to discuss as a modification to my amendment, which provides that—

The Secretary of Defense shall also provide to the Committees on Armed Services of the Senate and the House of Representatives a copy of all bilateral contingency plans, signed by a representative of the Department of Defense and an official of a government of a foreign country, involving use of United States forces for the joint defense of that country.

It deals, in effect, with the point the Senator from Kentucky has raised.

The point of the Senator from Kentucky is a very important one. I do not wish, through inadvertence, to see another Gulf of Tonkin resolution go through here without knowing it. I am inclined to believe that, with the explanation and interpretation given by the Senator from Mississippi and the Senator from Missouri, it would be certainly an outrageous way to interpret it if it were done that way.

I wonder if the Senator from Kentucky could not offer this amendment at a later date as his own amendment on this precise subject. I do not know whether the next amendment would cover it.

I think the Senator has a valid point, but I do not think it is necessary, with what has been said with regard to this amendment.

Mr. STENNIS. Mr. President, if I may say this, I think the Senator from Kentucky has made a contribution here. I have enjoyed getting his thought. This is purely a money bill. This is purely a special section here for foreign military aid. It has 2 years of use as a precedent. Except to put a ceiling on it, I believe we ought to proceed in that way.

Mr. FULBRIGHT. The Senator believes it would be an outrageous distortion to interpret it as authority for use of our military forces, apart from what they are presently doing?

Mr. STENNIS. I do not see how it could be interpreted that way. It would be a real monstrosity.

I yield to the Senator from Louisiana.

Mr. ELLENDER. Mr. President, I do not think there is any question that the amount is for military hardware and uses of that kind, and does not involve soldiers at all. But I rose to ask the Senator this question: He earmarked \$2.5 billion. During the hearings that were

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held 2 weeks ago, the figure was \$2.2 billion instead of \$2.5 billion.

Mr. STENNIS. That is correct.

Mr. ELLENDER. Would the Senator modify his amendment to include that figure?

Mr. STENNIS. No. I think there should be some latitude. The \$2.2 billion, which I mentioned during the debate, was arrived at when the budget was written up. We have already had a somewhat augmented program to aid the Vietnamese to build up their military forces.

I think that \$2.5 billion figure is a realistic one.

Mr. ELLENDER. The reason why I raised the question is that we used the figure of \$2.5 billion during all the hearings we had as being the amount of foreign aid to be used for military hardware.

Mr. STENNIS. It will not hurt at all to have this excess. I suggest that in the supplemental bills the extra amount of money will be used. It is better to have it done that way than to have the department draw the money from somewhere else and then come before the Congress with a big deficit. I think we ought to accept the figure of \$2.5 billion.

Mr. COOPER. Mr. President, it is late and I do not want to detain the Senate. As I have said, I may be straining the point, but I do not think so.

This is an important matter. For years we have been talking about Vietnam, and cries of anguish have gone up because we did not look ahead and consider the end that the steps that were being taken could lead to—our involvement in war. This bill before us will become a statute—could be another step involving the United States much as the course of events led to our involvement in Vietnam.

I would agree that it would be a monstrosity if the President of the United States, upon the language of this section, should consider the language of this bill as authority to enter war in Laos or Thailand. It would be a monstrosity, and I have full confidence in President Nixon, and that he would not do so, but that does not relieve us of our responsibility.

It is admitted here by the chairman of the committee that these funds shall be used only for what has been termed military assistance.

Is that correct?

Mr. FULBRIGHT. That is correct.

Mr. COOPER. And, as I understand that they shall not be used for our armed forces in support of fighting, or assisting fighting of the local forces of Laos and Thailand, other than for supplies. Therefore, I will propose another amendment. "Military assistance," I believe, is a phrase of art. Is it not?

Mr. STENNIS. Well, the Senator would know more about that than I would.

Mr. FULBRIGHT. For years it was in the foreign aid legislation. I assume it is still considered as such.

Mr. COOPER. In the testimony of the Secretary of Defense before both the Armed Services Committee and the Foreign Relations Committee in 1967, he spoke of the transfer of military assistance from the foreign aid bill to the defense bill. He called it military assistance.

Mr. FULBRIGHT. That is right.

Mr. COOPER. That is what it had been termed when it was considered by the Foreign Relations Committee.

I propose: On line 15 before "local" insert the words "military assistance" so as to read "Military assistance to local forces in Laos and Thailand." If these two items, Vietnam, Laos, and Thailand, were separated and distinguished there would be no problem of a misunderstanding.

However, the same words are employed for the use of funds in Vietnam as for Laos and Thailand, and there could be a mistake about their meaning. I would urge that before "local" there be inserted the words "Military assistance."

Mr. FULBRIGHT. I would think that would be all right.

Mr. STENNIS. We are talking about money. We are talking about funds. The first sentence reads "Not to exceed \$2.5 billion of the funds authorized for appropriation for the use of the Armed Forces," and so forth. We are talking about money, and that is all.

Mr. FULBRIGHT. Yes.

Mr. STENNIS. And it would not fit in there before the Senator's words "local forces," it seems to me.

Mr. COOPER. I thought my suggestion would help. I will offer the amendment I first proposed. Is it in order for me to offer an amendment?

Mr. SYMINGTON. Will the Senator read it?

The PRESIDING OFFICER. The Chair rules that it is not in order for the Senator from Kentucky to offer an amendment at this point, except by unanimous consent.

Mr. COOPER. Mr. President, a parliamentary inquiry.

The PRESIDING OFFICER. The Senator will state it.

Mr. COOPER. After the pending amendment is voted upon, as it has been modified would an amendment to the modified amendment then be in order?

The PRESIDING OFFICER. Will the Senator from Kentucky send his proposed amendment to the desk?

The Chair would say, in answer to the inquiry of the Senator from Kentucky, that after the pending amendment, as modified, is voted upon, it would be in order that his amendment be considered.

Mr. STENNIS. Mr. President, I think the amendment has been fully explained. I ask unanimous consent that the table of funds to which reference has been made, the last item being \$2.2 billion, be printed in the Record at this point.

There being no objection, the table was ordered to be printed in the Record, as follows:

ESTIMATED AMOUNTS INCLUDED IN MILITARY FUNCTIONS BUDGET FOR SUPPORT OF FREE WORLD MILITARY ASSISTANCE FORCES IN VIETNAM, LAOS, AND THAILAND AND RELATED COSTS, FISCAL YEAR 1970 BUDGET INCLUDING THE AID/DOD REALIGNMENT

(In millions of dollars)

	Fiscal year 1968	Fiscal year 1969	Fiscal year 1970
Military personnel:			
Army.....	118.0	114.2	116.3
Navy.....	.8	.6	1.1
Marine Corps.....	15.0	14.8	14.2
Air Force.....	.2	.2	.2
Total, military personnel.....	134.0	129.8	130.8
Operation and maintenance:			
Army.....	605.8	708.0	632.8
Navy.....	43.3	47.5	53.7
Marine Corps.....	6.1	10.7	10.3
Air Force.....	55.0	131.8	157.1
Total, operation and maintenance.....	710.2	898.0	853.9
Procurement:			
Army.....	552.5	1,243.5	927.3
Navy.....			
Other procurement.....	5.8	10.2	4.2
Shipbuilding and conversion.....	4.5	6.5	3.4
PAMN—Navy aircraft and missiles.....			2
Marine Corps.....	68.5	50.8	88.3
Air Force:			
Aircraft procurement.....	36.1	88.1	103.9
Missile procurement.....	1		
Other procurement.....	67.4	85.4	114.4
Total, procurement.....	734.9	1,484.5	1,241.7
Military construction:			
Army.....	1.7	10.7	
Navy.....	1.9	3.3	
Air Force.....	9.0	1.5	
Total, military construction.....	12.6	15.5	
Grand total.....	1,591.7	2,527.8	2,226.4

Mr. STENNIS. Mr. President, I believe that for the information of Senators, the clerk should read the amendment of the Senator from Arkansas, as modified.

The PRESIDING OFFICER. The clerk will state the amendment of the Senator from Arkansas, as modified.

The legislative clerk read as follows:

On page 5, line 11, strike out the quotation marks and the word "Funds" and insert in lieu thereof the following: "Not to exceed \$2,500,000,000 of the funds".

On page 5, line 17, strike out the words "the Secretary of Defense" and insert in lieu thereof the words "the President".

On page 5, line 17, insert after the word "conditions" the phrase "under Presidential regulations".

The PRESIDING OFFICER. The question is on agreeing to the amendment of the Senator from Arkansas, as modified.

The amendment, as modified, was agreed to.

The PRESIDING OFFICER. Does the Senator from Kentucky now call up his amendment?

Mr. COOPER. Yes.

The PRESIDING OFFICER. The amendment will be stated.

The assistant legislative clerk read as follows:

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On page 5, line 15, after (2) insert the following: "to provide equipment, material, supplies, and maintenance thereof to".

Mr. COOPER. Mr. President, there has been a very good discussion, but I do want to have for the RECORD an interpretation of the section. I would not be so interested if I had not been conscious of the steps by which our country became involved in the war in Vietnam. I shall spend a minute or two on the subject.

It all started very simply. Under President Eisenhower, military advisers were sent to Vietnam. I do not know whether I should speak of a statement former President Eisenhower made when he is now dead, but I think it proper. He came here one day 2 years ago and talked to a number of us. He said—

Mr. STENNIS. Mr. President, may we have order?

The PRESIDING OFFICER. The Senate will be in order.

Mr. COOPER. He said that the only commitment he had made, was to provide military assistance in the form of advisers, and to provide economic aid as long as South Vietnam made appropriate steps to help itself.

I may say that, after searching the record, that is all I could ever find that he had promised.

For years, he had our military advisers in Vietnam. We furnished equipment to Vietnam; we supported various regimes—it is hard to remember how many—and then, as the fighting increased in the outer areas, we began to send troops to those areas, to assist the South Vietnamese in actual fighting. They were finally fired upon, and it became a matter of national honor to defend them, as the President had the right to do, additional troops were sent to South Vietnam and step by step we had become involved in the war in Vietnam.

I am sure that President Eisenhower, President Kennedy, or President Johnson never intended that we would be involved in war and certainly no major war. But we conveyed to South Vietnam the impression that we would stand with them and defend them. I believe we conveyed that impression throughout Southeast Asia.

Wars start from small beginnings. I have thought, and many Senators have thought—it was definitely the expression of the Senate in the adoption of the National Commitments Resolution—that a likely way to become involved in a war is to put our armed forces in another country where there is a local war. And if we stay there long enough and send enough men there, they will be fired on some day, and then, as I have said, it is a matter of national honor and, because the President has the constitutional duty to protect our troops, we will be involved in a war.

Mr. FULBRIGHT. Mr. President, will the Senator yield?

Mr. COOPER. I yield.

Mr. FULBRIGHT. What the Senator has said does revive in my memory very clearly what was said, and particularly what I said, after having been briefed and informed by the Secretary of Defense, the Secretary of State, and the

Chairman of the Joint Chiefs, in regard to the Gulf of Tonkin resolution.

The Senator is very persuasive. It is a fact, even though I thought it was a monstrosity, that later the resolution was interpreted as it was by the President of the United States, that it was so interpreted; and every time the matter came up it was thrown in our faces. I believe the Senator's amendment will make the Senate's intent clearer and more positive. I do not really see how this can restrict the President's obligations, and I hope the Senator from Mississippi will accept the suggestion of the Senator from Kentucky. What we are trying to do is protect ourselves from such a monstrous interpretation. That having happened within the memory of all of us here, I believe it would be a very healthy thing for it to be accepted.

Mr. President, I am not sure; can I accept it? I would be willing to do so, with the agreement of the Senator from Mississippi.

Mr. STENNIS. Mr. President, the Senate has voted on the other amendment.

Mr. FULBRIGHT. That is right.

Mr. STENNIS. Mr. President, a parliamentary inquiry.

The PRESIDING OFFICER. The Senator will state it.

Mr. COOPER. I have the floor, but I will yield to the Senator for that purpose.

Mr. STENNIS. Mr. President, the amendment of the Senator from Arkansas has already been agreed to. Can any one Senator accept another amendment to that?

The PRESIDING OFFICER. Is the Senator from Mississippi asking that question as a parliamentary inquiry?

Mr. STENNIS. Yes, of course.

The PRESIDING OFFICER. The Chair rules that it cannot be accepted. The amendment of the Senator from Arkansas has been voted upon. This is new matter.

Mr. COOPER. I hope not, but it is possible we may be in war in Laos or Thailand; and if we go into war with the concurrent authority of the President of the United States and Congress, we will understand where we are, and at least Congress and the President will have made a determination that it is in our national interest.

We may become involved in war without such a determination at some point, with some 35,000 troops in Thailand, as I recall.

Mr. FULBRIGHT. There were 45,000 at the last count, I think.

Mr. COOPER. If at some point we thus became engaged in fighting, we may find ourselves at war by the same process as that by which we backed into war in Vietnam.

Again, I point out that the language of the amendment applies both to Vietnam and to Laos and Thailand. It is the identical language.

I read the language to which I refer: Funds authorized for appropriation for the use of the Armed Forces of the United States under this or any other Act are authorized to be made available for their stated purposes to support: (1) Vietnamese and other free world forces in Vietnam, (2) local forces in Laos and Thailand;

The same language is used for both countries. It is a possible interpretation that these funds could be used in the same way in Laos and Thailand as they are now being used in Vietnam.

I have said that it would be preposterous if the Secretary of Defense or the President were to use the funds in Laos and Thailand as they are being used in Vietnam as a result of the language of title IV. However, it is our province and our responsibility to make certain that the funds are not treated in the same way. This is the purpose of my amendment. It is simply to provide that as far as Laos and Thailand are concerned, these funds will only involve material, equipment, supplies, and related costs. The term "related costs" is in the language of the bill.

If this is what is intended by the sponsors of the bill and the administration, I do not see why they should not accept my language. It would remove all doubt.

Mr. SYMINGTON. Mr. President, will the Senator yield?

Mr. COOPER. I yield the floor.

The PRESIDING OFFICER. The Senator from Missouri is recognized.

Mr. SYMINGTON. Mr. President, I make two points. In effect, we have been in war in Laos for years, and it is time the American people knew more of the facts.

Second, the present Secretary of Defense states that, if this matter comes up again from the standpoint of any contingent agreement, he believes it is a matter which should be taken up with the Congress.

Mr. ALLOTT. Mr. President, I believe that the previous remarks of the distinguished Senator from Missouri, as well as his just completed remarks, are well taken.

Mr. SYMINGTON. Mr. President, I thank the Senator.

Mr. ALLOTT. Mr. President, I have been very quiet during the course of this debate. And, as I have listened to the debate, I find my emotions swelling up within me to the place where I think I would be hard pressed to express them in the period of 3 or 4 hours.

I am not a warlike man, nor am I an unpeaceful man. But I find it difficult for anyone who was concerned with the vital committees of the Senate to stand on this floor and say he did not know in the spring of 1964 that we were becoming involved in the war in Vietnam.

It is impossible for anyone not to have known it.

Mr. COOPER. Mr. President, will the Senator yield?

Mr. ALLOTT. I yield.

Mr. COOPER. Mr. President, was the Senator referring to me?

Mr. ALLOTT. I was referring to anyone who was a member of the Foreign Relations Committee or the Appropriations Committee at the time.

Mr. COOPER. Let me say in response that during that debate I said that I knew what we might get into. I voted for the resolution, but I had no misapprehension about its possibilities. The debate will show that on that day I said that it could lead us into war, but we

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had confidence in the President that he would use his authority with judgment.

However, I do not want the United States to get into the same situation again by the failure of the Congress to exercise its responsibility.

Mr. ALLOTT. Mr. President, I appreciate the situation of the Senator. And I ask him, and he can answer it in any way he wants to, if he does not believe the Secretary of Defense of his own party and if he does not believe his own President, because we have had assurances from both of them that we will not have any more commitments of troops in the Far East.

Mr. COOPER. Mr. President, will the Senator let me respond?

Mr. ALLOTT. The Senator may respond.

Mr. COOPER. Mr. President, I believe in the responsibility of the President, and I believe in President Nixon. He is my President whether he is Republican or Democrat. It happens that we are members of the same party, of which I am proud.

I understand and respect his responsibility. I believe that he will exercise it to the best of his ability, and he has great ability.

I believe also in the responsibility of Congress, both the House of Representatives and the Senate. I believe that we have a responsibility to determine also, whether the United States should go into war and whether we should become involved in situations which will send us into war—whether our national interests, security and proper commitments are actually involved.

We are talking about the future, and whether we will take steps or refuse to take steps that may prevent or inhibit the possibility of war.

Mr. ALLOTT. Mr. President, I understand the concern of the Senator about not wanting to become involved in another Vietnam. However, my statement was that there is no reason for anyone who was a member of the Foreign Relations Committee, or the Appropriations Committee, and particularly the Defense Subcommittee, or the Armed Services Committee, not to have known in the spring and summer of 1964 that we were going to become involved in a war.

Mr. FULBRIGHT. Mr. President, will the Senator yield?

Mr. ALLOTT. Mr. President, I yield for a question.

Mr. FULBRIGHT. Mr. President, it seems to me that repeating the statement is inviting comment upon a matter which was discussed at length. And the Senator looks in this direction.

I was there. It is true that in the spring of 1964, we had approximately 15,000 or 16,000 soldiers in Vietnam. There had been a gradual escalation from the time that President Kennedy came in, when there were less than 800 men who were considered to be advisers. They were not considered to be combat soldiers.

Mr. ALLOTT. There were 636, if the Senator wants the exact figure.

Mr. FULBRIGHT. Mr. President, I do not think anyone thought that we were

at war or anticipated that we would be at war there in the future.

President Eisenhower had been given the opportunity to go to war in Vietnam and he rejected it—I think very wisely—on the advice of General Ridgeway and General Gavin.

I certainly did not think we were getting into war when President Kennedy sent advisor personnel out there.

It is my impression that at about the same time he sent troops to Germany because Khrushchev had threatened him, he believed, at the meeting at Vienna.

I do not believe that he intended to get into war any more than he intended to get into war in Germany by sending those troops there.

No action had been taken when it came to the Gulf of Tonkin incident itself—

Mr. ALLOTT. Mr. President, with all due deference to the Senator, I said that I would yield for a question. I have been listening to the distinguished Senator, without interrupting him for weeks now. I yielded for a question, not for a speech.

Mr. FULBRIGHT. Mr. President, I will put it this way. Has the Senator read the report of the Foreign Relations Committee on the incidents of the Gulf of Tonkin?

Mr. ALLOTT. Recently?

Mr. FULBRIGHT. At any time.

Mr. ALLOTT. Yes.

Mr. FULBRIGHT. Was the Senator not impressed with the fact that the representations given to that committee by the then Secretary of State, Secretary of Defense, and the Chairman of the Joint Chiefs of Staff proved to be in error?

Mr. ALLOTT. I am completely aware of that. And I was present during all of the Gulf of Tonkin debate. I am aware of the statements made by various Senators at that time.

Mr. FULBRIGHT. The Senator is aware that the statements made by the Chairman of the Foreign Relations Committee were based on information given to him which information proved to be in error.

The question I ask the Senator is this: That being so, how can he make the statement that we all knew—and I assume he means by that intended to accept—the Southeast Asia resolution was the equivalent of a declaration of war?

ALLOTT. Mr. President, I have made no such statement. I have tried to make my remarks, and I am going to make them if we stay here until midnight, despite the Senator's loquacity. I never made the statement or implied the statement that when the Gulf of Tonkin resolution, for which I admit I voted, was passed, everybody knew we were going to get into war. That was not in 1964. The Gulf of Tonkin resolution was not passed in 1964.

Mr. PASTORE. Yes; it was.

Mr. FULBRIGHT. Unfortunately, it was in August of 1964.

Mr. ALLOTT. I thought it was before that. I apologize.

Mr. FULBRIGHT. I happen to know about that. I was present.

Mr. ALLOTT. I apologize. I had my dates crossed.

Mr. FULBRIGHT. The alleged incidents took place on the second and fourth of August, 1964. The resolution had been prepared long before that, I think. It was introduced in the House, and it was acted upon almost instantaneously.

Mr. ALLOTT. Let me say to the Senator that my mind played me a trick. I thought it was before this.

But I will still go back to the statement I made that in 1964 no member of the Armed Services Committee or the Appropriations Committee—particularly the Defense Committee or the Foreign Relations Committee—should not have known that we were being committed to a war at that time.

Now, Mr. President, I want to continue—

Mr. FULBRIGHT. Maybe we should be a lot brighter than we are, but I did not know it, I am frank to say.

Mr. ALLOTT. Well, I am not surprised. Mr. GOLDWATER. Mr. President, will the Senator yield?

Mr. ALLOTT. I yield.

Mr. GOLDWATER. Mr. President, having had some unpleasant personal experiences about that time in 1964, involving this subject, I can speak with some experience on it.

I have made the charge repeatedly, and it has never been denied—and this information came to me before my campaign actually started—that we did not drift into this war. We had a small number of advisers over there in 1960 and 1961, and suddenly 15,000 to 16,000 men were sent over, with explicit orders to shoot back.

I tried to bring this to the attention of the American public; I could not get anybody to listen to me. I do not think it would have made a bit of difference.

But we were at war when the Gulf of Tonkin incident took place. I remember begging for equal time on television so I could present not the Republican side but this American side of the understanding of what was going on in Vietnam, and I never got any place. When you are shooting back in a situation such as that, you are in war; and although we had advisers over there who were explicitly told never to fire on anyone, this advisory situation ended some time in 1962, when the troops were told to fire back.

I suggest to the Senator from Kentucky that, unless I am badly mistaken, even his language could not prevent a President from giving the same orders or a Secretary of Defense from giving the same orders.

So I have a feeling that what we are talking about now gets to the fact of whether or not we, as Senators, have faith, regardless of whether we are Republicans or Democrats, in the man who has been elected President and the men with whom he has surrounded himself as Secretary of State and Secretary of Defense.

I merely wanted to inject this because I have not heard it brought up. I have never been challenged on it, and I have made it and made it and made it.

Mr. ALLOTT. I would say to the Senator that I see no reason to challenge it, looking backward for 5 years now.

Mr. STENNIS addressed the Chair.

Mr. ALLOTT. I wish to continue.

Mr. STENNIS. Mr. President, if the Senator will yield for this statement—it is 6 o'clock, and if we are going to have a vote tonight, I think we should vote, with all deference to the Senator from Colorado. I just want to give my opinion.

Mr. ALLOTT. Mr. President, I want to defer to the Senator, but I have kept very quiet during the past weeks. My remarks will be very short. The fact that I would like to speak for 3 or 4 hours does not mean I am going to do so or have any intention of doing so.

Mr. STENNIS. I withdraw my request.

Mr. ALLOTT. If the Senator will permit me to continue for a short time, I will be very grateful to him.

The PRESIDING OFFICER. The Senator from Colorado has the floor.

Mr. ALLOTT. Mr. President, looking at the present amendment, I wish to say this: The thing that has concerned me about many of the rash of amendments that we have had—some of them have been meritorious—is that in my belief the Senate may be moving toward the position of creating a vacuum in Southeast Asia.

I know that the domino theory was discredited by all the intellectuals in this country several years ago. But whether the domino theory was discredited by the intellectuals or not, the fact is that if we do not preserve free governments in Southeast Asia, we are leaving a vacuum which is going to be filled faster than we can turn around by the Red Chinese and by the North Vietnamese.

As long ago as 1962, I brought to the attention of the State Department—without any action or any acknowledgment in any way—the fact that Red Chinese troops were roaming at will through a good portion of northern Thailand. They still are, except that now they are actually engaging in acts of war. This is a large area. It is composed of many people, and with it a lot of the natural resource wealth of the world.

We have done very well, in my opinion, in Indonesia; perhaps not as startlingly well as in Malaysia.

But if we permit Laos to go completely down the drain, Thailand to go down the drain, and Vietnam to go down the drain, as some people would like to do—and some people would like to have us encourage the promotion of a dual government there—I do not think it will be long before Southeast Asia will have become a Communist stronghold. When this occurs, I think our position in the world will be much more difficult; our position with the Philippines will be much more difficult; our position with Indonesia will be much more difficult; and our position with Malaysia will be impossible.

When we formed the tripartite situation in Laos, I said at the time it would not work. It has not worked. Today we find that the Plain of Jars in Laos is pretty much overrun by the Viet Minh.

If I may have the attention of the Senator from Kentucky particularly as I make this remark, I do not want to see

commitments made for ground troops in this area any more than he does. He is no more sincere in his belief than I am. But I am sure he knows that we have air bases in Thailand. He knows that we have a naval base in Thailand. That is no secret. He knows of our activities now—which I shall not mention—in Laos, activities which do not involve ground troops.

I have read his amendment. I say in all sincerity, looking down the road to what I think could happen if the Senate keeps on with this sort of frenetic pattern it has established during the last few days and weeks, that I am afraid we shall be sending a good portion of the world down the drain. I have had the clerk write out the Fulbright amendment as modified. The amendment, so modified reads, in pertinent portion:

Not to exceed \$2.5 billion of the funds authorized for appropriation for the use of the Armed Forces of the United States under this or any other Act are authorized to be made available for their stated purposes to support: (1) Vietnamese and other free world forces in Vietnam, (2)—

And this is where the Senator's amendment comes in—

to provide materiel, supplies, equipment, and maintenance thereof to local forces in Laos and Thailand.

Have I quoted the Senator's amendment correctly?

Mr. COOPER. Correctly.

Mr. ALLOTT. In my opinion, what the Senator from Kentucky's amendment could mean is that we could not put supplies in Laos or Thailand to maintain our forces, or supplies to protect our airports, our Air Force, our naval bases, or anything else that we have there. The legislative history is quite clear, I think, as it pertains to every Senator, that none of us wishes to engage in more ground warfare in Southeast Asia or, for that matter, anywhere else.

But I cannot read his amendment in any way except as being a totally unacceptable and crippling burden upon the Secretary of Defense and the President. I know the Senator's concern. I know he is sincere. I have never seen him do anything in his life which was not sincere. He does not play games with people and he does not play games with legislation. He is completely a sincere, honest, and straightforward man.

But just as strongly, I would hope he would not press his amendment because I think it places a burden on our President with respect to the protection of our forces in those areas, which is something that no one, if he understood it as I interpret it, would wish to do.

Mr. MURPHY. Mr. President, will the Senator yield?

Mr. ALLOTT. I yield.

Mr. MURPHY. Mr. President, I wish to ask the Senator if it is not true that the President inherited the problems in Vietnam. I know the wish is shared by all of us that there had been another way to solve that problem. I know all of us wish that there was some way to solve it now without withdrawing from our commitments and without doing something that would not be in the best interests of our country.

However, is it not true that the President said on several occasions there will be no more Vietnams in his administration?

Mr. ALLOTT. That is my understanding of what he has said.

Mr. MURPHY. Would it not be considered responsible that this man who has been in public life for many years and who has been elected by the people of this country be given the confidence without trying to write into an authorization bill for military procurement provisions that might be a detriment to the protection of American people, American troops, and American property?

Mr. ALLOTT. I fully believe so; yes.

Mr. MURPHY. Mr. President, I have listened patiently to the discussion. As I said at the outset, and as the distinguished Senator from Florida stated, this entire discussion has been a filibuster. This entire discussion has taken place at the wrong time and under the wrong set of circumstances. It should not be a part of this particular bill. I made that statement on the first day we considered the bill.

I assure the Senate that the work of this committee was carefully and thoughtfully done. It was properly done. But now it is being shredded, twisted, and torn up. The more I hear this discussion, the more I am certain discussion on our foreign policy, present and future, should take place in this body, and I would enjoy taking part in it.

However, it would seem to me, and I hope the Senator agrees, that this evening, at this stage, in this protracted discussion this is an unfortunate attempt to place restrictions on a new President who has been doing a magnificent job, as far as I know, in bringing about solutions to problems that he inherited. By taking a good hard look at them he will be able to find solutions.

Mr. ALLOTT. I thank the Senator for his contribution. I am appreciative of the Senator's statements.

Mr. TOWER. Mr. President, will the Senator yield?

Mr. ALLOTT. I yield.

Mr. TOWER. Mr. President, I think this is a dangerous amendment. I think it is potentially mischievous and very unnecessary for us to vote on it tonight when it has not been printed and no one has had a chance to look at it. There is no copy available except what has been scratched in pencil on a piece of paper. I think the matter requires extensive debate.

I spent a great deal of time in Laos and Thailand. I know what we are engaged in and I know the extent to which we are involved.

If a rigid interpretation were applied to the amendment of the Senator from Kentucky it could seriously jeopardize the lives of American men. I am not prepared to vote willy-nilly on something that we know nothing about. We do not know the reaction of the Department of Defense to the amendment or how they would interpret it.

If extended discussion is required on the matter tonight I am prepared to discuss it at length as long as anyone is prepared to sit and listen.

Mr. STENNIS and Mr. FULBRIGHT addressed the Chair.

Mr. ALLOTT. Mr. President, I assured the Senator from Mississippi I would not retain the floor for more than a few minutes. I have no intention of holding the floor further.

I wish to say to the Senator from Mississippi that the statement made by the Senator from California is true. Senators can rest assured that any matter coming out of the committee of the distinguished Senator from Mississippi has had the most meticulous scrutiny, observation, discussion, and thought.

While I do not desire to retain the floor against the wishes of the distinguished Senator from Mississippi, I felt some of these things had to be said before this matter was voted upon because I am convinced this amendment would wreak a lot of havoc.

There can be no question in anyone's mind after this legislative history that the amendment agreed to a few moments ago was never intended to put ground troops in Laos and Thailand.

Mr. SYMINGTON. Mr. President, will the Senator yield?

Mr. ALLOTT. I yield to the Senator from Missouri.

Mr. SYMINGTON. I thank the Senator.

Mr. President, I would hope we could get on with the bill. I respectfully point out to the Senate the fact that the language was agreed to by the chairman of the Committee on Armed Services and the chairman of the Committee on Foreign Relations. I thought that the language agreed to was eminently satisfactory and that we could have gone ahead at least 1 hour ago and gotten through with this part of the bill.

Mr. ALLOTT. I yield the floor.

Mr. STENNIS. Mr. President, I appreciate the contribution of the Senator from Kentucky I feel this section is old law. It already has a meaning. It has been followed these 2 years. It would be far better to keep this section now, as used heretofore, with the ceiling we have prepared. If the Senator from Kentucky wants to pursue his thoughts further, I know what a draftsman he is and that he does not need anyone particularly, but if he would put anything he has in mind in a separate amendment, it would be helpful to see what others thought.

I am glad now to yield to the Senator from Kentucky.

Mr. COOPER. Mr. President, I have taken up a good deal of time tonight. I must say that I have not filibustered.

Mr. STENNIS. No.

Mr. COOPER. I have taken some time because I considered this to be an important matter, much more important than merely reducing the amounts involved, with due regard to my friend from Arkansas and my friend from Mississippi. We are dealing with an entirely different concept: The question of whether funds can be spent for the use of our Armed Forces in fighting in support of local Laos and Thailand forces without a commitment by the President or the Congress or both, which might lead to war.

I would therefore urge that the question is much more important than the matter of dollars and cents.

I want to thank my friend from Colorado (Mr. ALLOTT) for his statement. I know him. I know that he has deep feelings about these matters. He does sit quietly at times, but I know how deep his feelings run and he speaks with conviction courage and force. I appreciate very much what he has said, and for his kind remarks about me.

Perhaps I may be sincere, but someone else might say that I may be sincere, but I may not be always right or too bright about things. Sincerity does not always make up for those qualities.

My amendment has not been printed. I had thought about it but as we were coming to the close of the debate in these 2 days before we recess, I did not expect to bring it up until after the recess. But when the Senator from Arkansas offered his amendment, I knew that mine should be offered.

I will not press for a vote tonight. I know that I can withdraw, and offer this amendment later, but I ask a parliamentary question because I want to be certain: Mr. President, in the event the Senator from Kentucky withdraws his amendment this evening, would it be possible for him to submit the amendment at a later date?

The PRESIDING OFFICER. Yes. That would be completely in order.

Mr. COOPER. I thank the Chair. I will withdraw the amendment but I will bring it up again. I hope that by the time I bring it up again, the Senator from Mississippi will have consulted with the Defense Department to see if they would be willing to offer language in title IV conforming to the Senator from Mississippi's understanding that it was their intention. The Senator has said it was intended that funds were to be used for supplies, equipment, and such. We have absolute confidence in the Senator from Mississippi, but the Department of Defense should spell out clearly the purpose of title IV relative to Laos and Thailand.

Mr. President, we have been talking about the President, President Nixon is my President. He is a Republican President. I do not want to go back into history, but members of my family have been Republicans since the Civil War—longer than some others have been, and some fought in the Civil War as Republicans. I support the office of President, I support the great responsibility it carries, and I have great admiration for and confidence in President Nixon.

But, I also respect this body. We have responsibilities, too. I do not want the President of the United States—and we are talking about President Nixon—to be hindered in his efforts by the same mistakes which have been made before.

It is rather curious that before 1966, when this item had been carried in the foreign aid bill for years, it was used for military assistance, meaning equipment, supplies, maintenance, food, and money. Then it was changed, and placed in the Defense bill.

It is rather curious that after it had been put in the defense bill, we began to use helicopters in Laos and Thailand under orders of the Department of Defense, and I understand in military activities. I cannot understand why the language

is not differentiated between funds to be used in Laos and Thailand and funds to be used in Vietnam. It is exactly the same language. Perhaps funds are to be used for some military activities such as for helicopters. Helicopters may take local forces to back areas. Firing on the helicopters begins, as it did in Vietnam, and war comes.

In 1963 or 1964—before the Gulf of Tonkin resolution—I remember the former Senator from Oklahoma, Mr. Monroney, came back from Vietnam and told us that our helicopters were carrying men up the mountains, that there were U.S. riflemen on the helicopters who were firing in defense of the helicopters and the pilots, and that their fire was being returned from the ground. That may be what we are doing in Laos and Thailand now.

The fact that some Senators have stated we are engaged in fighting in Laos and Thailand makes it more important that we limit the funds in this bill, because if we do not, if we approve that kind of activity, it may lead—I hope not—but it may lead us into war.

The SEATO Treaty states that in the event of armed aggression against any of the parties thereto, including the protocol states, Laos, Cambodia, or Thailand, the parties thereto shall take action according to their constitutional processes.

Mr. President, what are the constitutional processes?

It is not defined.

When Secretary of State Dulles testified before the Foreign Relations Committee on the SEATO Treaty—I have read the testimony—he was asked what constitutional processes meant. He replied that it meant the joint authority of the executive branch and the Congress.

The national commitments resolution was recently passed, expressing the same sense.

If we are fighting in Thailand and Laos now, we should know it.

The President of the United States—whether he be President Nixon, President Johnson, or any President, in my view, has no right to take our country into war without first coming to the Congress and asking for its authority.

If a situation should arise where our forces were being attacked, of course, the President has the constitutional right to defend them and to protect the security of our country. But I do not want war to occur because of carelessness or failure to look ahead. If we get into war, I believe that the Senate wants the determination to be made by the joint authority of the President and the Congress.

Mr. President, that is the meaning of my amendment.

I shall withdraw the amendment tonight because many Senators have not had the opportunity to read it and to consider it. Unless the Armed Services Committee and its chairman modify the section by amendment—it has to be by amendment—and by interpretation so precise that no one can think anything to the contrary. I want to say that I will bring up this amendment again and we can determine if this body wants to

abide by the constitutional processes, wants to abide by its national commitments resolution and wants to disapprove funds for the use of our forces which could lead us into another war without the consent of Congress.

Mr. President, I withdraw my amendment.

The PRESIDING OFFICER. The Senator from Kentucky withdraws his amendment.

Mr. STENNIS. I thank the Senator very much for his splendid remarks and for what I think is a constructive step, too, in withdrawing the amendment for the time being. That is all I have to say.

Mr. COOPER. Mr. President, I thank the Senator, and I may add to my remarks that I shall ask for a rollcall.

Mr. FULBRIGHT. Mr. President, I do not know what the wishes of the leadership or of the Senator from Mississippi are. I have a very minor amendment, which can go over until September, but I wanted to inquire as to the wishes of the Senator from Mississippi.

Mr. STENNIS. Mr. President, a parliamentary inquiry.

The PRESIDING OFFICER. The Senator will state it.

Mr. STENNIS. Has the amendment been adopted?

The PRESIDING OFFICER. The amendment has been withdrawn. No amendment is pending.

Mr. FULBRIGHT. Mr. President, in other words, the one which I amended in accordance with the Senator's amendment has been adopted, according to my understanding.

Mr. STENNIS. That is my understanding.

Mr. FULBRIGHT. Mr. President, does the Senator wish me to offer amendment No. 111 at this time or not? The Senator is familiar with it.

Mr. STENNIS. I cannot agree to it.

Mr. FULBRIGHT. I thought the Senator had proposed an amendment to it.

Mr. STENNIS. No; that is the wrong one. The Senator is referring to another amendment. I have only seen the amendment the Senator has handed me within the last hour or two.

Mr. FULBRIGHT. This is No. 111.

Mr. STENNIS. I was handed the wrong one.

Mr. FULBRIGHT. I am sorry the Senator was given the wrong amendment by mistake. Amendment No. 111 was submitted and printed about a week ago.

Mr. STENNIS. I am ready for the Senator to present his amendment, if he is agreeable to a proviso.

Mr. MANSFIELD. Mr. President, will the Senator yield briefly?

Mr. FULBRIGHT. I yield to the Senator from Montana.

Mr. MANSFIELD. Mr. President, I do not feel I should let this occasion go by without expressing my respect, regard, and affection for the distinguished senior Senator from Kentucky (Mr. Cooper). What he tried to say and what he did was and is in the minds and hearts of all of us, and has been for almost half a decade, if not longer.

I want him to know that I honor him for his persistence as well as for his sagacity and I am delighted that he is

going to introduce again the amendment which he has withdrawn, because none of us can alibi himself out of what he did on the Tonkin resolution. It was plain, clear, and legible, and every one of us understood it, but that does not mean many of us have not regretted it.

The reason why I am impressed by what the distinguished Senator has said is that he has tried, as best he knows how, to exercise his responsibility as a Senator of the United States, in the hope that this body—the Senate of the United States—will live up to its responsibility, collectively as well as individually, and that we will participate, insofar as we can within the realm of the Constitution, in making certain that we act in line with what President Nixon said just this past month, when he laid down, in Guam, the Nixon Doctrine for the Pacific.

He said, in effect, "No more Vietnams." He said, in effect, we are a pacific nation, with peripheral Asian interests in the mainland. He said, in effect, we are not going to get involved in internal difficulties. He said, in effect, we are not going to go to war again unless it is nuclear and our security is at stake.

So I am delighted that, even though the hour is late, the Senator from Kentucky did bring up this question. It is paramount. Everything that is happening and has been happening in Vietnam has an indirect and a direct relationship to many of the other troubles that confront this Republic today.

I agree with the Senator that we do not want to get involved again in an area which is not vital to the security of this country, and in an area which has cost this country over \$100 billion—and the end is not yet in sight—and not just 36,000, but altogether 44,000 dead—with the end not yet in sight—and with wounded of over 200,000—and the end not yet in sight.

So I think the warning raised by the distinguished Senator from Kentucky should be and will be heeded.

I want him to know that I honor him for what he has said, and I honor him for what he has done in this body.

Mr. FULBRIGHT. Mr. President, I would like to associate myself with everything the majority leader has said about the Senator from Kentucky. The Senator from Kentucky played a leading role relating to the recent resolution with regard to the responsibilities of the Senate and the Congress. In offering this proposal and in making the statement he made, he was carrying into effect the letter, and I think the spirit, of that resolution. He has rendered a great service.

I could go further and say that, as a result of the efforts of the Senator from Kentucky, I have noticed that the Senate as a whole in recent weeks has shown a greater sensitivity to its responsibilities in this whole area than it has ever done in the 25 years I have been in the Senate. I think the Senator from Kentucky deserves the credit which the Senator from Montana so appropriately expressed.

Mr. JAVITS. Mr. President, if the Senator will yield, I wish to associate myself with the remarks just made by my col-

leagues. The Senator from Kentucky is a dear old friend of mine. I make the practical suggestion that to articulate this amendment properly it will take not only the Department of Defense, but it will take the State Department, which have a role in trying to coordinate the military and diplomatic activities of the United States.

I think the majority leader's words give added authority to the need for articulating an amendment which will be upon the level of the one we discussed so long and which was decided so narrowly, but which will truly seek to carry out a policy of the United States. That is what this amendment is really all about.

I know that I, as a member of the committee, and I am sure the chairman, will cooperate with our colleague from Kentucky, so that when he presents the proposal it will truly represent the Senate declaration as articulated, and which raises the question which the Senator from Colorado (Mr. Allott) raised, all of which is pertinent to our security requirements.

Mr. COOPER. I thank the Senator.

Mr. JAVITS. I think he has rendered a historic service.

Mr. FULBRIGHT. Mr. President—
Mr. STENNIS. Mr. President, who has the floor?

The PRESIDING OFFICER. The Senator from Mississippi yielded to the Senator from Arkansas. He had the floor initially held by the Senator from Mississippi.

The Senator from Arkansas.

Mr. FULBRIGHT. I was going to yield to the Senator from Kentucky.

Mr. STENNIS. I yield briefly to the Senator from Kentucky.

Mr. COOK. Mr. President, I wish to associate myself with the remarks made by the majority leader and would like to say to my colleague that I would hope he would do us the honor, when he re-submits the amendment, to consider using the argument that is now in the Record and disseminating it to the Members of this body, and that he would do many of us the honor of asking for cosponsors to his amendment when it may be submitted in the future.

Mr. STENNIS. Mr. President, I yield to the Senator from Arkansas. If he would rather have the floor, I yield the floor.

Mr. FULBRIGHT. Very well. I will take the floor. I want to direct an inquiry to the Senator.

Mr. President, I wish to take the floor.

The PRESIDING OFFICER. The Senator from Arkansas.

Mr. FULBRIGHT. It is my understanding the Senator from Mississippi has prepared an amendment to my amendment No. 111—a proviso, I should say, at the end—which made the amendment acceptable to him. Is that correct?

Mr. STENNIS. I may say to the Senator from Arkansas that an additional question has arisen here about which I think we ought to have a colloquy with respect to possibly redrafting the amendment of the Senator. I am in sympathy with the amendment. I believe we could work something out along that line.

Mr. FULBRIGHT. Does the Senator wish to do that tonight or at a later date?

Mr. STENNIS. If the Senator wishes to briefly offer his amendment, I may ask him some questions about it. We can get to it rather quickly.

The amendment is relatively simple. It would require the Secretary of Defense to make available to a congressional committee, upon request, any study or report prepared outside the Department of Defense which was financed in whole or in part by the Department. The purpose is to insure that the Congress is given access to research studies performed by the so-called "think tanks," the universities, or individuals whose work is paid for by the taxpayers. The amendment recognizes the issue of executive privilege and carefully specifies that the mandate applies only to work performed outside—I emphasizing "outside"—the Department of Defense.

This amendment is the outgrowth of an effort by the Committee on Foreign Relations to obtain a study prepared by the Institute for Defense Analysis relating to the Gulf of Tonkin incident. It is my understanding that the study contains a review of what happened in the Gulf of Tonkin, how communications were handled, and in general how decisions were made. The purpose of the study, I was informed, was to determine what lessons could be learned for future crisis situations. I think that my colleagues will agree that there is much that all of us can learn from that incident and its aftermath. The committee has attempted several times to obtain this study from the Department of Defense, but has been refused each time.

The Institute for Defense Analysis receives virtually all its funds from the Department of Defense. In fiscal year 1969 this organization received \$10,898,000 from the Department of Defense and the Department proposes to give them \$11,150,000 in 1970.

I believe that the Congress, which imposes the taxes on the public to finance this organization, and which authorizes and appropriates the money for it, should have the right to see how that money is being spent. The issue here is far more important than this one study—it is a question of whether the Congress has the power to obtain information, prepared outside the Government with tax money, for which no claim of executive privilege has been made.

The Senate is beginning, at long last, to reassert its constitutional prerogatives and to restore the proper balance to our system. Passage of this amendment will be one small, but positive, step in that direction.

So I do think that there is an important principle involved here. The Senator from Mississippi has proposed a modification, which I think is proper, but which he can discuss, which simply, as I understand it, says that these reports must be final in form—not tentative, or unfinished reports—which is what I intended. I am perfectly willing to modify my amendment in accordance with that suggestion.

With this stated, I may say that, as a consequence of this morning's meeting, I propose a further amendment which I hope will be acceptable to the Senator from Mississippi. I have not previously prepared it, because it grew out of this morning's meeting of the committee with the representative of the Joint Chiefs. If it is acceptable, I hope the Senator will add it. If it is not, I will do the same as the Senator from Kentucky, and reserve it for further consideration. But if I may, I should like to read it for the information of the Senate. It is only one paragraph.

I would add, if it is acceptable to the Senator from Mississippi, the following language:

The Secretary of Defense shall also provide to the Committees on Armed Services of the Senate and the House of Representatives a copy of all bilateral contingency plans, signed by a representative of the Department of Defense and an official of a government of a foreign country, involving use of United States forces for the joint defense of that country.

I mean, of course, that foreign country. I thought this language might solve or help solve a problem such as that which presently confronts us. It speaks for itself. If the Senator is willing to accept, it I shall include it; if he is not, I shall reserve it and see if we can work out something mutually acceptable at a later date.

Mr. STENNIS. Mr. President, addressing myself to the last point of the proposal, this is a highly important matter. It demands the most careful analysis and consideration of the language, the implications, and the complications involved; so I very respectfully, at this time, could not seriously consider accepting it.

Mr. FULBRIGHT. If the Senator will yield, I do solicit his assistance, because I know he has great influence in the Department of Defense, in working this matter out. I very deeply regret to have a difference of view of this character with the Department of Defense. It involves exactly the same principle of the right of Congress—and now, of course, we are speaking of the Senate—to such information as "What is the status of the agreement?"

So, in the interim between now and the time when I shall offer it later, I hope the Senator from Mississippi will use his influence with the Department of Defense to prevail upon their making available to the committee the documents, with which he is familiar.

Mr. STENNIS. We will give the problem attention. It is a matter that the full committee certainly ought to have a chance to pass upon. It appears to me that it is broad enough to include any and all kinds of war plans that might be made, or near war plans, so those matters would have to be taken care of.

Mr. FULBRIGHT. I emphasize to the Senator that I did not mean that. This refers only to matters signed by the representative of a foreign country, in this case the Prime Minister of Thailand.

This is most unusual. I asked the Department, "Is there any precedent? Is there anything similar to it?" They were

unable to cite any other example of a similar nature.

Mr. STENNIS. Mr. President, I am not passing on the facts the Senator refers to. I have not seen it, and know nothing about the contents of it.

Back to the printed amendment, though, with the proviso on it, my proviso merely stated, "This shall apply only to reports, studies, and investigations which are already or substantially final and complete, and shall not be applicable to preliminary or tentative drafts," and so forth, "and working papers."

But going back, now, to the substance of amendment No. 111 as printed—

AMENDMENT NO. 111

Mr. FULBRIGHT. Mr. President, if the Senator will yield, I believe I overlooked calling up amendment No. 111.

I call up my amendment No. 111, and ask for its immediate consideration.

The PRESIDING OFFICER. The amendment will be stated.

The LEGISLATIVE CLERK. The Senator from Arkansas (Mr. FULBRIGHT) proposes an amendment (No. 111) as follows:

At the end of the bill add a new section as follows:

"SEC. 402. The Secretary of Defense shall, in response to any request made to him in writing by a committee of the Congress, promptly submit to such committee a copy of any report, study, or investigation requested by such committee if such report, study, or investigation was made in whole or in part with Department of Defense funds and was made by a person, organization, foundation, association, corporation, or other entity outside the Department of Defense."

Mr. STENNIS. Mr. President, I do not think this in any way would involve war plans, because it pertains only to work done by someone outside the Defense Department. But I raise this question: Why should it not apply to other entities outside the Defense Department, or any other department of the Government? If we just say "Defense Department," other departments could have these studies made, and pay for them themselves, and we would have no access to them. Perhaps we would not want it.

But the main point is this: Suppose the President of the United States has an outside organization prepare something for him, and it should be thus paid for? Suppose it is military, and very properly paid for by the Department of Defense? We could not afford to think of having such an amendment here, requiring him to give us the report. That is purely executive privilege.

Mr. FULBRIGHT. Well, of course there is no problem. The President has executive privilege.

Mr. STENNIS. I think the Senate should redraft this proposal, with the printed language modified to clearly exclude matters of executive privilege, because there is an instance that just came to mind a minute ago, that a President could very well have a department, have a study made, for himself and the department.

This executive privilege matter, I think, is a very serious thing. I have been through that. I am in sympathy with the intent of the Senator's amendment and

its general, primary purpose, but I really think, with all due respect, it should be withdrawn.

Mr. FULBRIGHT. Mr. President, I believe I am correct in saying that the President of the United States can at any time—and of course he has pleaded on many occasions—plead executive privilege. We have never contested that with him.

I do not see how that would be a real problem. He is not the one who is withholding this. In fact, one request has been made of the President. I do not recall any incident with which I have been associated in which it has occurred.

Mr. STENNIS. Mr. President, the amendment merely provides that any kind of study, report, or investigation paid for with the Department of Defense funds shall be subjected to the will of Congress.

I think that is too much. A redrafting of it would make certain exclusions.

Mr. FULBRIGHT. Mr. President, I understood that the Senator, with his proviso, would accept it.

Mr. STENNIS. The Senator is correct. I had indicated that. However, in the last few minutes I have become concerned about the matter of executive privilege.

Mr. FULBRIGHT. Mr. President, does the Senator wish for us to proceed with the debate and vote tonight on this matter, or does he wish it to go over until September?

I do not think it is essential to the survival of the Republic that we vote on the matter tonight. It is perfectly all right with me for it to go over.

I do not wish to give up on it. It involves a very critical problem that we are in the midst of, and particularly the one I refer to with regard to the amendment.

Mr. STENNIS. I think it has much merit.

Mr. FULBRIGHT. That is what I understood the Senator to think.

Mr. STENNIS. Mr. President, I think it should spell out clearly the matter about executive privilege. I do not see how we can do that tonight.

Mr. FULBRIGHT. Mr. President, I want the suggestion of the Senator with regard to spelling it out. It is not clear as to how to accomplish what he has in mind.

Under the circumstances, if I may do so with the agreement of the Senator, I will withdraw the amendment temporarily with the assurance that I shall re-submit it when we return in September. Is that agreeable with the Senator?

Mr. STENNIS. That is what I had expected the Senator to do.

Mr. FULBRIGHT. Mr. President, is that satisfactory with the Senator?

Mr. STENNIS. Entirely so.

Mr. FULBRIGHT. I will also try to incorporate it with the provision and get it to the Senator in advance.

Mr. STENNIS. That is entirely satisfactory.

Mr. FULBRIGHT. Mr. President, I withdraw the amendment.

The PRESIDING OFFICER. The amendment is withdrawn.

Mr. MANSFIELD. Mr. President, do I understand correctly that the amendment offered by the distinguished Senator from Arkansas has been withdrawn?

The PRESIDING OFFICER. The amendment has been withdrawn.

The Senator from Wisconsin is recognized.

Mr. PROXMIRE. Mr. President, I call up amendment No. 108 and ask that it be made the pending business.

The PRESIDING OFFICER. The amendment will be stated.

The legislative clerk proceeded to state the amendment.

Mr. PROXMIRE. Mr. President, I ask unanimous consent that the reading of the amendment be dispensed with and that the amendment be printed in the RECORD.

The PRESIDING OFFICER. Without objection, it is so ordered.

The amendment, ordered to be printed in the RECORD, reads as follows:

On page 2, line 7, strike out "3,965,700,000" and insert in lieu thereof "\$3,432,700,000".

At the end of the bill add a new section as follows:

"Sec. 402. (a) None of the funds authorized to be appropriated by this or any other Act may be expended for the procurement of any C-5A aircraft in addition to those aircraft for which a contract has been entered into prior to the date of enactment of this Act, and in no event shall more than a total of fifty-eight of such aircraft be purchased until after the Comptroller General of the United States has completed and submitted to the Congress a comprehensive study and investigation of the past and projected costs of such aircraft. In carrying out such study and investigation the Comptroller General of the United States shall among other things, consider—

"(1) whether the C-5A aircraft is an economic replacement for the C-141 and other aircraft in view of the great increase in both the procurement and operating costs of the C-5A aircraft;

"(2) whether the purchase of a fourth squadron of C-5A aircraft would add significantly to the deployment capability of the military forces of the United States;

"(3) whether the purchase of a fourth squadron of C-5A aircraft would make the United States liable for all contractor losses and termination costs if a total of six squadrons of such aircraft were not procured;

"(4) whether the purchase of a fourth squadron of the C-5A aircraft would make the United States liable for the cost of repairs and modifications necessary to correct the structural defect revealed in the recent failure of the C-5A wing;

"(5) the current cost estimates necessary to complete—

"(a) Run A of the C-5A aircraft, and
 "(b) the first twenty-three units of Run B of such aircraft, and

"(c) the remainder of Run B of such aircraft, including spares and operating expenses for such aircraft over the next ten years; and

"(6) the cost results to the United States of applying the repricing formula contained in the C-5A procurement contract on the first twenty-three units of Run B of such aircraft and on the complete Run B of such aircraft.

"(b) In carrying out the study and investigation authorized by subsection (a) of this section, the Comptroller General of the United States shall consult with the Office of Systems Analysis of the Department of Defense.

"(c) The Comptroller General of the United States shall submit the results of his

study and investigation, together with such recommendations as he deems appropriate, to the Congress not more than ninety days after the date of enactment of this Act."

Mr. PROXMIRE. Mr. President, this is the amendment that pertains to reducing funds for the C-5A.

I stated on the basis of the colloquy previously between the chairman of the committee and the distinguished majority leader that the amendment would not be voted on until we return in the fall, but that it would be the first order of business at that time.

Mr. MURPHY. Mr. President, will the Senator yield?

Mr. PROXMIRE. I yield.

Mr. MURPHY. Mr. President, the Senator from California wants to confirm his understanding that the pending business when we return after the recess has already been laid down.

Mr. MANSFIELD. The Senator from California is correct. The C-5A amendment presented by the distinguished Senator from Wisconsin (Mr. PROXMIRE) will be the pending business.

Mr. MURPHY. That amendment will be the pending business.

Mr. MANSFIELD. The Senator is correct.

Mr. MURPHY. It is not the desire of the Senator to pursue this matter tonight, but to carry over on it; is that correct?

Mr. PROXMIRE. I will make remarks on the amendment tomorrow, but I understand that there will be no vote on it until the fall.

Mr. MURPHY. I thank the Senator.

Mr. MANSFIELD. Mr. President, I understand that there will be no further rollcall votes tonight. In all candor, there will be none on tomorrow, either.

THE CALENDAR

Mr. MANSFIELD. Mr. President, I ask unanimous consent that the Senate proceed to the consideration of Calendar Nos. 349 to 358.

The PRESIDING OFFICER. Without objection, it is so ordered.

MISS JALILEH FARAH SALAMEH EL AHWAL

The bill (H.R. 1707) for the relief of Miss Jalileh Farah Salameh El Ahwal was considered, ordered to a third reading, read the third time, and passed.

MISS MARIA MOSIO

The bill (H.R. 5107) for the relief of Miss Maria Mosio was considered, ordered to a third reading, read the third time, and passed.

Mr. MANSFIELD. Mr. President, I ask unanimous consent to have printed in the RECORD an excerpt from the report (No. 91-357) explaining the purpose of the bill.

There being no objection, the excerpt was ordered to be printed in the RECORD, as follows:

PURPOSE OF THE BILL

The purpose of the bill is to facilitate the entry into the United States in an immedi-

ate relative status of the adopted daughter of a U.S. citizen.

BILL PASSED OVER

The bill (H.R. 3213) conferring jurisdiction upon the U.S. Court of Claims to hear, determine, and render judgment upon the claim of Solomon S. Levadi was announced as next in order.

Mr. MANSFIELD. Over.

The PRESIDING OFFICER. The bill will be passed over.

ANTHONY SMILKO

The bill (H.R. 8136) for the relief of Anthony Smilko was considered, ordered to a third reading, read the third time, and passed.

Mr. MANSFIELD. Mr. President, I ask unanimous consent to have printed in the RECORD an excerpt from the report (No. 91-360), explaining the purposes of the bill.

There being no objection, the excerpt was ordered to be printed in the RECORD, as follows:

PURPOSE

The purpose of the proposed legislation is to credit the annual leave account of Anthony Smilko, a General Services Administration employee, with 321 hours of annual leave earned by him during the period beginning April 1959, and ending December 1965, inclusive which, through administrative error, was not credited to his annual leave account.

STATEMENT

The proposed legislation passed the House of Representatives May 20, 1969. The facts of the case as stated in the accompanying House Report 91-204 are as follows:

In its report to the committee on a similar bill in the 90th Congress, the General Services Administration recommended the enactment of the bill with corrections which are now embodied in H.R. 8136.

Mr. Anthony Smilko served as an employee of the General Services Administration in the period from April 1959 through the end of 1965 and in that period he was credited with 20 days of annual leave per year. However, it was subsequently determined that in that period he was, in fact, entitled to 26 days per year. The error in crediting his annual leave occurred because the leave was computed on the basis of a service computation date of August 6, 1949, rather than the correct date of April 5, 1944, which should have been used for purposes of determining annual leave computations. In the period in question Mr. Smilko was credited with 1,117 annual leave hours when he should have been credited with 1,438 hours. As a result, he was not credited with 321 hours to which he was entitled. This is the figure carried in the bill H.R. 8136.

In its report to the committee, the General Services Administration observed that this error can only be adjusted by legislation and, accordingly, it is recommended that the bill providing for a credit in a separate leave account be made to Anthony Smilko by enactment of the bill. The General Services Administration further stated that the Civil Service Commission has indicated to the General Services Administration that they do not object to the enactment of private legislation in this instance, for the leave merely provides for a restoration of the leave for use only and not for the purpose of a lump-sum payment. It is also appropriate to note that, whereas the Civil Service Commission states that future cases ought to be covered by general legislation, such legisla-

tion would not normally grant retroactive relief in Mr. Smilko's case.

In agreement with the views of the Civil Service Commission, the General Services Administration, and the House of Representatives, the committee recommends the bill favorably.

BERNARD L. COULTER

The Senate proceeded to consider the bill (H.R. 4658) for the relief of Bernard L. Coulter which had been reported from the Committee on the Judiciary with an amendment on page 2, line 4, after the word "of" strike out "Cooke" and insert "Cook".

The amendment was agreed to.

The amendment was ordered to be engrossed and the bill to be read a third time.

The bill was read the third time, and passed.

Mr. MANSFIELD. Mr. President, I ask unanimous consent to have printed in the RECORD an excerpt from the report—No. 91-355—explaining the purposes of the bill.

There being no objection, the excerpt was ordered to be printed in the RECORD, as follows:

PURPOSE

The purpose of the proposed legislation, as amended, is to pay Richard S. Bell \$313.66 in settlement of his claims against the United States and Bernard L. Coulter arising out of an accident in Chicago, Ill., which occurred on December 17, 1961, when Bernard L. Coulter was operating a Government motor vehicle in the course of his duties as an employee of the U.S. Department of Justice. The payment provided for in this bill would also be in full satisfaction of a judgment and costs entered against the Government employee in a municipal court of the Circuit Court of Cook County, Ill., based upon that accident.

STATEMENT

In its favorable report on the bill, the Committee on the Judiciary of the House of Representatives set forth the facts of the case and its recommendations as follows:

The Department of Justice in a report to the committee on a similar bill dated July 22, 1968, stated that it had examined the circumstances of the case and had concluded that passage of the bill would be equitable and that the Department had no objection to its enactment.

The report of the Department of Justice notes that had the accident occurred after March 21, 1962, the effective date of the Drivers Act Amendment to the Federal Tort Claims Act, 28 U.S.C. 2679 (b-e), the Government would have been substituted for Bernard L. Coulter as the sole party defendant. The result of this substitution would have been that any judgment would have to have been paid by the Government. This amendment, which originated as a bill before this committee, was intended to protect employees such as Mr. Coulter in just such situations. Prior to the enactment of these provisions, this committee had granted relief such as that provided in H.R. 4653 in a number of cases. It might also be noted that had the other party elected to bring an action against the United States under the Federal Tort Claims Act, a recovery against the United States would have barred any action against the Government employee. This is provided in section 2676 of title 28, which provides as follows:

"§ 2676. Judgment as bar

"The judgment in an action under section 1346(b) of this title shall constitute a com-

plete bar to any action by the claimant by reason of the same subject matter, against the employee of the Government whose act or omission gave rise to the claim."

In connection with the consideration of this matter, the committee was supplied with additional facts concerning the accident. It appears that Mr. Coulter had stopped at a stop sign at the intersection of 45th and South Drexel Boulevard in Chicago, Ill., while traveling in an eastbound direction. On December 17, 1961, there was ice on the streets and after starting the car, the Government employee realized that due to the icy condition, he was unable to accelerate the car enough to clear the intersection and avoid approaching traffic. He, therefore, stopped the car after proceeding 4 to 7 feet into the intersection. The oncoming car continued to approach and struck the Government vehicle at that point.

The committee has carefully considered the matter in the light of the recommendation of the Department and the facts of the case and has determined that this is a proper subject for legislative relief. The policy considerations reflected in the provisions of the Tort Claims Act as noted by the Department of Justice further provide a basis for such relief. Accordingly, it is recommended that the bill, with the corrective amendment recommended by the Department, be considered favorably.

The committee believes that the bill is meritorious and recommends it favorably.

THE NAVAJO INDIAN IRRIGATION PROJECT

The Senate proceeded to consider the bill (S. 203) to amend the act of June 13, 1962 (76 Stat. 96), with respect to the Navajo Indian irrigation project which had been reported from the Committee on Interior and Insular Affairs, with an amendment, on page 2, after line 3, strike out:

"(d) The Secretary of the Interior shall compensate the persons whose grazing permits, licenses, or leases covering lands declared to be held in trust for the Navajo Tribe pursuant to section 3(a) of this Act are canceled after the date this subsection becomes effective. Such compensation shall be determined in accordance with the standards prescribed in the Act of July 9, 1942, as amended (43 U.S.C. 315g), and shall be paid from the moneys received by the United States from the Navajo Tribe for the full appraised value of such lands under the provisions of section 3(a)."

And, in lieu thereof, insert:

(d) Any permits, licenses, or leases that have been granted on lands acquired and declared to be held in trust for the Navajo Tribe pursuant to section 3(a) of this Act shall be canceled on the effective date of this Act, except that permits, licenses, or leases whose term has not expired at the time of cancellation thereof by this Act, shall continue in effect for the term of the permit, license, or lease under regulations for Indian lands until the land is required for irrigation purposes. When such lands are required for irrigation purposes, the permittee, licensee, or lessee shall be compensated by the Navajo Tribe proportionately for the value of developments or improvements made by such permittee, licensee, or lessee and which such permittee, licensee, or lessee was unable to utilize fully because of the cancellation of the permit, license, or lease, as determined by the Secretary of the Interior.

So as to make the bill read:

S. 203

Be it enacted by the Senate and House of Representatives of the United States of

AUTHORIZATION OF APPROPRIATIONS FOR FISCAL YEAR 1970 FOR MILITARY PROCUREMENT, RESEARCH AND DEVELOPMENT, AND FOR THE CONSTRUCTION OF MISSILE TEST FACILITIES AT KWAJALEIN MISSILE RANGE, AND RESERVE COMPONENT STRENGTH—AMENDMENT

AMENDMENT NO. 136

Mr. MONDALE. Mr. President, on behalf of myself and Senator Case, I am submitting an amendment to the military authorization bill, now before the Senate.

This amendment withholds the \$377.1 million authorized for laying the keel of the nuclear attack carrier CVAN-69, pending a full study and investigation by the Comptroller General of the justification for building an additional attack carrier.

The United States has 15 attack carriers, each requiring a task force of escorts and logistical ships, and it has maintained the same number—with few exceptions—since the end of World War II. No adequate rationale for a force level of this size has ever been presented by the Navy. That 15 is an arbitrary number is indicated by the fact that the United States has always had at least 15 capital ships since it was allotted this quota under the Washington Naval Disarmament Treaty of 1921. When the attack carrier replaced the battleship as the capital ship, the Navy switched from 15 battleships to 15 carriers.

With the advent of Minuteman and Polaris missiles, the attack carrier is no longer part of our strategic nuclear forces; its primary mission is to provide tactical air power. The use of 15 attack carrier task forces to carry out this mission is simply wasteful and inefficient.

First. The assignment of nine carrier task forces in the Western Pacific and six in the Mediterranean overlaps and duplicates U.S. land-based tactical air capacity.

The United States maintains some 138 squadrons of tactical fighters and bombers in active forces on land bases at home and abroad, including 3,350 active aircraft and 23 wings.

This capability for land-based tactical air power is impressive, especially in light of the fact that with modern mid-air refueling techniques, the U.S.-based tactical air forces can be operational in a very short period of time.

The geographic spread of overseas air bases operated by or available to the United States is such as to sharply reduce the need for continually maintaining attack carriers "on station" in the Mediterranean and the Western Pacific.

The Air Force is developing a Bare Base Support Program, which will enable the United States to convert 1,000 available overseas civilian runways into military airfields with the use of "pre-positioned" kits within less than 3 days.

Second. A carrier base is far more expensive than a land base.

The procurement cost of one nuclear carrier task force—one carrier and four destroyers—is a minimum of \$1.4 billion, and it can run much higher. But to keep one such task force "on station" in nor-

mal times involves two complete task forces in reserve, thereby making the investment cost of placing one "on station" three times \$1.4 billion or \$4.2 billion.

To build an airbase in the Pacific costs \$53 million; a civilian runway can be operational for tactical air with a bare base set for approximately \$36 million.

Third. Because of their high degree of vulnerability to enemy attacks, carriers are far less effective than land bases.

In recognition of the carrier's vulnerability to attacks by submarines, aircraft, ship-to-ship and air-launched missiles, one-half of the cost of a carrier task force is for carrier defense.

About 25 percent of a carrier's aircraft are held back for defensive purposes—during the Korean war, 23 percent of the total combat sorties flown from carriers were defensive, in contrast to 2.7 percent flown from land bases.

Because of its tremendous investment in a carrier task force, the Navy is slow to commit the carrier to combat; once committed the carrier cannot effectively launch air attacks when attempting to evade enemy attack.

Rapid advances in missile technology have produced the STYX and other more advanced antiship missiles, making the carrier's position untenable in any conflict with a sophisticated enemy.

Fourth. Instead of reducing its carrier fleet, thereby accepting the realities of present and future defense needs, the Navy has continued to augment this fleet.

The carriers which have joined the fleet since the mid-1950's—eight *Forrestal* class, one *Enterprise*, and the CVAN-68—the nuclear carrier which will enter the fleet in 1972—are almost double the size of the older carriers, are equipped with the most modern aircraft, and, therefore, have far greater capability for tactical air than the oldest carriers which they replace. The Navy has stated that the nuclear carrier air wing is tactically more than twice as effective as that of the World War II carriers.

Since the Navy has followed a "one for one" replacement policy in the past, the actual capacity of the carrier fleet in terms of providing tactical air power is far greater than 15 carrier force level would imply.

There is no reason why the Navy cannot reduce the number of attack carriers by retiring two of the older carriers as each of the modern carriers joins the fleet.

Since the large, modern carriers are only effective in very limited conflicts, the Navy should use some of its antisubmarine carriers, CVS, for attack purposes; one of these carriers is now being used in Vietnam as an attack carrier.

Fifth. The fact that our adversaries and potential adversaries do not have attack carriers further weakens the justification for the present size of the U.S. carrier fleet.

Neither the Soviet Union or China has built a single attack carrier, and neither plans to do so. The British and the French are the only other nations with an attack carrier in their fleet, and the British have decided to phase out their carriers.

Whether the U.S. goal is military par-

ity or superiority vis-a-vis the navies of other nations, it is obvious that we could substantially reduce our carrier force level without any danger to national security.

In addition to these arguments, there are serious foreign policy implications to the "show of force" role of the carrier in support of U.S. foreign policy commitments. It is official naval doctrine that one of the main advantages of carrier air power is that it can be employed unilaterally, without involving third parties and without invoking treaties, agreements, or overflight rights. However, except where the United States itself is threatened, it is highly questionable that we should be prepared to intervene in conflicts unilaterally and without making political arrangements.

If air power is needed to protect our interests, naval doctrine ignores the availability of land bases in most areas of the world. If a "show of force" in the form of U.S. naval presence is needed, older attack carriers, antisubmarine carriers, or other types of ships will be adequate.

In the face of these arguments, it would be fiscally irresponsible to authorize an additional carrier at this time until there is a full discussion of the role of the attack carrier and the necessary force level needed to carry out this role. That is why our amendment calls for a study by the Comptroller General, and anticipates a full congressional debate before continuing to spend billions of dollars on this highly expensive and often ineffective means of providing tactical air power.

I ask unanimous consent that the text of this amendment be printed in the RECORD at this point.

The PRESIDING OFFICER. The amendment will be received and printed, and will lie on the table; and, without objection, the amendment will be printed in the RECORD.

The amendment (No. 136) is as follows:

On page 2, line 16, strike out "2,568,200,000;" and insert in lieu thereof "2,191,100,000;"

At the end of the bill add a new section as follows:

"Sec. 402. None of the funds authorized to be appropriated by this or any other Act may be expended in connection with the production or procurement of the nuclear aircraft carrier designated as CVAN-69; and no funds may be appropriated for any such purpose until after the Comptroller General of the United States has completed and submitted to the Congress a comprehensive study and investigation of the past and projected costs and effectiveness of attack aircraft carriers and their task forces and a thorough review of the considerations which went into the decision to maintain the present number of attack carriers. In carrying out such study and investigation the Comptroller General of the United States shall, among other things, consider—

"1. What are the primary limited war missions of the attack carrier; what role, if any, does it have in strategic nuclear planning;

"2. To what extent and in what way is the force-level of on-station and back-up carriers related to potential targets and the number of sorties needed to destroy these targets;

"3. What is the justification for maintaining on continual deployment 2 carriers in the

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Mediterranean and from 3 to 5 in the West-ern Pacific;

"4. What is the over-all attack carrier force level needed to carry out these primary missions;

"5. Does the present 'one for one' replacement policy for these carriers have the effect of maintaining or increasing this force level, in light of the fact that the newer carriers and their aircraft are more expensive and have far more capability than the oldest carriers which they are now replacing;

"6. Would a policy of replacing two of the oldest carriers with one modern carrier maintain a constant force level;

"7. How many, if any, attack carriers and carrier task forces are needed to back-up a carrier task force 'on-the-line';

"8. What efficiencies, such as the Polaris 'blue and gold' crew concept, can be utilized to increase the time in which a carrier can stay 'on-the-line';

"9. What type of military threats are faced by the attack carrier; what proportion of the costs of a carrier task force are allocated to carrier defense; what is the estimated effectiveness of carrier defense against various types and levels of threats;

"10. To what extent does the carrier's vulnerability affect its capacity to carry out its missions; what are the plausible contingencies in which carriers may be committed;

"11. What type of resources should be devoted to carrier defense, considering the range of threats, the costs and effectiveness of the defense, and the plausible contingencies in which a carrier can be effectively used;

"12. To what extent can land-based tactical air power substitute for attack carriers; to what extent should the role of the attack carrier be restricted to the initial stages of a conflict;

"13. What are the comparative systems costs for land-based and sea-based tactical air power, and what is their comparative cost effectiveness;

"14. How is the attack carrier being used in support of American foreign policy; if there is a need for a 'show of force' in support of foreign policy commitments, can this need be met by smaller carriers or other types of ships?

"The Comptroller General of the United States shall submit the results of his study and investigation, together with such recommendations as he deems appropriate, to the Congress not later than June 30, 1970."

GENERAL REVISION OF THE COPY-RIGHT LAW, TITLE 17 OF THE UNITED STATES CODE—AMENDMENT

AMENDMENT NO. 137

Mr. HART. Mr. President, for the last 60 years there has been no change in the flat fee composers and authors of musical works have received, under the Copyright Act of 1909, for the use of their creations by recording companies. The fee, called a "mechanical royalty," is 2 cents for each selection recorded.

Although vast changes have occurred since 1909 in the price of records, the cost of living and technology in the record industry, the composer and author still get the same 2 cents.

The copyright revision bill S. 543, recognized the inequity of this and would increase the mechanical royalty to 2½ cents per selection. This is inequitable since it does not take into consideration changes in the prices of records by record manufacturers. It would impose on Congress a continuing responsibility of fixing royalty payments.

This burden on Congress in order to do equity to authors and composers can be removed by substituting for a flat cent rate royalty in S. 543 a flexible royalty, namely a percent of the retail price of the record suggested by the manufacturer. This would permit authors and composers to share in the increased prices at which records have sold since 1909, for example the replacement of \$3.98 records by \$4.98 records and by stereo tape cartridges and cassettes selling for \$6.98 and \$7.98.

Mr. President. I am submitting now an amendment to section 115 of S. 543 which would serve the purpose I have stated.

The PRESIDING OFFICER. The amendment will be received and printed, and will be appropriately referred.

The amendment was referred to the Committee on the Judiciary.

NOTICE CONCERNING NOMINATION BEFORE THE COMMITTEE ON THE JUDICIARY

Mr. EASTLAND. Mr. President, the following nominations have been referred to and are now pending before the Committee on the Judiciary:

Peter Mills, of Maine, to be U.S. attorney for the district of Maine for the term of 4 years, vice Lloyd P. LaFountain.

John H. deWinter, of Maine, to be U.S. marshal for the district of Maine for the term of 4 years, vice Adam J. Walsh.

On behalf of the Committee on the Judiciary, notice is hereby given to all persons interested in these nominations to file with the committee, in writing on or before Tuesday, August 19, 1969, any representations or objections they may wish to present concerning the above nominations, with a further statement whether it is their intention to appear at any hearing which may be scheduled.

NOTICE CONCERNING NOMINATION BEFORE THE COMMITTEE ON THE JUDICIARY

Mr. EASTLAND. Mr. President, the following nomination has been referred to and is now pending before the Committee on the Judiciary:

Wayman G. Sherrer, of Alabama, to be U.S. attorney for the northern district of Alabama for the term of 4 years, vice Macon L. Weaver.

On behalf of the Committee on the Judiciary, notice is hereby given to all persons interested in this nomination to file with the committee, in writing, on or before Tuesday, August 19, 1969, any representations or objections they may wish to present concerning the above nomination, with a further statement whether it is their intention to appear at any hearing which may be scheduled.

NOTICE CONCERNING NOMINATION BEFORE THE COMMITTEE ON THE JUDICIARY

Mr. EASTLAND. Mr. President, the following nomination has been referred to and is now pending before the Committee on the Judiciary:

Charles S. Guy, of Pennsylvania, to be U.S. marshal for the eastern district of Pennsylvania for the term of 4 years, vice James F. Delaney.

On behalf of the Committee on the Judiciary, notice is hereby given to all persons interested in this nomination to file with the committee, in writing, on or before Tuesday, August 19, 1969, any representations or objections they may wish to present concerning the above nomination, with a further statement whether it is their intention to appear at any hearing which may be scheduled.

"SLUG" SULLIVAN, FOSTER GRANDPARENT

Mr. MANSFIELD. Mr. President, the VISTA voluntary program has been active in many areas of the State of Montana, and perhaps one of the most popular has been the Foster Grandparent program. This program is designed to keep our senior citizens active in working with the local schools and hospitals.

One of my oldest and closest associates in Montana, John L. "Slug" Sullivan, has become very active and one of the leaders in the Foster Grandparent program in Helena. "Slug" Sullivan is 78 years of age and has found his latest endeavor most worthwhile and satisfying.

A recent feature story published in the Independent Record discusses the program at some length and gives an account of John Sullivan's activities as a Foster Grandparent. This group of elder citizens help young people to overcome feelings of inferiority and to develop self-assurance and understanding.

"Slug" was one of my earliest political mentors in Butte, Mont.

I found the article written by Robert Sibley, a VISTA volunteer, most interesting and ask unanimous consent that it be printed in the RECORD.

There being no objection, the article was ordered to be printed in the RECORD, as follows:

ONCE A FIGHTER, NOW A LOVING FOSTER GRANDPARENT

(By Robert Sibley)

(NOTE.—Bob Sibley, 25, a VISTA volunteer from Washington, D.C., is using his master's degree in journalism to aid the VISTA program serving elderly persons in Montana. Here he describes the Foster Grandparents segment of the program.)

When Mike Mansfield was first deciding to run for Congress, he asked his old friend "Slug" Sullivan what he thought.

"Well, I think you don't know too many people right now," Slug answered. "But after they get to know you, they'll like you. You should run this first time just to get advertising for yourself, and next time you'll probably make it."

Mike Mansfield was defeated in his first race for Congress, but just as Slug predicted, he won the second time he ran and has been winning ever since.

John L. "Slug" Sullivan has a lot of moments like this that he can recall as though they happened just a few hours ago, even though they may have taken place more than 40 years back.

"CLEAN LIFE"

Tall and healthy looking with an easy-going smile, Slug's appearance belies his 78 years; nevertheless, that's how old he is.

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should also be designed to deal with the consequences of new defense spending as well as the curtailment of spending. In short, I am suggesting that such a high-level Commission should be designed to deal not only with the economic problems associated with a reduction in defense spending but also with all phases of the relationship between the ongoing military-industrial complex and the economy. In regards to the general question of conversion to a peacetime economy, I was pleased to hear President Nixon state in his inaugural address:

We shall plan now for the day when our wealth can be transferred from the destruction of war abroad to the urgent needs of our people at home.

Following up on this pledge, the President has asked a subcommittee of the Council for Economic Policy chaired by Dr. Herbert Stein, to initiate policy planning for converting our economy to a peacetime basis.

Mr. President, over the past few months the military-industrial complex, its meaning and its dangers, has been the subject of far ranging, searching discussion and analysis. On the whole I think this has been healthy. I hope that the debate will continue. However, I also believe that we have reached the stage where we should do more than talk and debate. We should begin to act. And in this respect there are a number of measures which the Congress could adopt in the near future. I have pointed to several such possible measures today. I again urge their favorable consideration by the Senate.

And in closing I would return to President Eisenhower's message. In citing the dangers of the military-industrial complex, President Eisenhower also stressed the fact that the complex was the product of necessity. Thus we cannot control these dangers by destroying the complex as some would seem to suggest. The military-industrial complex is a fact of modern American life. No amount of wishing will make it go away. At the same time all must recognize that although there are dangers inherent to the military-industrial complex these dangers are not inherently uncontrollable. In other words we must keep the military-industrial complex in a proper perspective. We must see both its essentiality and also its potential for abuse. We must have it, but we must control it. We must be vigorous in our efforts to see to it that it is a servant of peace and prosperity rather than the servant of war and destruction.

Mr. DOLE. Mr. President, will the Senator yield?

Mr. PEARSON. I am very pleased to yield to my colleague from Kansas.

Mr. DOLE. Mr. President, first of all, I commend my colleague from Kansas for a general review of the so-called military-industrial complex.

I feel that most of us will agree with many things said. I wish to add that we are fortunate in this administration to have a man like Melvin Laird as Secretary of Defense. I know of no one who has gone to the Cabinet level so well equipped.

As my colleague knows, Mr. Laird for 14 years was a member of the House Defense Appropriations Subcommittee.

Mr. Laird was a prober. He was a critic. He was a questioner. But, above all, he understood the Defense Department. He understood its responsibility, he tried to make the Department responsive and responsible when he could do so.

At the outset of this administration, both Secretary Laird and Under Secretary Packard had expressed the philosophy that we should take a close look at all of the programs and reexamine our military requirements and validate the need for any new major weapons system.

I would hope my colleague would agree that in the span of 6, 7, or 8 months, progress has been made by Secretary Laird. I would cite only a few examples of responsible progress under Mr. Laird.

First, Mr. Laird has established a Defense Systems Acquisition Review Council within the office of the Secretary of Defense to advise the Secretary of the current status and the readiness of each major system to proceed to the next phase of efforts in its life cycle.

Second, and I think this very important, there has been the appointment of a blue ribbon defense panel by the Secretary. This is a matter that he pursued with vigor while a Member of the House of Representatives. A blue ribbon defense panel has been appointed to reappraise the Defense Establishment. There has been the cancellation of the manned orbital laboratory. There has been the termination of the Cheyenne helicopter program.

There have been new, frank, and candid reports to both the Senate and House Armed Services Committees on major weapons acquisitions.

Mr. Laird has attempted to provide Congress with more information. He has done an excellent job getting facts so that the Senate and the House can make valid adjustments. He has also endorsed as recently as July 31 the establishment of a Commission on Government Procurement. He views the Commission as another positive step in reporting on the methods of military procurement.

There have been numerous improvements in the management of weapons acquisition process.

As recently as Saturday we find the Secretary concurring in the judgment of the Senate concerning chemical and biological weapons. As an addition to the remarks of my colleague from Kansas, I want the record to show that we have a Secretary of Defense who is just as dedicated as anyone in the Senate or anyone in Congress in saving the taxpayers' money, and just as concerned about any so-called military-industrial complex.

The PRESIDING OFFICER (Mr. GRAVEL in the chair). Under the prior unanimous-consent agreement, the Senate will now proceed to other business.

Mr. PEARSON. Mr. President, I ask unanimous consent that I may continue for an additional 5 minutes.

Mr. BYRD of West Virginia. Mr. President, I am constrained to object. This unanimous-consent request was made

last week, as I understand, and Senators were put on notice that debate on the pending McIntyre amendment would be controlled and would last for 1 hour after the unfinished business was laid down.

Mr. PEARSON. Mr. President, I will withdraw the request. I do appreciate the situation of the leadership in this respect, and they were very gracious to give me time this morning. I can respond at another time.

ABM

AUTHORIZATION OF APPROPRIATIONS FOR FISCAL YEAR 1970 FOR MILITARY PROCUREMENT, RESEARCH AND DEVELOPMENT, AND FOR THE CONSTRUCTION OF MISSILE TEST FACILITIES AT KWAJALEIN MISSILE RANGE, AND RESERVE COMPONENT STRENGTH

The PRESIDING OFFICER. Under the previous order, the Chair lays before the Senate the unfinished business, which will be stated.

The ASSISTANT LEGISLATIVE CLERK. A bill (S. 2546) to authorize appropriations during the fiscal year 1970 for procurement of aircraft, missiles, naval vessels, and tracked combat vehicles, and to authorize the construction of test facilities at Kwajalein Missile Range, and to prescribe the authorized personnel strength of the Selected Reserve of each Reserve component of the Armed Forces and for other purposes.

The PRESIDING OFFICER. The question is on agreeing to the amendment of the Senator from New Hampshire.

Mr. GOLDWATER. Mr. President, will the Senator yield for a question?

Mr. BYRD of West Virginia. I yield 1 minute to the Senator.

Mr. GOLDWATER. Mr. President, this is getting to be a rather unusual procedure, to request unanimous consent for a specific time for a speech and then nobody can make a rebuttal.

The Senator made an excellent speech. I do not agree with it in its entirety. He used President Eisenhower's quotations but he did not use enough of them. If I have to wait until tomorrow or September, the point I want to make will have lost its effectiveness.

I think I am going to start opposing all unanimous-consent requests for this type of presentation.

Mr. BYRD of West Virginia. I thank the Senator.

Mr. President, I ask unanimous consent that a brief quorum call may be had at this time.

Mr. STENNIS. Mr. President, will the Senator withhold his request for a quorum call?

What was the unanimous-consent request? Did the Senator make a unanimous-consent request about limitation?

Mr. BYRD of West Virginia. No. That was made last week.

Mr. STENNIS. I thank the Senator.

Mr. BYRD of West Virginia. Mr. President, I ask unanimous consent that there be a brief quorum call, the time to be equally divided between both sides.

The PRESIDING OFFICER. Without objection, it is so ordered.

Mr. BYRD of West Virginia. Mr. President, I suggest the absence of a quorum.

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The PRESIDING OFFICER. The clerk will call the roll.

The assistant legislative clerk proceeded to call the roll.

Mr. BYRD of West Virginia. Mr. President, I ask unanimous consent that the order for the quorum call be rescinded.

The PRESIDING OFFICER. Without objection, it is so ordered.

Mr. BYRD of West Virginia. Mr. President, I ask unanimous consent that, at the conclusion of the vote on the pending amendment, the able chairman of the Committee on Armed Services be recognized.

The PRESIDING OFFICER. Without objection, it is so ordered.

Who yields time?

Mr. NELSON. Mr. President, how much time does the Senator desire?

Mr. MCINTYRE. Ten minutes or so.

Mr. NELSON. I yield 10 minutes to the Senator from New Hampshire.

CHEMICAL AND BIOLOGICAL WARFARE

Mr. MCINTYRE. Mr. President, the Senate today will consider amendment No. 131, which I introduced last Friday together with Senators YARBOROUGH, PROXMIER, HARTKE, PELL, NELSON, MONDALE, STEVENS, GOODELL, and HUGHES.

Had more time been available after the introduction, I am certain many other Senators would have joined in its sponsorship.

On an associated point, Mr. President, may I say that I was particularly pleased with Defense Secretary Melvin Laird's statement Saturday. This statement, expressing his concurrence with the goals of this amendment, reflects an admirable understanding on the part of the Secretary of the need for improved management and control of chemical and biological warfare programs.

Secretary Laird also deserves commendation for recommending a National Security Council study of these matters, and President Nixon deserves much praise for ordering the study.

Most helpful, too, in the present examination of CBW programs has been the consistent, progressive leadership of the distinguished chairman of the Committee on Armed Services, the Senator from Mississippi (Mr. STENNIS).

We are considering today a coordinated effort to deal with a highly complex and unpopular part of our defense structure in such a way as to achieve the kind of congressional control and national understanding we feel is needed, while, at the same time, avoiding involvement of the Senate in the lengthy procedure which would be required were we to take up a number of separate amendments.

Moreover, by bringing together in a single package a number of proposals involving chemical and biological warfare programs, our consideration can be all the more comprehensive.

The amendment introduced Friday did not include a section covering one particular area. The proposal dealing with this particular area was originally put forth by the distinguished Senator from Indiana (Mr. HARTKE). I am happy to say that since Friday we have reached agreement on the language for this section, a section relating to the subject of

so-called "back-door financing" of CBW programs.

Mr. President, I send this section to the desk and ask unanimous consent to have it added to amendment No. 131, together with technical changes that have been made to the original amendment, No. 131; and I ask unanimous consent to have it printed at this point in the RECORD.

The PRESIDING OFFICER. Is there objection? The Chair hears none, and it is so ordered.

The modification is as follows:

At the end of amendment No. 131 add a new subsection as follows:

"(g) (1) Except as provided in subsection (g) (2) of this section, no funds authorized to be appropriated by this, or any other later enacted Act may be expended for research, development, test, evaluation, or procurement of any chemical or biological weapon, including any such weapon used for incapacitation, defoliation, or other military operations.

"(g) (2) The prohibition contained in subsection (g) (1) of this section shall not apply with respect to funds authorized to be appropriated by this Act."

On page 4, line 3, insert "will" between "agents" and "be".

On page 4, line 6, change "subsections (e) (1)" to "subsections (d) (1)".

On page 4, line 7, change "(e) (2)" to "(d) (2)".

On page 4, line 21, change "or an other" to "or any other".

On page 5, line 2, insert "of the Public Health Service" after "Surgeon General".

On page 5, line 3, delete "President" and insert "Secretary of Defense".

On page 4, line 22, insert "or any" after "lethal chemical agents."

Mr. MCINTYRE. Mr. President, a word must be said at this point about the excellent work done by each of the Senators who have contributed sections of this amendment. Their individual research, the honing of their proposals to a remarkable precision of language, and the spirit of cooperation exhibited in their willingness to consolidate their proposals into a single amendment is in the finest tradition of this great body.

As we take up consideration of the amendment, let us keep in mind that already included in the overall legislation before us is a \$16 million reduction in the Defense Department's budget for research and development in lethal offensive chemical and biological warfare. This reduction was recommended by my Subcommittee on Research and Development and accepted by the full Armed Services Committee.

I raise this thought so that, as we take up consideration of the amendment, we have a comprehensive picture of the action we can take in regard to CBW programs.

Now let me identify each of the sections of this amendment. I will not go into detail because I know other Members intend to do that.

The first section (402) (a), also developed by our able colleague the Senator from Indiana (Mr. HARTKE), calls for a full and complete semiannual report by the Secretary of Defense to the Congress setting forth in detail the total CBW research, development, test evaluation, and procurement program.

This, of course, would provide Con-

gress with the kind of detailed information Congress and the public need in order to understand the programs and to determine future direction.

The second section (402) (b), developed by the able Senator from Wisconsin (Mr. NELSON), and the able Senator from New York (Mr. GOODELL), provides that no funds can be used for the procurement of any delivery system which is specifically designed to disseminate lethal agents.

This section, Mr. President, makes clear our opposition to the use of lethal CBW agents as offensive weapons and prohibits expenditure of funds for any device designed to deliver these agents.

The third section, (402) (c), expresses the concern of many about the deployment or storage of lethal agents and microorganisms outside the United States. Recent accounts of unfortunate incidents involving such deployment or storage have prompted new congressional interest in what we may be doing in this area of CBW activity.

This section will provide for a full range of reports to the interested Congressional committees, and will also insure consultation with foreign nations before we deploy CBW agents on their soil.

Mr. President, I believe that in general we accomplish the substance of this proposal, but the section makes unmistakably clear Congress' interest and desires.

This section is another developed by the Senator from Wisconsin, (Mr. NELSON) and the Senator from New York (Mr. GOODELL).

The next section, (402) (d), also proposed by the Senator from Indiana (Mr. HARTKE), relates to recent fears of many about the possible dangers inherent in the rail shipment of lethal chemical and biological agents.

Basically, this section covers three areas. It requires the Surgeon General of the Public Health Service to assure that shipment will not be detrimental to the public health.

It would give advance notice of such shipments to the Congress and civilian agencies.

And finally, it will bring about the detoxification of lethal agents before they are shipped off for disposal. Again, some of this already is being done, but this section makes clear the Congress interest and intent.

I would like to say at this point that while I am completely in agreement with this section I think we should always keep before us the fact that it is not the chemical and biological warfare service alone that transports biological agents around the country, nor is this service the principal shipper of such agents. The National Institute of Health and other public and private health agencies transport an enormous amount of such agents.

We are not dealing with such agencies in this particular legislation, to be true, but we may want to consider this in other legislation. I think a study would show that the amount of potentially dangerous biological agents shipped by CBW is relatively small when measured against the total shipment by all agencies.

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The able Senator from Rhode Island (Mr. PELL), proposed the next section 402(e). While the previous section dealt with transportation of lethal chemical and biological agents within the United States, the section of the Senator from Rhode Island, deals with transportation of such agents outside the United States.

It also includes the matter of testing, development, storage and disposal of such agents outside the United States, and it asks for the full consideration of U.S. international responsibilities when lethal CBW agents are moved, tested, disposed of, or developed in foreign areas.

This section places certain responsibilities in the hands of the Secretary of State to assure that we are not likely to violate international law.

The succeeding section 402(f), an additional section developed by the Senator from Wisconsin (Mr. NELSON) and the Senator from New York (Mr. GOODELL) is, perhaps, one of the most significant in the proposal.

I am sure we have all been concerned about incidents of the past several years where outdoor testing of lethal agents and micro-organisms have jeopardized both animal and human life.

This particular section of the amendment would eliminate open air testing except in those instances when the Secretary of Defense, under the direction of the President of the United States, would declare that our national security required such testing, and the Surgeon General of the Public Health Service determined that the public's health would not be endangered.

Furthermore, this section would require that appropriate committees of the Congress would be informed of all proposed open air tests at least 30 days prior to the date on which it is proposed to hold them.

The final section of the amendment, added by unanimous consent today, would become section 402(g) (1) and (2). This section, proposed by the Senator from Indiana (Mr. HARTKE) is another step in congressional control over funds that can be used in CBW efforts.

It would restrict the reprogramming of funds from other programs into CBW. I am not aware that so-called backdoor financing of CBW is presently taking place, Mr. President, but with the adoption of this section we would assure that it does not.

In summary, this amendment will serve the obvious public need to better know and understand our chemical and biological programs.

It will provide in-depth information to the Congress in its continuing consideration of this broad, complex, and frequently distasteful matter.

And it comes directly to grips with those incidents that have so disturbed the Nation recently—the severe illness of two dozen CBW workers in Okinawa, the death of the sheep at Dugway, Utah, and the dangers inherent in moving deadly CBW agents across the country.

I conclude, Mr. President, by pledging my determination to make the chemical and biological warfare program a prin-

cipal item on the agenda of the Research and Development Subcommittee of the Armed Services Committee during the coming year.

We will want to examine in detail every facet of the program.

We will be briefed by a full range of scientists and other experts and receive pertinent material from them.

We will want to hear from other Members of the Senate who have a particular interest in CBW.

And we will want to survey the effects of the actions proposed in this amendment and in other sections of the current authorization bill.

In short, when we return next year to consider the 1971 version of the authorization bill I sincerely believe that the recommendations we will make will enable the Senate to meet problems that may still exist in this program.

In the interim, Mr. President, I strongly urge the adoption of this amendment.

The PRESIDING OFFICER. Who yields time?

Mr. STENNIS. Mr. President, under the agreement, who controls time?

The PRESIDING OFFICER. The minority leader and the majority leader or their designee.

Mr. NELSON. Mr. President, how much time does the Senator from New York desire?

Mr. GOODELL. Mr. President, will the Senator yield to me for 10 minutes.

Mr. NELSON. I yield 10 minutes to the Senator from New York.

Mr. GOODELL. Mr. President, before I begin my formal remarks I wish to offer my commendations to the distinguished Senator from New Hampshire.

I would like to ask the Senator from New Hampshire a question to make sure a technical correction has been made in the amendment. I refer to page 4, line 22, of amendment 131.

Mr. McINTYRE. Is the Senator referring to the technical amendments I offered this morning to the original amendment?

Mr. GOODELL. Yes. I refer to that point where reference is made to "lethal chemical agents, disease-producing biological micro-organisms, or biological toxins." It was my understanding there might be some misinterpretation here because of the words which should read "or any other."

Mr. McINTYRE. Does the Senator refer to page 4, line 22, where the amendment reads, "None of the funds authorized to be appropriated by this or any other act shall be used for the open-air testing of lethal chemical agents, disease-producing biological micro-organisms, or biological toxins"?

What is the question?

Mr. GOODELL. That is the way the amendment reads?

Mr. McINTYRE. That is the way the amendment reads at the present time.

Mr. GOODELL. I simply wanted to clarify that point. I think it is a crucial point. We are requiring this procedure of lethal chemical agents that are tested and all disease-producing biological microorganisms, or biological toxins. Is that correct?

Mr. McINTYRE. The Senator is correct.

Mr. GOODELL. Mr. President, the omnibus anti-CBW amendment we are presenting here today represents an important break with secrecy over chemical and biological weapons. It is a modest measure to check the vast destruction potential of our CBW arsenal. Still, it is a significant measure.

It is significant for it opens up the secrecy which has cloaked the spiraling gas and germ weapons program. It checks the weapons spiral. It minimizes international repercussions over CBW. It provides for public health and safety by guarding against the perils in transport, storage, and disposal of CBW. It puts up a barrier to future outdoor testing of CBW. It encourages congressional review.

The distinguished chairman of the Committee on Armed Services has called this omnibus anti-CBW amendment a solid start on the problem, and he is quite certainly right.

I should like to commend Senator STENNIS and the members of the Armed Services Committee for taking the first major step in controlling the CBW program. The committee cut \$16 million from the Pentagon's request for funds earmarked for research and development on offensive lethal chemical and biological weapons. This significant step has set in motion other steps to control the CBW program.

I would like to start today by considering open-air testing of deadly gas and disease-producing germs. It was with great reluctance that I agreed to modify the "flat ban" amendment originally introduced by the Senator from Wisconsin (Mr. NELSON) and myself. A flat ban on outdoor CBW testing would eliminate the threat that a test cloud of deadly gas and germs might drift from the test site to our cities and towns. The moratorium postpones but does not eliminate this threat. We felt we could make a significant step forward at this time.

On the assurance of the Senator from New Hampshire that his subcommittee was going to look intensively at this entire program we have great confidence he will do so and that we can move forward in the future with greater restrictions consistent with national security.

There are pluses and minuses in the test ban revision. The minus side leaves the option open for future tests. The plus side puts congressional control over testing. The burden of proof is on the Pentagon if any further tests are to take place due to national security. I believe there is agreement here today that no longer will these tests take place on a routine basis. There must be a high-level determination that such tests are directly involved with the national security. That determination must be made by the Secretary of Defense under guidelines prescribed by the President and must be agreed to by the Surgeon General with reference to the procedures to be followed.

It is my view that it should be unnecessary in the future for us to engage in any outdoor testing, but we do leave the door open for the very unusual—

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and I emphasize very unusual—situation that might arise in the national security.

While we are studying this problem in the next year, such tests might take place under very careful regulations and safeguards. The burden of assurance that no health hazard will result from any test rests with the U.S. Surgeon General. In each case, Congress will have the opportunity for hard questioning. On balance, then, the moratorium is acceptable at this beginning stage of CBW review.

If the moratorium is to be meaningful, we simply must be guided by the principle that the security of this Nation begins with the health and safety of our people. Pentagon requests based on national security simply must be viewed in this context. If not, the moratorium on outdoor testing would be relatively meaningless. If CBW tests are requested, every effort must be made to confine them to the laboratory. This point cannot be emphasized enough. We all know the example at Dugway Proving Grounds in Utah where thousands of sheep were killed. Had the wind shifted farther a large city in the United States would have been engulfed by deadly nerve gas, VX—odorless and colorless. What a disaster that would have been. We must not engage in such tests without the highest priority given the safety of our people.

One example suffices to explain why CBW testing should be confined to the laboratory. It is an example which clearly demonstrates that hazards from open air tests of chemical and biological weapons are not vague speculations, but grim realities. The example is the now well-known sheep-killing accident last year, caused by an open air test of VX at the Army's Dugway Proving Grounds in Utah. Some say that safety rules for CBW testing are sufficient. Safety rules, they may say, are enough to protect against the fatal results possible when deadly nerve gas is tested in the air. Before the sheep-killing incident and since that time, the Army has announced safety regulations for CBW open air testing.

Are safety rules at the test site sufficient for public safety? I simply cannot accept that they are. A freakish wind shift or a poorly supervised test may never occur. Let us consider, then, what might otherwise happen.

In the 1968 sheep-killing incident, the test at Dugway was to determine how nerve gas VX distributes itself downwind 5 to 25 miles per hour to the northeast. This was the information sought. Under today's safety rules at Dugway, the test would be limited to winds 15 miles per hour. Even so, would this prevent another nerve gas accident? Consider what happened in the sheep-killing incident. The test started. The jet opened its tanks and began spraying nerve gas over the test area. After a few seconds, the tanks were to close and the plane pull up. But the tanks did not close; the tanks stayed open. The plane pulled up with nerve gas still spraying. Then over 6,000 sheep were killed.

Regardless of safety regulations, field testing of biologicals at Dugway, has pro-

duced land designated as "permanent biocontaminated area."

What next is in store from such CBW open air testing?

As we debate the wisdom of banning open air testing of lethal gas and any disease-producing bacteria or toxin, the very testing of deadly nerve gasses continues. It is of little comfort to me to hear from the Defense Department that there are no immediate plans to conduct outdoor tests of lethal biological agents. It is of little comfort that the Q-fever field tests at Dugway have been completed and now research will shift to the laboratory to evaluate results.

While the specter of future open air tests for disease-producing bacteria hangs over us; while outdoor testing of such deadly nerve gasses as VX, Tabun—GA—Sarin—GB—and Soman—GD—continues; when any open air test of deadly gas or any disease-producing bacteria takes place, the issue of public safety remains of grave concern.

If just one accidental release of deadly nerve gas or disease-producing bacteria spreads to our cities and towns, the toll in death and sickness would be indelible. Every precaution must be taken to assure the health and safety of our people. Animals must be protected. Environment must be preserved. All these things must be done regardless of how slight the danger.

Consider the deadly effect of these chemical agents. Consider the vast destruction potential of the disease-producing biologicals. Let us take a look at these agents in deciding whether in terms of public safety alone, we should ban lethal CWB from being tested outdoors.

Mr. President, I ask unanimous consent to have printed in the RECORD a table of chemical and biological agents, together with a table on planned open air testing at various sites including the site at Dugway Proving Ground, Utah, the Desert Test Center in Utah, and at Edgewood Arsenal in Maryland.

There being no objection, the tables were ordered to be printed in the RECORD, as follows:

TABLE OF CHEMICAL AND BIOLOGICAL AGENTS
THE CHEMICAL AGENTS
Nerve gases

GB: An odorless, colorless, volatile gas that can kill in minutes in dosages of 1 milligram, approximately 1/50 of a drop. In the U.S. arsenal since the late 1940's, it is also known as Sarin. The gas kills by paralyzing the nervous system.

VX: Another odorless gas that, unlike GB, does not evaporate rapidly or freeze at normal temperatures. Because of its low volatility, it is effective for a longer period of time. VX also is capable of killing in 1 milligram doses and, like GB, paralyzes the nervous system in minutes.

Incapacitating agents

BZ: A gas that is either a psychochemical or a strong anesthetic which can produce temporary paralysis, blindness, or deafness in its victims. BZ has also been known to cause maniacal behavior. Its precise makeup is secret.

Riot control gases

CN: A non-lethal gas with a deceptive, fragrant odor similar to apple blossoms. The agent, now in use in Vietnam, is a fast-acting

tear gas that also acts as an irritant to the upper respiratory system.

CS: An improved, more toxic tear gas that quickly causes tearing, coughing, breathing difficulty, and chest tightness. Can temporarily incapacitate men in twenty seconds. Heavy concentrations cause nausea. It is now used in Vietnam.

Harassing agents

DM: A pepper-like arsenical gas that causes headaches, nausea, vomiting, chest pains for up to two or three hours. It can be lethal in heavy doses and has been blamed for some deaths since its first use in Vietnam in 1964. DM is widely known as adamsite and was used in World War I.

HD: A pale yellow gas with the odor of garlic, popularly known as mustard gas. Causes severe burns to eyes and lungs and blisters skin after exposure, but onset of symptoms is delayed from four to six hours. Can kill in heavy concentrations. Mustard, like VX, is not volatile and is usually effective for days after its use. It caused one-fourth of the U.S. gas casualties in World War I.

Defoliants and herbicides

2,4-D: A weed-killing compound known as dichlorophen-oxyacetic acid that has relatively short persistence in the soil and a relatively low level of toxicity to man, if properly dispersed. Heavier concentrations can cause eye irritations and stomach upsets, however. Dangerous to inhale. Usually used in Vietnam along with 2,4,5-T (trichlorophenoxyacetic acid), which has similar—although somewhat more toxic—properties. Effective against heavy jungle.

Cacodylic Acid: An arsenic-base compound used against rice plants and tall grass. Strong plant killer that gives quick results. One serious restriction on its use is the possibility that heavy concentrations will cause arsenical poisoning in humans. Widely used in Vietnam. It is composed of 54.29 per cent arsenic.

BIOLOGICAL AGENTS

Anthrax: An acute bacterial disease that is usually fatal if untreated when it attacks the lungs (pulmonary anthrax). Death can result in twenty-four hours. Found naturally in animals, which must be buried or burned to prevent contamination. Symptoms include high fever, hard breathing, and collapse. Also known as woolsorters' disease.

Brucellosis: Bacterial disease usually found in cattle, goats, and pigs. Marked by high fever and chills in humans. Also known as undulant fever. Fatal in up to 5 per cent of untreated cases. Symptoms can linger for months.

Encephalomyelitis: Highly infectious viral disease that appears in many forms and gradations; it can be simply debilitating or fatal. Venezuelan equine encephalomyelitis (VEE) kills less than 1 per cent of its victims and lasts as few as three days; Eastern equine encephalomyelitis (EEE) is fatal about 5 per cent of the time, if untreated, and can seriously cripple the central nervous system of survivors.

Plague: Acute, usually fatal, highly infectious bacterial disease of wild rodents found in two forms—bubonic and pneumonic. Symptoms of bubonic plague include small hemorrhages, and the black spots that led the disease to be commonly known as the "black death" during the massive epidemics of the past. Pneumonic plague is highly infectious because it is spread from man to man via coughing. Symptoms include, fever, chills, rapid pulse and breathing, mental dullness, coated tongue, and red eyes.

Pittacosis: Viral infection in birds that is transmissible to man, with symptoms of high fever, muscle ache, and disorientation. Disease can be mild, and last less than a week, or can cause death in upwards of 40 per cent of those afflicted. Complete convalescence may take months.

Q-fever: Acute, rarely fatal rickettsial dis-

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ease usually found in ticks, but also found in cattle, sheep, goats, and some wild animals. The Q-fever organism can remain alive and infectious in dry areas for years. Rarely fatal but the resulting fever may last up to three months.

Rift Valley Fever: Viral infection of sheep, cattle, and other animals that can be transmitted to humans, usually to the male. Symptoms include nausea, chills, headaches, and pains, but the disease is mild: despite

the severity of symptoms deaths are rare and acute discomfort lasts only a few days. Also believed to be more virulent among Asians.

Rocky Mountain Spotted Fever: An acute rickettsial disease transmitted to man by the tick. One of the most severe of all infectious diseases. Can kill within three days. Fevers range up to 105 degrees F. Often found in northwestern United States, but susceptibility to the disease in general. Highly responsive to treatment.

Tularemia: A bacterial disease marked by high fever, chills, pains, and weakness. Acute period can last two to three weeks. Sometimes causes ulcers in mouth or eyes, which multiply. Untreated, its mortality rate is between 5 and 8 per cent. Highly infectious, and usually found in animals, fowls, and ticks. Also known as rabbit fever.

Source: Chemical and Biological Warfare, America's Hidden Arsenal, by Seymour H. Hersh (Doubleday Co. 1969).

PLANNED OPEN AIR TESTING—MARCH 1968-MAY 1969, DUGWAY PROVING GROUND, UTAH

Item	Agent	Agent amount	Quantity	Item	Agent	Agent amount	Quantity
M139 bomblet.....	GB	-----	1 round per trial (5 trials).	M55 rocket.....	GB	-----	1 round per trial (4 trials).
E139 bomblet.....	GB	-----	1 item per trial (8 trials).	Spray boom (truck).....	GB	2 gallons per trial.....	3 trials.
105 millimeter projectile.....	GB	1.5 pounds per round.....	1 round per trial (3 trials).	8-inch howitzer shell.....	VX	14½ pounds per round.....	1 round per trail (5 trials).
BLU 19/B23.....	GB	-----	1 round per trial (1 trial).	Spray boom (truck).....	VX	2 gallons per trail.....	2 trials.

PLANNED TESTING, FOURTH QUARTER, FISCAL YEAR 1969: APRIL-JUNE 1969

Item	Agent	Agent quantity per item	Number of items to be teste	Item	Agent	Agent quantity per item	Number of items to be tested
Deseret Test Center, Utah (Dugway Proving Ground, Utah):				Edgewood Arsenal, Md.—all Army:			
United States Army:				155 mm shell, ground release ¹	VX	6.5 pounds.....	28
8 inch shell, 50 foot release.....	VX	15.4 pounds.....	4	Test fixture.....	EA 1356	100 grams.....	24
E139 bomblet.....	GB	-----	4	Do.....	GB	50 grams.....	20
Do.....	GB	-----	4	E139 bomblet (EOD test).....	GB	-----	1
M55 rocket warhead.....	GB	-----	4	M23 land mine.....	VX	-----	3
M23 land mine.....	GB	-----	6	E139 bomblet.....	GA	-----	14
Test fixture, ground release ¹	VX	-----	3	Do.....	GB	-----	8
Test fixture, ground release ¹	HD	-----	3	Do.....	GD	-----	20
Test fixture, ground release ¹	GD	12.5 pound.....	10	Test munition.....	VX	10 pounds.....	2
155-millimeter shell, ground release ¹	GA	1.2 pounds.....	16	Fort McClellan, Ala:²			
Test fixture, ground release ¹	GA	-----	4	Bulk agent, poured on a suitable surface for detection and decontamination exercises.	HD	2 gallons.....	1
United States Navy:				Do.....	HD	1 gallon.....	5
Bomblet.....	G-type	3 pounds.....	6	Do.....	HD	160 centimeters.....	1
Defense system challenge, ground release ¹	GB or VX	-----	3	Do.....	HD	120 centimeters.....	1
United States Air Force: BLU-19 bomblet.....	GB	-----	4	Do.....	HD	80 centimeters.....	6
				Do.....	HD	40 centimeters.....	5
				Do.....	GB	42 centimeters.....	5
				Do.....	VX	42 centimeters.....	5
				Do.....	VX	42 centimeters.....	8

LETHAL AGENT, OPEN-AIR TESTS SCHEDULED, FIRST QUARTER, FISCAL YEAR 1970—JULY-SEPTEMBER 1969

Item	Height of release	Agent	Agent quantity per item	Quantity of item to be tested	Item	Height of release	Agent	Agent quantity per item	Quantity of item to be tested
Deseret Test Center, Utah (Dugway Proving Ground):					Edgewood Arsenal, Md. (All Army tests):				
United States Navy: V Bomblet.....	Ground.....	VX	1 pound.....	3	155 Howitzer shell.....	Ground.....	VX	6.5 pounds.....	7
United States Army:					Test fixture.....	do.....	EA1356	100 grams.....	24
55-gallon drum—portable water.....	do.....	GB	Less than 2 pounds.....	5	Do.....	do.....	EA1356	11 pounds.....	3
					Do.....	do.....	GB	50 grams.....	20
M2XR.....		VX	-----	75	Do.....	do.....	GB	-----	1
155 M121 projectile.....		GB	-----	28	E139 bomblet (EOD test).....	do.....	VX	1 pound.....	8
155 M121 projectile.....		VX	-----	28	Test bomblet.....	do.....	VX	-----	3
155 M121 projectile.....		GB	-----	6	M23 land mine.....	do.....	VX	-----	9
155 M121 projectile.....		VX	-----	6	155 Howitzer canister.....	do.....	VX	3 pounds.....	16
4.5-inch mortar.....	Ground.....	HD	6 pounds.....	148	Test spray.....	1 meter.....	GA	1.3 pounds.....	8
155.....	do.....	G	-----	30	Fixture.....	do.....	GB	1.3 pounds.....	16
M23 Land mine.....		VX	-----	12	Do.....	do.....	VX	10 pounds.....	2
M56 Warhead (M55 rocket).....		GB	-----	10	Do.....	do.....	GB	-----	4
United States Air Force:					E139 bomblet.....	do.....	GD	-----	8
Test fixture.....	Ground.....	HD	8 pounds.....	7					

¹ Ground releases are statically detonated or functioned.
² To be conducted this quarter or next quarter, depending on availability of facilities.
³ Chemical agent decontamination and detection exercises are conducted to train chemical specialists in techniques for these operations. The specialists are subsequently assigned to Army divisions and decontamination teams.
 Source: Subcommittee on Conservation and Natural Resources, Committee on Government Operations, U.S. House of Representatives.

Note: Recent exchanges between Representative Henry Reuss, chairman of the House Conservation and Natural Resources Subcommittee and Army Secretary Stanley Resor give some idea of the scheduling of open air tests of chemical agents, including nerve gas.
 The unclassified data above lists item-by-item outdoor testing for the periods March 1968 to May 1969 at Dugway Proving Ground, Utah; April to June 1969 at Deseret Test Center, Utah (Dugway Proving Ground, Utah); at Edgewood Arsenal, Md.; and at Fort McClellan, Ala.; July to September 1969 at Deseret Test Center, Utah (Dugway Proving Ground, Utah) and at Edgewood Arsenal, Md.

Mr. GOODELL. Mr. President, let us suppose that VX again escaped from a testing site. Suppose instead of drifting to a field of sheep, the nerve gas drifted to a city or town of people. The deadly nerve gas VX is colorless and odorless. The protection required against its very rapid fatal effect is a gas mask and protective clothing. First aid suggested is atropine. What chances under

these circumstances would our people have of surviving?
 A ban on outdoor testing of lethal chemical agents, including VX, would prevent such circumstances from arising. I simply cannot accept accidental death, contaminated land, and the spread of disease as a price for adding still more to the already vast offensive capability of our CBW arsenal.

Mr. President, on Saturday, Secretary of Defense Laird said that a chemical warfare deterrent and a biological research program are essential to national security. He said that research and testing of CBW agents should continue.
 If I rightly understand, we can expect Pentagon requests to break the proposed "moratorium" on CBW open air tests. If such Pentagon requests be made and

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agreed to, I fear we will be back again where we started. That is, we will be back with peril to the public health and peril from a spiraling CBW program.

Mr. President, why, in view of the nuclear, and other deterrents, are chemical warfare deterrence and an offensive biological research program essential to national security?

To date, research in biological warfare has already produced biological warheads for the Sergeant; research has brought germ warfare to the missile age.

Chemical deterrence has also found shelter in the Sergeant. Still, we are told by the Pentagon that research and testing should continue.

What are we really contributing to when we stockpile munitions filled with lethal gas and disease-producing bacteria? Do we not contribute to that eerie sense of doomsday? What do we mean to accomplish with gas and germ weapons? To prevent use? But what if the net result is to proliferate use?

Mr. President, anything so infamous as germ warfare should be deterred ultimately by eliminating germ weapons. Some will say that this is a dream. Some will say that it cannot be achieved. I cannot accept this reasoning to justify germ weapons. Today, I call for the day when we will dismantle our germ arsenal. I look forward to the day, when the United States will eliminate the means by which civilizations of the world could plunge into the abyss of epidemic and mass death. I urge today, that we fight germs with medicine; not with germ weapons. Medical protection against germs is reasonable, it is sane. To protect against germs with germ weapons is folly; it is madness.

Deterrence with defensive equipment, such as gas masks and vaccines, is more reasonable than the deterrence offered by military science and by hardware which places gas and germs in grenades and in nuclear warheads. Deterrence with defensive equipment has the added advantage of beneficial "spin-offs" for peacetime medical applications gained by gas and germ research. It is still unclear to me why medical research of this kind is done by the Defense Department when such research can be done by the Public Health Service.

Deterrence with weapons has the negative side effect of arms race competition with other nations or indeed, with our own self. Unilateral armament may be the net effect, or perhaps is the goal of our CBW program. Still, we cannot ignore our contributions to proliferation of CBW throughout the world.

Mr. President, how does our national security benefit from CBW proliferation? We have spent years to check nuclear proliferation to nonnuclear nations. If we succeed in nuclear nonproliferation, then few nations will pose a nuclear threat to the cities of this country. Chemical and biological weapons are a way that many nations can threaten our cities.

Do we and should we encourage foreign nations to build up gas and germ weapons as a deterrent to a potential enemy? Should we train foreign officers in gas and germ warfare? Should we have

CBW courses at Fort McClellan and invite foreign officers to attend?

Mr. President, many people are unaware that in the past 20 years, concerning CBW, and prior to 1951, we even had a foreign officer training program which trained military officers from Egypt and Yugoslavia in the use of chemical and biological agents. It has been charged that, subsequent to that time, Egypt used deadly gases in Yeman. We have a share of the responsibility for this tragic development in the history of mankind.

Some 35 nations have received foreign officer training in how to use CBW weapons. This is truly a significant rung up the balance-of-terror ladder for the world, because chemical and biological agents can be produced cheaply by countries with very small resources.

Unlike nuclear weapons, chemical and biological weapons which can wipe out mankind can be produced by small countries. We must move forward—certainly our country must—and should not be a party to escalating an arms race in this area of CBW.

Certainly it is difficult to look back at different countries' activities in the past 20 years with any confidence that we have done anything but contribute to greater escalation.

It is particularly distressing to me that our CBW program includes a foreign officer training program in CBW. The Army offers two courses in CBW open to foreign officers at Fort McClellan. One course is for a period of 9 weeks. The other is for a period of 9 months. Since 1951, the Pentagon has provided CBW training to officers from over 35 foreign countries.

Mr. President, I ask unanimous consent to have printed in the RECORD two charts showing the countries which have participated in the Army's CBW training program.

There being no objection, the charts were ordered to be printed in the RECORD, as follows:

ARMY'S CBW FOREIGN OFFICER TRAINING PROGRAM— PARTICIPATING COUNTRY LIST, FROM 1951 TO PRESENT

	Fiscal year—	
	1969	1970
Japan.....		
Korea.....		
Philippines.....		
Taiwan.....		
Thailand.....		
South Vietnam.....		
Iran.....		1
Lebanon.....		
Pakistan.....		
Saudi Arabia.....	5	4
France.....		
Germany.....	2	2
Greece.....	5	4
Italy.....		
Netherlands.....		
Norway.....		
Spain.....		
Sweden.....		
United Kingdom.....	3	3
Yugoslavia.....		
Canada.....	1	2
Argentina.....		
Mexico.....		
Australia.....	2	

Source: Department of Defense

FOREIGN OFFICERS TRAINING PROGRAM—36 WEEK COURSE

	Fiscal year	
	1969	1970
Australia.....		
Japan.....		
Korea.....	2	
Philippines.....		
Taiwan.....	1	
Thailand.....		
South Vietnam.....		2
Iran.....		
Iraq.....		
Jordan.....		
Lebanon.....		
Pakistan.....		
Egypt ¹		
Austria.....		
Denmark.....	1	
Germany.....		
Greece.....		
Italy.....		
Norway.....		
Switzerland.....		
Turkey.....		
Yugoslavia.....		
Canada.....		
Argentina.....		
Brazil.....		
Venezuela.....		
Israel.....		1

¹ Terminated since early 1950's.

Source: Department of Defense.

Mr. GOODELL, Mr. President, officers have come here to learn about CBW. They have come from Europe, from Latin America, from the middle East and from Southeast Asia. This year, emphasis has been given to training officers from Vietnam, Thailand, Korea, Taiwan, and the Philippines.

I am concerned that such training of foreign officers could inspire an appetite for acquisition of these insidious weapons of war. I am disturbed that knowledge and acquisition of CBW could propel nations of the world to use CBW in war. Have we learned nothing from Yemen? Indeed, sharp review of this foreign officers training program in CBW is long overdue.

I urge that the Senate Armed Services Committee make a complete review of this aspect of the CBW program. The question to be faced is whether these study courses should be continued or abandoned in the name of reason.

If we fail to halt chemical and biological weapons spread and build-up now, what will be in store for future generations? While we now pause on the present rung of the CBW balance-of-terror ladder, we see that we are in a near perfect model of weapons escalation. If we have "overkill" in nuclear weapons; we have "superkill" in chemical and biological weapons. If the Pentagon has asked us to deploy an ABM for defense against nuclear attack, it is just a matter of time that the Pentagon will ask us for funds to deploy an ACBM, an anti-chemical and biological monitoring system?

We simply must guard against the dangers inherent in the very existence of chemical and germ weapons. There is danger in any outdoor testing of lethal gas and any disease-producing bacteria and toxin. There is danger in CBW escalation and proliferation. There is danger in the use of gas and germs in warfare.

Today, we can start to check the dangers posed by CBW by acting favorably on the omnibus anti-CBW amendment. We can begin today with what promises to be a very long and difficult

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road to additional review and further control of chemical and biological weapons both in this country and throughout the world.

Yet to be done is a review by the whole Congress of many general areas of inquiry:

Why do we have a gas and germ arsenal? Is the Pentagon's retaliation in kind a valid justification given the nuclear deterrent?

How does our CBW program contribute to the proliferation of CBW throughout the world?

What is the U.S. policy on use of these weapons in combat?

What steps are the United States willing to take in CBW arms control?

Let us give deep consideration to the grave moral issues which arise when we stockpile munitions filled with lethal gas and disease-producing bacteria. Let us think deeply on this as we move further in our review of CBW from the standpoints of deterrence, proliferation, use in combat, and targets for further disarmament.

More steps can be taken to control chemical and biological weapons. These include:

Presentation of the Geneva Protocol by the President to the Senate for ratification. The United States signed, but never ratified, the 1925 Protocol outlawing use of gas and germs in war.

A report by a nongovernmental Scientific and Medical Advisory Committee on CBW. This report could focus on scientific, medical, and arms-control aspects of chemical and biological weapons. The report should be presented to both the President and to Congress. Paralleled with congressional examination and that of the National Security Council, such a report could be an important contribution in options for charting a long-range course of action on gas and germ weapons.

These are some more steps we can take to control CBW in addition to the omnibus anti-CBW amendment we are considering today.

Mr. President, I am not completely satisfied with the compromise, but I think it is a significant breakthrough.

I want to commend particularly the Senator from Wisconsin (Mr. NELSON) for his cooperation in working with me and others in developing these amendments, particularly the three originally cosponsored by us. I would also like to commend the Senator from New Hampshire for his continuing concern and interest in this area, and for his cooperation in working out the amendment which we expect will be carried through in conference and not diluted further.

Mr. McINTYRE. Mr. President, will the Senator from Wisconsin yield me 1 minute?

Mr. NELSON. Mr. President, how much time remains to me?

The PRESIDING OFFICER. Four minutes remain to the Senator from Wisconsin.

Mr. NELSON. I yield 1 minute to the Senator from New Hampshire.

The PRESIDING OFFICER. The Senator from New Hampshire is recognized for 1 minute.

Mr. McINTYRE. Mr. President, I should like to respond to the Senator from New York and commend him for the fine work he has done in this area of CBW, and to commend also the Senator from Wisconsin (Mr. NELSON) and others, and their staffs, for their close cooperation and the fine work they have done in trying to bring together and consolidate the thinking on control matters concerning the CBW program.

To this point I would say that all of these Senators have cooperated. The compromise may not please everyone; but, as the Senator from New York stated, it represents a beginning of control that Congress should have over this program.

Mr. NELSON. Mr. President, I thank the Senator from New Hampshire. As chairman of the subcommittee, along with other Senators and their staffs, they did a superb job in working out the combined amendment.

I should like to mention that a number of us have offered amendments of various kinds to the budget. It is appropriate to mention that the original budget on January 14 was \$23,151,660,000. That was reduced by Secretary Laird's recommendations to \$21,963,060,000. And then through the efforts of the chairman, the Senator from Mississippi (Mr. STENNIS), the budget was cut another almost \$2 billion, down to \$20,059,500,000.

It should not go unnoted that the chairman and his committee did an excellent job in reducing the budget. The fact that a number of us have other amendments should not cause us to ignore the fact that the chairman did a fine and conscientious job.

Mr. President, I ask unanimous consent to have printed in the RECORD a news story from the Washington Post of yesterday, Sunday, August 10, 1969, on a statement by the Secretary of Defense, Mr. Laird, as well as the statement by Mr. Laird made on August 9, 1969, regarding the CBW amendment pending.

There being no objection, the news article and statement were ordered to be printed in the RECORD, as follows:

[From the Washington (D.C.) Post, Aug. 10, 1969]

CBW CURE ENDORSED BY LAIRD

The Defense Department announced unexpectedly yesterday that it would support efforts for strict congressional controls on the testing and production of chemical and germ warfare weapons.

The announcement by Defense Secretary Melvin R. Laird virtually insures Senate approval Monday of a revised but still broad amendment drawn up by critics of the Pentagon's past activities in the CBW field. It would, among other restrictions, ban most open air testing of the lethal agents.

If approved, the CBW amendment would be the second major victory for critics of the Pentagon since they failed by two votes last week to block initial deployment of the Safeguard anti-ballistic missile system.

The Senate's liberal bloc won approval Thursday of a potentially far-reaching amendment that would give the General Accounting Office greater powers to audit defense contracts.

"I am in agreement with the goals of the (CBW) amendment," Laird said yesterday in a statement released by the Pentagon.

"I believe this revised amendment will allow us to maintain our chemical warfare

deterrent and our biological research program, both of which are essential to national security," the statement said.

Senate Armed Services Committee Chairman John Stennis (D-Miss.) said Friday he would probably support the amendment and predicted its approval.

The compromise language, which the original supporters—said would not harm the amendment, would allow open air testing of CBW agents only when the Secretary of Defense certified that it was necessary for national security, the U.S. Surgeon General certified that it would not be hazardous to health or the environment and congressional committees had been notified in advance.

There are no restrictions on such testing now. The original amendment would have flatly banned it.

The compromise version was worked out Friday in a meeting between Dr. John S. Foster, Pentagon research director, and Sen. Thomas J. McIntyre (D-N.H.), chairman of an Armed Services subcommittee that had already recommended deletion of all funds for development of offensive CBW weapons.

CONCERN CITED

Laird said that when he took office in January he "became concerned with the management and control of our chemical warfare and biological research programs" and "felt that improvements were needed in the management and control of these programs."

On result of this concern, he said, was President Nixon's directive in April ordering the National Security Council to make a thorough study of CBW activities.

"Pending the completion of the NSC study," Laird said, "I believe it is prudent that we act jointly with Congress and take actions, wherever possible, to improve the management and control of chemical warfare and biological research programs."

Laird emphasized that research and testing of CBW agents should continue even though the United States has stated it would use them only in self-defense, because "failure to maintain an effective chemical warfare deterrent would endanger national security."

The amendment would also require semi-annual reports to Congress on CBW spending and would bar procurement of further CBW delivery systems, CBW activities found by the Secretary of State to violate with international law, most shipments of CBW agents within the United States and transport to foreign countries without approval of the foreign nation and notification to Congress.

\$2.5 BILLION SPENT

Since 1960, the Pentagon has spent about \$2.5 billion on CBW activities with little congressional scrutiny or public knowledge.

The amendment would be attached to the \$20-billion military procurement bill, which has been on the Senate floor for five weeks. Nearly a dozen other amendments are awaiting action and Senate leaders said Friday the bill would probably not come to a final vote until September.

Sen. Gaylord Nelson (D-Wis.), a sponsor of the CBW amendment, released this list of colleges and universities engaged in Pentagon CBW contracts:

"Boston Univ., Brooklyn College, Buffalo Univ., Univ. of California at Berkeley, Univ. of California at Los Angeles, Univ. of Chicago, Univ. of Connecticut, Cornell Univ., Delaware, George Peabody College, George Washington Univ., Georgia Institute of Technology, Hahnemann Medical College, Harvard, Univ. of Illinois at Urbana, Illinois Institute of Technology.

Also, Indiana Univ. Foundation, Iowa State Univ., Johns Hopkins, Kansas State Univ., Univ. of Maryland and its medical and dental schools, Univ. of Massachusetts, Massachusetts Institute of Technology, Univ. of Michigan, Univ. of Minnesota, Univ. of North Carolina, Ohio State Univ., Univ. of Oklahoma,

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Univ. of Oregon, Univ. of Pennsylvania, Univ. of Pittsburgh, Polytechnic Institute of Brooklyn.

"Also, Rutgers, St. Louis Univ., Stanford Research Institute, Univ. of Tennessee, Univ. of Texas at Austin, Texas A&M, Univ. of Utah, Utah State Univ., Medical College of Virginia, Univ. of Washington, Washington State Univ., Western Reserve Univ., College of William and Mary, Univ. of Wisconsin and Yale."

MEMORANDUM FOR CORRESPONDENTS, AUGUST 9, 1969

Secretary of Defense Melvin R. Laird today issued the following statement in response to queries about the DoD position on the pending McIntyre amendment.

On assuming the office of Secretary of Defense in January, I became concerned with the management and control of our chemical warfare and biological research programs. I felt that improvements were needed in the management and control of these programs. That is why in April I requested and the President ordered a National Security Council study of these matters. This study is in progress.

Pending the completion of the NSC study, I believe it is prudent that we act jointly with Congress and take actions, wherever possible, to improve the management and control of chemical warfare and biological research programs.

Members of my staff, principally Dr. John S. Foster, Jr., Director of Research and Engineering, have been working in recent days with Senator Thomas J. McIntyre of New Hampshire, and with other members of the Senate Armed Services Committee, on a revised amendment to the pending Defense Authorization Bill.

I am in agreement with the goals of the new amendment, which the Senate is scheduled to consider on Monday.

I believe this revised amendment will allow us to maintain our chemical warfare deterrent and our biological research program both of which are essential to national security.

The history of the use of lethal chemical warfare agents has demonstrated on three notable occasions in this country that the only time military forces have used these weapons is when the opposing forces had no immediate capability to deter or to retaliate. This was true early in World War I, later in Ethiopia and more recently in Yemen. Clearly, failure to maintain an effective chemical warfare deterrent would endanger national security.

Because it would not always be possible to determine the origin of attack by biological agents, the deterrent aspects of biological research are not as sharply defined. A continued biological research program, however, is vital on two other major counts.

First, we must strengthen our protective capabilities in such areas as vaccines and therapy.

Secondly, we must minimize the dangers of technological surprise.

It is important that the American people be informed of why we must continue to maintain our chemical deterrent, conduct biological research, and how we propose to improve the management and control of these programs.

Mr. NELSON. Mr. President, how much time do I have left?

The PRESIDING OFFICER. The Senator from Wisconsin has 2 minutes remaining.

Mr. NELSON. Mr. President, I ask unanimous consent to have printed in full in the RECORD the report of the Secretary General on chemical and bacteriological weapons and the effects of their possible use.

There being no objection, the report was ordered to be printed in the RECORD, as follows:

LETTER OF TRANSMITTAL

JUNE 30, 1969.

DEAR MR. SECRETARY-GENERAL: I have the honour to submit herewith a unanimous report on chemical and bacteriological (biological) weapons which was prepared in pursuance of General Assembly resolution 2454 A (XXIII).

The Consultant Experts appointed in accordance with the General Assembly resolution were the following:

Dr. Tibor Bakacs, Professor of Hygiene, Director-General of the National Institute of Public Health, Budapest.

Dr. Hotse C. Bartlema, Head of the Microbiological Department of the Medical-Biological Laboratory, National Defense Research Organization TNO, Rijswijk, Netherlands.

Dr. Ivan L. Bennett, Director of the New York University Medical Center and Vice-President for Medical Affairs, New York University, New York.

Dr. S. Bhagavantam, Scientific Adviser to the Minister of Defense, New Delhi.

Dr. Jiri Franek, Director of the Military Institute for Hygiene, Epidemiology and Microbiology, Prague.

Dr. Yosio Kawakita, President of the University of Chiba, Professor of Bacteriology, Chiba City, Japan.

M. Victor Moulin, *Ingenieur en chef de l'armement, Chef du Bureau Défense chimique et biologique, Direction technique des armements terrestres*, Saint Cloud, France.

Dr. M. K. McPhail, Director of Chemical and Biological Defense, Defense Chemical, Biological and Radiation Laboratories, Defense Research Board, Ottawa.

Academician O. A. Reutov, Professor of Chemistry at the Moscow State University, Moscow.

Dr. Guillermo Soberon, Director, *Instituto de Investigaciones Biomedicas, Universidad Nacional Autonoma de Mexico, Mexico City*.

Dr. Lars-Erik Tammelin, Chief of Department for Medicine and Chemistry, Research Institute for National Defense, Stockholm.

Dr. Berhane Teoume-Leessane, Medical Co-Director and Head of Department of Viruses and Rickettsiae, Imperial Central Laboratory and Research Institute, Addis Ababa.

Colonel Zbigniew Zoltowski, Professor of Medicine, Epidemiologist and Scientific Adviser to the Ministry of National Defense, Warsaw.

Sir Solly Zuckerman, Chief Scientific Adviser to the Government of the United Kingdom, Professor Emeritus, University of Birmingham.

The report was drafted during sessions held in Geneva between 20 and 24 January and between 18 and 29 April, and finalized at meetings held in New York between 2 and 14 June 1969.

The Group of Consultant Experts wish to acknowledge the assistance they received from the World Health Organization, the Food and Agriculture Organization, the International Committee of the Red Cross, the Pugwash Conference on Science and World Affairs (Pugwash) and the International Institute for Peace and Conflict Research (SIPI), all of which submitted valuable information and material for the purposes of the study.

The Group of Consultant Experts also wish to express their gratitude for the valuable assistance they received from members of the United Nations Secretariat.

I have been requested by the Group of Consultant Experts, as their Chairman, to submit their unanimous report to you on their behalf.

Yours sincerely,

WILLIAM EPSTEIN,
Chairman, Group of Consultant Experts
on Chemical and Bacteriological (Biological) Weapons.

QUESTION OF GENERAL AND COMPLETE
DISARMAMENT

[Illustrations not printed in the RECORD]
(Report of the Secretary-General on chemical and bacteriological (biological) weapons and the effects of their possible use)

Pursuant to General Assembly resolution 2454 A (XXIII) of 20 December 1968, the Secretary-General has the honour to transmit herewith to the General Assembly the report on chemical and bacteriological (biological) weapons and the effects of their possible use, prepared with the assistance of qualified consultant experts.

In accordance with paragraph 4 of the resolution, the report is also being transmitted to the Security Council (S/9292) and the Conference of the Eighteen-Nation Committee on Disarmament¹ as well as to the Governments of Member States.

FOREWORD BY THE SECRETARY-GENERAL

During the past few years, I have become increasingly concerned by developments in the field of chemical and bacteriological (biological) weapons and have given expression to this concern on several occasions. A year ago, I stated publicly that "the international community was not sufficiently conscious of the dangers inherent in this new type of weapon of mass murder", and that "due attention had not been focused on this very serious problem". In the introduction to my annual report on the work of the Organization, in September 1968, I stated:

"While progress is being made in the field of nuclear disarmament, there is another aspect of the disarmament problem to which I feel too little attention has been devoted in recent years. The question of chemical and biological weapons has been overshadowed by the question of nuclear weapons, which have a destructive power several orders of magnitude greater than that of chemical and biological weapons. Nevertheless, these too are weapons of mass destruction regarded with universal horror. In some respects, they may be even more dangerous than nuclear weapons because they do not require the enormous expenditure of financial and scientific resources that are required for nuclear weapons. Almost all countries, including small ones and developing ones, may have access to these weapons, which can be manufactured quite cheaply, quickly and secretly in small laboratories or factories. This fact in itself makes the problem of control and inspection much more difficult. Moreover, since the adoption, on 17 June, 1925, of the Geneva Protocol for the Prohibition of the Use in War of Asphyxiating, Poisonous or Other Gases and of Bacteriological Methods of Warfare, there have been many scientific and technical developments and numerous improvements, if that is the right word, in chemical and biological weapons, which have created new situations and new problems. On the one hand, there has been a great increase in the capability of these weapons to inflict unimaginable suffering, disease and death to ever larger numbers of human beings; on the other hand, there has been a growing tendency to use some chemical agents for civilian riot control and a dangerous trend to accept their use in some form in conventional warfare.

"Two years ago, by resolution 2162 B (XXI), the General Assembly called for the strict observance by all States of the principles and objectives of the Geneva Protocol of 1925, condemned all actions contrary to those objectives and invited all States to accede to the Protocol. Once again, I would like to add my voice to those of others in urging the early and complete implementation of this resolution. However, in my opinion, much more is needed. . . ."

¹ By a letter dated 1 July 1969 from the Secretary-General to the Co-Chairmen of the Conference.

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At its twenty-third session, by resolution 2454 A (XXIII), the General Assembly requested me to prepare, with the assistance of qualified consultant experts, a report on chemical and bacteriological (biological) weapons in accordance with the proposal contained in the introduction to my annual report on the work of the organization (A/7201/Add.1), and in accordance with the recommendation contained in the report of the Conference of the Eighteen-Nation Committee on Disarmament of 4 September 1968 (A/7189).

In pursuance of this resolution, I appointed the following group of fourteen consultant experts to assist me in the preparation of the report: Dr. Tibor Bakacs, Professor of Hygiene, Director-General of the National Institute of Public Health, Budapest; Dr. Hotse C. Bartlema, Head of the Microbiological Department of the Medical-Biological Laboratory, National Defence Research Organization TNO, Rijswijk, Netherlands; Dr. Ivan L. Bennett, Director of the New York University Medical Center and Vice-President of Medical Affairs, New York University, New York; Dr. S. Bhagavantam, Scientific Adviser to the Minister of Defence, New Delhi; Dr. Jiri Franek, Director of the Military Institute for Hygiene, Epidemiology and Microbiology, Prague; Dr. Yosio Kawakita, President of University of Chiba, Professor of Bacteriology, Chiba City, Japan; M. Victor Moulin, *Ingénieur en chef de l'armement, Chef du Bureau Défense chimique at biologique, Direction technique des armements terrestres*, Saint Cloud, France; Dr. M. K. McPhail, Director of Chemical and Biological Defence, Defence Chemical, Biological and Radiation Laboratories, Defence Research Board, Ottawa; Academician O. A. Reutov, Professor of Chemistry at the Moscow State University, Moscow; Dr. Guillermo Soberon, Director, *Instituto de Investigaciones Biomedicas, Universidad Nacional Autonoma de Mexico*, Mexico City; Dr. Lars-Erik Tammelin, Chief of Department for Medicine and Chemistry, Research Institute for National Defence, Stockholm; Dr. Berhane Teoume-Lessane, Medical Co-Director and Head of Department of Viruses and Rickettsiae, Imperial Central Laboratory and Research Institute, Addis Ababa; Colonel Zbigniew Zoltowski, Professor of Medicine, Epidemiologist and Scientific Adviser to the Ministry of National Defence, Warsaw; Sir Solly Zuckerman, Chief Scientific Adviser to the Government of the United Kingdom, Professor Emeritus, University of Birmingham.

Mr. William Epstein, Director of the Disarmament Affairs Division, Department of Political and Security Council Affairs, served as Chairman of the Group of Consultant Experts. Mr. Alessandro Corradini, Chief of the Committee and Conference Services Section, acted as Secretary of the Group. He was assisted by members of the Disarmament Affairs Division.

After giving due consideration to the terms of the resolution and to the views expressed and the suggestions made during the discussion of the question at the twenty-third session of the General Assembly, I reached the conclusion that the aim of the report should be to provide a scientifically sound appraisal of the effects of chemical and bacteriological (biological) weapons and should serve to inform Governments of the consequences of their possible use. Within this over-all framework, the report would furnish accurate information in a concise and readily understandable form on the following matters: the basic characteristics of chemical and bacteriological (biological) means of warfare; the probable effects of chemical and bacteriological (biological) weapons on military and civil personnel, both protected and unprotected; the environmental factors affecting the employment of chemical and bacteriological (biological)

means of warfare; the possible long-term effects on human health and ecology; and the economic and security implications of the development, acquisition and possible use of chemical and bacteriological (biological) weapons and of systems for their delivery.

The consultant experts to whom I conveyed these terms of reference accepted them as the basis for their study.

It was my intention that the Group of Consultant Experts should survey the entire subject from the technical and scientific points of view, so that the report could place these weapons in proper perspective. It was also my hope that an authoritative report could become the basis for political and legal action by the Members of the United Nations.

As the report was to be made available by 1 July 1969, very concentrated efforts by the consultant experts were required in order to cover this extensive field. The members of the Group, acting in their personal capacities, carried out this demanding task at three sessions between January and June 1969.

The Group had the benefit of valuable submissions from the World Health Organization, the Food and Agriculture Organization, the International Committee of the Red Cross, the Pugwash Conference on Science and World Affairs (Pugwash) and the International Institute for Peace and Conflict Research (SIPRI). I wish to express my grateful appreciation to all the consultant experts for their dedicated work and to the organizations and bodies who co-operated in the preparation of the study.

The Group has submitted me to a unanimous report embodying its findings and conclusions. I wish to avail myself of this opportunity to express my gratification for the very high level of competence with which the consultant experts have discharged their mandate. In a very short period of time, they have produced a study, which, in spite of the many complex aspects of the subject matter, is both concise and authoritative. It is a document which, I believe, provides valuable insights into the grave dangers that are posed by the production and possible use of these dreaded weapons.

I am particularly impressed by the conclusion of the consultant experts wherein they state:

"The general conclusion of the report can thus be summed up in a few lines. Were these weapons ever to be used on a large scale in war, no one could predict how enduring the effects would be, and how they would affect the structure of society and the environment in which we live. This overriding danger would apply as much to the country which initiated the use of these weapons as to the one which had been attacked, regardless of what protective measures it might have taken in parallel with its development of an offensive capability. A particular danger also derives from the fact that any country could develop or acquire, in one way or another, a capability in this type of warfare, despite the fact that this could prove costly. The danger of the proliferation of this class of weapons applies as much to the developing as it does to developed countries.

"The momentum of the arms race would clearly decrease if the production of these weapons were effectively and unconditionally banned. Their use, which could cause an enormous loss of human life, has already been condemned and prohibited by international agreements, in particular the Geneva Protocol of 1925, and, more recently, in resolutions of the General Assembly of the United Nations. The prospects for general and complete disarmament under effective international control, and hence for peace throughout the world, would brighten significantly if the development, production and stockpiling of chemical and bacterio-

logical (biological) agents intended for purposes of war were to end if they were eliminated from all military arsenals.

"If this were to happen, there would be a general lessening of international fear and tension. It is the hope of the authors that this report will contribute to public awareness of the profoundly dangerous results if these weapons were ever used, and that an aroused public will demand and receive assurances that Governments are working for the earliest effective elimination of chemical and bacteriological (biological) weapons."

I have given the study prepared by the consultant experts my earnest consideration and I have decided to accept their unanimous report in its entirety, and to transmit it to the General Assembly, the Security Council, the Eighteen-Nation Committee on Disarmament and to the Governments of Member States, as the report called for by resolution 2454 A (XXIII).

I also feel it incumbent upon me, in the hope that further action will be taken to deal with the threat posed by the existence of these weapons, to urge that the Members of the United Nations undertake the following measures in the interests of enhancing the security of the peoples of the world:

1. To renew the appeal to all States to accede to the Geneva Protocol of 1925;
2. To make a clear affirmation that the prohibition contained in the Geneva Protocol applies to the use in war of all chemical, bacteriological and biological agents (including tear gas and other harassing agents), which now exist or which may be developed in the future;
3. To call upon all countries to reach agreement to halt the development, production and stockpiling of all chemical and bacteriological (biological) agents for purposes of war and to achieve their effective elimination from the arsenal of weapons.

INTRODUCTION

1. In accordance with the resolution of the General Assembly 2454 A (XXIII) the Secretary-General was asked to prepare, with the assistance of qualified consultant experts, a report on chemical and bacteriological (biological) weapons and on the effects of their possible use. Specifically the experts were asked to provide a scientific appraisal of the characteristics of the chemical and bacteriological (biological) weapons which could be used in warfare; of the effects they could have on military personnel and civilians; as well as of their long-term effects on health and our physical environment. They were also asked to provide a statement about the economic and security implications of the development, acquisition and possible use of such weapons and associated weapon systems. The report which follows is confined to these objectives.

2. No form of warfare has been more condemned than has the use of this category of weapons. The poisoning of wells has been regarded from time immemorial as a crime incompatible with the rules of war. "War is waged with weapons, not with poison" (*"Arms bella non venenis geri"*), declared the Roman jurists. As the destructive power of arms increased over the years, and with it the potential for the widespread use of chemicals, efforts were made to prohibit through international understandings and by legal means the use of chemical weapons. The Brussels Declaration of 1874 and the Hague Conventions of 1899 and 1907 prohibited the use of poisons and poisoned bullets and a separate declaration of the Hague Convention of 1899 condemned "the use of projectiles the sole object of which is the diffusion of asphyxiating or deleterious gases".

3. The fear today is that the scientific and technological advances of the past few decades have increased the potential of chemical and bacteriological (biological) weapons to such an extent that one can con-

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ceive of their use causing casualties on a scale greater than one would associate with conventional warfare. At the moment most of our knowledge concerning the use of chemical weapons is based upon the experience of World War I. Gas was first used in 1914 and the first big attack in 1915 claimed 5,000 human lives. It is estimated that from then until the end of the war in 1918, at least 125,000 tons of toxic chemicals were used, and according to official reports gas casualties numbered about 1,300,000, of which about 100,000 were fatal. The agents which were used in this war were much less toxic than those, in particular nerve agents, which could be used today, and they were dispersed by means of relatively primitive equipment as compared with what is now available, and in accordance with battlefield concepts of a relatively unsophisticated kind.

4. It is true that a considerable effort has also been made to develop chemical agents which have as their purpose not to kill but to reduce a man's capacity to fight. Such agents are used by civil authorities of a number of countries in order to suppress disorders and to control riots, but when used in warfare they would inevitably be employed as an adjunct to other forms of attack, and their over-all effect might be lethal.

5. Since World War II, bacteriological (biological) weapons have also become an increasing possibility. But because there is no clear evidence that these agents have ever been used as modern military weapons, discussions of their characteristics and potential threat have to draw heavily upon experimental field and laboratory data, and on studies of naturally occurring outbreaks and epidemics of infectious disease, rather than on direct battlefield experience. Their potential importance in warfare can be sensed when one remembers that infectious disease even as late as World War II caused numerous casualties.

6. The greater threat posed by chemical weapons today derives from the discovery and manufacture of new, more toxic compounds. On the other hand, bacteriological (biological) agents already exist in nature and can be selected for use in warfare. Some of these agents, notably bacteria, have been known for several decades, but there is a vast number of other possible agents, especially viruses, which have been discovered only recently, and some of these also possess characteristics which make their use possible in war. Increases in potency of these various types of agent have been made possible by scientific and technological advances in microbial genetics, experimental pathology and aerobiology.

7. As is well known, the use of toxic gases in World War I generated so powerful a sense of outrage that countries were encouraged to adopt measures prohibiting both chemical and bacteriological (biological) weapons. The result was the Geneva Protocol of 17 June 1925, which prohibits the use in war of asphyxiating, poisonous or other gases and of all analogous liquids, materials or devices, as well as bacteriological methods of warfare. This established a custom and hence a standard of international law, and in practice most States have adhered to the principle that no one should resort to the use of such weapons. But despite the adherence in which they have always been held by civilized peoples, chemical weapons have none the less on occasion been used. For example, mustard gas was used in Ethiopia in 1935-36, causing numerous casualties amongst troops and a civilian population which was not only completely unprotected, but which lacked even the most elementary medical services. It should also be noted that the existence of the Geneva Protocol of 1925 may have helped as a deterrent to the use of chemical or bacteriological (biological) weapons in World War II, even though the belligerents in that conflict had developed,

produced and stockpiled chemical agents for possible use. The International Tribunal at Nuremberg brought into the open the fact that amongst the new agents which had been produced and stockpiled during the course of the war were such highly lethal agents as Tabun and Sarin. Since then the validity and effectiveness of the Geneva Protocol have been reinforced by the approval, by the General Assembly of the United Nations, without a single dissenting voice, of resolutions 2162 B (XXI) of 5 December 1966 and 2454 A (XXIII) of 20 December 1968, calling for "strict observance by all States of the principles and objectives" of the Geneva Protocol, and inviting all States to accede to it.

8. It is simple to appreciate the resurgence of interest in the problems of chemical and bacteriological (biological) warfare. Advances in chemical and biological science, while contributing to the good of mankind, have also opened up the possibility of exploiting the idea of chemical and bacteriological (biological) warfare weapons, some of which could endanger man's future, and the situation will remain threatening so long as a number of States proceed with their development, perfection, production and stockpiling.

9. The report, as is noted in the General Assembly resolution, is designed to submit to peoples and governments, in a form easily understood by them, information on the effects of the possible use of chemical and bacteriological (biological) weapons, as well as to promote a further consideration of problems connected with chemical and bacteriological (biological) weapons. Information about the nature of chemical and bacteriological (biological) weapons, about their increase and diversification as technology has advanced, about their long-term effects on human beings, animals and vegetation, and about environmental factors which condition these effects, is provided in Chapters I to IV of the Report. In Chapter V, which deals with the economic and security implications of chemical and bacteriological (biological) warfare, the experts have interpreted the word "security" to mean both security in the narrow military sense, and security in terms of the adverse and long-term effects which these weapons, given they were ever used, could have on the framework of civilized existence.

10. As the present report shows, the outstanding characteristics of this class of weapons, and particularly of bacteriological (biological) weapons, is the variability, amounting under some circumstances to unpredictability, of their effects. Depending on environmental and meteorological conditions, and depending on the particular agent used, the effects might be devastating or negligible. They could be localized or widespread. They might bear not only on those attacked but also on the side which initiated their use, whether or not the attacked military forces retaliated in kind. Civilians would be even more vulnerable than the military. The development, acquisition and deployment of chemical and bacteriological (biological) weapons—quite apart from questions of protection—constitutes a real economic burden which varies in extent for different countries. Above all their acquisition could not possibly obviate the need for other weapons.

11. As chapters I and V of the report indicate, it would be enormously costly in resources, and administratively all but impossible, to organize adequate protection for a civilian population against the range of possible chemical agents. Even military personnel, if locally engaged in a particular operation in which chemical and/or bacteriological (biological) weapons were used and where they had the advantage of protective measures, would be unlikely to escape the wider-spread and longer-term effects on their

country at large. These might arise, for example, from the impracticability of protecting soil, plants, animals and essential food crops against short and long-term effects.

12. To appreciate the risks which bacteriological (biological) warfare could entail, one has only to remember how a natural epidemic may persist unpredictably, and spread far beyond the initial area of incidence, even when the most up-to-date medical resources are used to suppress the outbreak. The difficulties would be considerably increased were deliberate efforts made, for military reasons, to propagate pathogenic organisms. Mass disease, following an attack, especially of civilian populations, could be expected not only because of the lack of timely warning of the danger, but also because effective measures of protection or treatment simply do not exist or cannot be provided on an adequate scale.

13. Once the door was opened to this kind of warfare, escalation would in all likelihood occur and no one could say where the process would end. Thus the report concludes that the existence of chemical and bacteriological (biological) weapons not only contributes to international tension, but that their further development spurs the arms race without contributing to the security of any nation.

14. The present report will, in accordance with resolution 2454 A (XXIII), be submitted to the Eighteen-Nation Committee on Disarmament to the Security Council and to the General Assembly at its twenty-fourth session. We hope that it will contribute to the implementation of measures which, in the final analysis, will eliminate chemical and bacteriological (biological) weapons from all military arsenals.

CHAPTER I. THE BASIC CHARACTERISTICS OF CHEMICAL AND BACTERIOLOGICAL (BIOLOGICAL) MEANS OF WARFARE

15. Since World War I, when chemical warfare was first resorted to on a large scale, the variety and potency of chemical and bacteriological (biological) weapons has grown steadily, and there has been a corresponding increase in the capacity to deliver them to a target area. The particular threat posed by chemical weapons today derives from the existence of new, and far more toxic, chemical compounds than were known fifty years ago. Since bacteriological (biological) agents exist naturally, their increased potency as weapons has resulted from a process of selection rather than from the production of entirely new agents. As is explained in later sections of this report, selection has been made possible by advances in our knowledge of the genetics of microbes, and through advances in experimental aerobiology.

16. The most significant result of these technical developments is the great variety of injurious effect which these agents can induce, and the consequent increase in the number and types of situation in which there might be a temptation to use them for military purposes.

A. Characteristics of chemical and bacteriological (biological) weapons

17. For the purposes of this report, chemical agents of warfare are taken to be chemical substances, whether gaseous, liquid, or solid, which might be employed because of their direct toxic effects on man, animals and plants. Bacteriological (biological) agents of warfare are living organisms, whatever their nature, or infective material derived from them, which are intended to cause disease or death in man, animals or plants, and which depend for their effects on their ability to multiply in the person, animal or plant attacked.

18. Various living organisms (e.g. rickettsiae, viruses and fungi), as well as bacteria, can be used as weapons. In the context of warfare all these are generally recognized as "bacteriological weapons". But in order to eliminate any possible ambiguity,

the phrase "bacteriological (biological) weapons" has been used throughout to comprehend all forms of biological warfare.

19. All biological processes depend upon chemical or physico-chemical reactions, and what may be regarded today as a biological agent could, tomorrow, as knowledge advances, be treated as chemical. Because they themselves do not multiply, toxins, which are produced by living organisms, are treated in this report as chemical substances. We also recognize there is a dividing line between chemical agents of warfare in the sense we use the terms, and incendiary substances such as napalm and smoke, which exercise their effects through fire, temporary deprivation of air or reduced visibility. We regard the latter as weapons which are better classified with high explosives than with the substances with which we are concerned. They are therefore not dealt with further in this report.

20. Finally, we recognize that both chemical and bacteriological (biological) agents are designated either as lethal agents, that is to say, agents which are intended to kill, or as incapacitating agents, that is to say, agents which are intended to cause disability. These terms are not absolute, but imply statistical probabilities of response which are more uncertain with bacteriological (biological) than with chemical agents. Not all individuals will die from an attack with a given lethal agent, whereas some, for example infants and people weakened by malnutrition, disease or old age, as well as a high proportion of individuals in special circumstances, for example following irradiation, might succumb to an attack with incapacitating chemical or bacteriological (biological) agents. With a few chemical agents, notably some tear gases (lachrymators), there is a negligible probability of any fatal outcome, and these have been used by many Governments to quell riots and civil disorders. When used in this way they are called riot control agents. Lachrymators have also been widely used in warfare as harassing agents, in order to enhance the effectiveness of conventional weapons, or to facilitate the capture of enemy personnel.

1. Differences Between Chemical and Bacteriological (Biological) Warfare

21. Although there are some similarities between chemical and bacteriological (biological) agents regarded as weapons of war, they differ in certain important respects. These differences are related to (1) potential toxicity; (2) speed of action; (3) duration of effect; (4) specificity; (5) controllability; and (6) residual effects.

Potential toxicity

22. Although more toxic than most well-known industrial chemicals, chemical warfare agents are far less potent on a weight-for-weight basis than are bacteriological (biological) agents. The dose of a chemical agent required to produce untoward effects in man is measured in milligrams (1/1,000 of a gram), except for toxins which may be in the microgram (1/1,000 of a milligram) range. The corresponding dose for bacteriological (biological) agents is in the picogram (1/1,000,000 of a microgram) range.

23. This difference reflects the fact that bacteriological (biological) agents, being alive, can multiply, and its significance is that, weight-for-weight, bacteriological (biological) weapons could be expected to inflict casualties over very much more extensive areas than could chemical weapons.

24. Being living organisms, bacteriological (biological) agents are also very much more susceptible to sunlight, temperature, and other environmental factors than are chemical agents. A bacteriological (biological) agent disseminated into a given environment may retain its viability (ability to live and multiply) while losing its virulence (ability to produce disease and injury).

Speed of action

25. As a class, chemical agents produce their injurious effects in man, animals or plants more rapidly than do bacteriological (biological) agents. The time between exposure and significant effect may be minutes, or even seconds, for highly toxic gases or irritating vapours. Blister agents take a few hours to produce injury. Most chemicals used against crops elicit no noticeable effect until a few days have elapsed. On the other hand, a bacteriological (biological) agent must multiply in the body of the victim before disease (or injury) supervenes; this is the familiar "incubation period" of a disease, the time which elapses between exposure to infection and the appearance of symptoms of illness. This period is rarely as short as one or two days, and may be as long as a few weeks or even longer. For both chemical and bacteriological (biological) agents the speed of action is affected by the dose (i.e., the quantity absorbed) but this secondary factor does not obscure the basic difference between the two classes of agents in the time they take to manifest their effects.

Duration of effect

26. The effects of most chemical agents which do not kill quickly do not last long, except in the case of some agents such as phosgene and mustard, where they might continue for some weeks, months or longer. On the other hand, bacteriological (biological) agents which are not quickly lethal cause illness lasting days or even weeks and on occasion involve periods of prolonged convalescence. The effects of agents which act against plants and trees would last for weeks or months and, depending on the agent and the species of vegetation attacked, could result in death.

Specificity

27. While both classes of agents can be used to attack men, animals or plants, individual biological agents have in general a much greater degree of host specificity. Influenza, for example, is essentially a disease of man; foot-and-mouth disease mainly affects cloven-hoofed animals; and rice blast is a disease confined to rice only. On the other hand, some diseases (for example, brucellosis and anthrax) occur both in man and animals. However, chemical agents are much less specific: nerve agents can affect mammals, birds and invertebrates (e.g., insects).

Controllability

28. By controllability is meant the ability to predict the extent and nature of the damage which chemical and bacteriological (biological) agents can cause. This is a most important consideration in their use as weapons. The most likely means of delivering chemical and bacteriological (biological) agents is by discharge into the atmosphere, relying on turbulent diffusion and wind currents to dilute and spread the agent over the area being attacked. Control is thus possible only to the extent that the meteorological situation can be predicted.

29. Because they infect living organisms, some bacteriological (biological) agents can be carried by travellers, migratory birds, or animals, to localities far from the area originally attacked.

30. The possibility of this kind of spread does not apply to chemical agents. But control of contamination by persistent chemical agents could be very difficult. Should large quantities of chemical agents penetrate the soil and reach underground waters, or should they contaminate reservoirs, they might spread hundreds of kilometres from the area of attack, affecting people remote from the zone of military operations. Although we know of no comparable substance likely to be used as a chemical warfare agent, the spread of DDT over the globe illustrates, in an extreme form, how man-made chemicals can spread. This chemical insecticide is now found in the tissues of creatures in all parts

of the world, even in places in which it has never been used. For example, as a result of its transfer through food chains, it is even found in the tissues of the penguins which live in Antarctica.

Residual effects

31. In circumstances which favour their persistence, herbicides, defoliants and perhaps some other chemical agents, might linger for months, stunting the growth of surviving or subsequent plant life, and even changing the floral pattern through selection. Following repeated use, certain chemical agents could even influence soil structure. The risk of residual effects with some bacteriological (biological) agents is potentially greater, mainly because they could lead to disease, which might become epidemic if man-to-man transmission occurred readily. Bacteriological (biological) agents might also find unintended hosts in the animals and plants of an area, or be transported by infected individuals over great distances to new environments.

2. Technology of Chemical and Bacteriological (Biological) Warfare

32. The technological problems associated with chemical and bacteriological (biological) warfare are of two kinds; (1) those associated with the production of the agents and the weapons needed for their dissemination and (2) those which concern the provision of the protective equipment and defenses necessary to protect military forces and civilian populations. Any nation whose chemical, pharmaceutical and fermentation industries are well advanced could produce chemical and bacteriological (biological) agents on a scale commensurate with its other military capabilities. The assurance of safety in the production of bacteriological (biological) agents, problems associated with the synthesis of complex chemical agents, and deciding on the best weapons to disseminate them, are examples of some of the relevant technological difficulties. A special problem associated with the development and maintenance of an offensive capability in bacteriological (biological) warfare relates to the fact that some agents are viable for only a short time (a few days) after manufacture. This period can be extended by refrigeration of the agent or by freeze-drying it before storage. The drying processes, however, are very complex and difficult where large quantities of highly pathogenic agents are involved. The problems which relate to defence are far more difficult, for as with most weapons, effective defence calls for much more stringent training, and demands far more manpower and monetary resources than does the offence. For example, alarm systems against chemical attack are very complex electro-mechanical devices whose production demands a highly technologically based industry. They cannot be maintained except by expert and highly trained personnel.

3. Chemical and Bacteriological (Biological) Weapons Systems

33. The use in warfare, and the possible military effectiveness, of chemical and bacteriological (biological) agents cannot be appreciated if they are thought of simply as poisons and plagues. They need to be considered in the context of the weapon systems of which they would be part.

34. A weapon system comprises all the equipment and personnel, as well as the organizational structure, required to maintain and operate a military device. By itself, for example, a cannon is not a weapon system. Only when it is integrated into an artillery battery, together with trained crew, ammunition, vehicles, supplies, spare parts, firing table, forward observer, communications and command organization does it constitute a weapon system. Correspondingly, artillery shells filled with mustard gas or nerve agents and guns to fire them, or an aircraft with a spray tank filled with a bacteriological (bio-

logical) agent, are not by themselves weapon systems.

35. Many complex technological problems have to be overcome in transforming a chemical or bacteriological (biological) "agent" into a "weapon system". A "weapon" is of little military value if it is not dependable and if it cannot be delivered to a target with certainty. This means that in the development of a chemical and bacteriological (biological) weapon system it is not only necessary to consider matters such as mass production, storage, transportation, and means of delivery, but also the limitations on use set by terrain and weather prediction.

36. In addition, considerations affecting defense need to be taken into account. Masks, protective clothing, detection alarms, special medical supplies, augmented logistic facilities and, above all, thoroughly trained military and civilian personnel, are necessary parts of chemical and bacteriological (biological) weapon systems. The concept of a fully developed chemical or bacteriological (biological) weapon system is thus exceedingly complex, and implies as much technical capability and as high a degree of training as does the operation of any other advanced weapon systems. While chemical and bacteriological (biological) weapon systems are cheaper and more readily attained than nuclear weapons, and while they may in some circumstances be more effective militarily than conventional weapons, they are highly complex systems which for their development and operation call for sizeable resources and considerable expertise. But the possibility always exists that by choosing a single agent and a simple means of delivery, a nation could equip itself relatively cheaply to attack a limited area with a reasonable chance of success.

B. Concepts of the use of chemical and bacteriological (biological) weapons in war

1. Chemical Weapons

37. Chemical weapons could be used either within the zone of contact of opposing forces; or against military targets such as airfields, barracks, supply depots, and rail centres well behind the battle-area itself; or against targets which have no immediate connexion with military operations; for example, centres of population, farm land, and water supplies. The circumstances in which they could be used within a zone of contact are many and varied—for example, to achieve a rapid and surprise advantage against a poorly trained, ill-equipped military force which lacked chemical protective equipment; to overcome troops in dug-outs, fox-holes, or fortifications where they would be otherwise protected against fragmenting weapons and high-explosive; to remove foliage, by means of chemical herbicides so as to improve visibility and to open up lines of fire, and to prevent ambush; to create barriers of contaminated land on or in the rear of the battlefield to impede or channel movement; or to slow an enemy advance by forcing them to use protective clothing and equipment. Such equipment undoubtedly restricts mobility and impedes normal activities. It is thus highly probable that once one of two well-equipped sides had been attacked with chemical weapons, it would retaliate in kind, in order to force its opponent to suffer the same penalties of restriction. In all such operations civilians who had not fled from the battle-area might become casualties, as they also would if, while not in the battle-zone, vapours or aerosols drifted towards them with the wind, or if they strayed at a latter date into areas contaminated with a persistent agent. The risk of civilian casualties would obviously be greater if chemical attacks were made on military targets well in the rear of the zone of contact, and would be very serious in the case of attacks on centres of population.

2. Bacteriological (Biological) Weapons

38. There is no military experience of the use of bacteriological (biological) agents as weapons or war and the feasibility of using them as such has often been questioned. One issue which has frequently been raised concerns the validity of extrapolations made from laboratory experience to military situations in the field. Some recent investigations under field conditions throw light on this point.

39. In one field trial, zinc cadmium sulfide (a harmless powder) was disseminated in particles two microns (one micron is 1/1,000,000 of a metre in diameter, from a ship traveling 16 kilometres offshore. About 200 kilograms were disseminated while the ship travelled a distance of 260 kilometres parallel to the coastline. The resulting aerosol traveled at least 750 kilometres, and covered an area of over 75,000 square kilometres.

40. This observation provides an indication of the size of area which might be covered by a windborne aerosol, but it does not tell whether the bacteriological (biological) agents which might be spread in an aerosol would still retain the ability to produce disease. All bacteriological (biological) agents lose their virulence or die progressively while travelling in an aerosol and the distance of effective travel of the cloud would depend on the rate of decay of the particular agent in the particular atmospheric conditions prevailing.

41. Some idea of the relative size of areas which can be covered by bacteriological (biological) and chemical aerosols can be gained from this same experiment. Had the particles that were carried been a bacterial or viral agent, they would not have caused casualties over as large an area as the one covered, because of decay of the agent while in the aerosol state. However, depending on the organism and its degree of hardiness, areas of 5,000 to 20,000 km² could have been effectively attacked, infecting a high proportion of unprotected people in the area. If the same means are applied to a hypothetical chemical attack using the most toxic chemical nerve agent, then about 0.8 kg of agent would have been released per km. The downwind hazard from this, in which some casualties might be expected, would not have extended more than one kilometre, and probably less, unless meteorological conditions were extremely favourable (see chapter III). The area covered by such a chemical attack might thus have been 50 to 150 km², as compared with the 5,000 to 20,000 km² for the bacteriological (biological) attack.

42. For purposes of sabotage or covert (secret, as in sabotage actions behind enemy lines) operations, small aerosol generators for bacteriological (biological) agents could be built, for example, into fountain pens or cigarette lighters. It is also possible to conceive of the distribution of bacteriological (biological) agents by hand to poison either water supplies or ventilation systems, especially in a situation of breakdown of sanitary facilities due, say, to military mobilization, or to a nuclear attack. In addition to producing casualties, such an attack could produce severe panic. If half a kilo of a culture of Salmonella (a group of bacteria, many species of which produce severe intestinal infections, including gastro-enteritis, food ("ptomaine") poisoning, paratyphoid fever and typhoid fever) had been added to a reservoir containing 5 million litres of water, and complete mixing had occurred, severe illness or disability would be suffered by anyone drinking 1 decilitre (about 3 ounces) of untreated water.

43. The same degree of poisoning as would be produced by half a kilo of Salmonella culture could be achieved with 5 kilos of botulinum toxin (see chapter II), 7 kilos of staphylococcal enterotoxin (see chapter II), or 50 kilos of V-nerve agent, or in the case of common industrial chemicals, with five tons

of sodium fluoroacetate (used as a rodenticide) or ten tons of potassium cyanide.

C. Chemical and bacteriological (biological) agents

Chemical Agents

44. Chemical agents are usually described in terms of their physiological effects and are characterized as follows:

Agents affecting man and animals

Nerve agents are colourless, odourless, tasteless chemicals, of the same family as organophosphorus insecticides. They poison the nervous system and disrupt vital body functions. They constitute the most modern war chemicals known; they kill quickly and are more potent than any other chemical agents (except toxins).

Blister agents (vesicants) are oily liquids which, in the main, burn and blister the skin within hours after exposure. But they also have general toxic effects. Mustard gas is a good example. Blister agents caused more casualties than any other chemical agent used in World War I.

Choking agents are highly volatile liquids which, when breathed as gases, irritate and severely injure the lungs, causing death from choking. They were introduced in World War I and are of much lower potency than the nerve agents.

Blood agents are also intended to enter the body through the respiratory tract. They produce death by interfering with the utilization of oxygen by the tissues. They, too, are much less toxic than nerve agents.

Toxins are biologically produced chemical substances which are very highly toxic and may act by ingestion or inhalation.

Tear and harassing gases are sensory irritants which cause a temporary flow of tears, irritation of the skin and respiratory tract, and occasionally nausea and vomiting. They have been widely used as riot control agents, and also in war.

Psycho-chemicals are drug-like chemicals intended to cause temporary mental disturbances.

Agents affecting plants

Herbicides (defoliants) are agricultural chemicals which poison or desiccate the leaves of plants, causing them to lose their leaves or die. The effectiveness of different chemical warfare agents against man, animals and plants is shown in table I. The various specific chemical agents are listed and described in chapter 2.

Methods of delivery

45. Chemical munitions are designed to fulfill three objectives: (1) to provide a container for the agent so that the agent/munition combination can be delivered to its target; (2) to attain an effective distribution of agent over the target area; and (3) to release the agent in active form. In the case of incapacitating and riot control agents, it is necessary that the munition itself should not cause injury or death, and that it should not start fires. This is particularly important for devices used in the control of riots.

46. The munitions to be used would depend on the method of delivery, the shape and size of the target area, and other variables. Ground-to-ground munitions include grenades, shells, rockets; and missile warheads; air-to-ground munitions include large bombs, dispensers, spray tanks, and rockets; emplaced munitions include generators and mines.

47. *Ground-to-ground munitions.* Small ground-to-ground munitions (grenades, shells and small rockets) function much like their conventional counterparts. Upon impact in the target area, they would either explode or burn, and so expel the agent to form a cloud which would diffuse and drift downwind, resulting in an elongated elliptical area within which casualties would occur. This represents a point source of dissemination (chapter II).

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TABLE 1.—CATEGORIES OF CHEMICAL WARFARE AGENTS AND THEIR CHARACTERISTICS

	Physical state at 20° C.	Persistence	Main state of aggregation in target	Effective route of entry	Effective against
Nerve agents.....	Liquid.....	Low to high.....	Vapour, aerosol, liquid.....	Lungs, eyes, skin.....	Man, animals.
Bliaster agents.....	Liquid, solid.....	High.....	do.....	do.....	Do.
Choking agents.....	Liquid.....	Low.....	Vapour.....	do.....	Do.
Blood agents.....	Liquid, vapors.....	do.....	do.....	Lungs.....	Do.
Toxins.....	Solid.....	do.....	Aerosol, liquid.....	Lungs, intestinal tract.....	Do.
Tear and harassing gases.....	Liquid, solid.....	do.....	Vapor, aerosol.....	Lungs, eyes.....	Do.
Incapacitants.....	do.....	do.....	Aerosol, liquid.....	Lung, skin.....	Do.
Herbicides (defoliant).....	do.....	Low to high.....	do.....	Foliage and roots.....	Plants. ¹

¹ Some herbicides, particularly those containing organic arsenic are also toxic for man and animals.

48. Small rockets would frequently be fired in "ripples", and artillery shells in salvos, resulting in a group of impacts over the target area. This would constitute an area source of dissemination (chapter II).

49. Large ground-to-ground (as well as aerial munitions and missile warheads) might carry a number of small submunitions as well as agent in bulk. The parent munition, upon functioning, would disperse the submunitions over the target area. These would then disseminate the agent over a wide area rather than a single point of impact, as in the case of bulk munitions.

50. Another military concept is to use large warheads filled with several hundred kilos of an agent of low vapour pressure. Such a warhead, burst at a suitable altitude would produce a shower of droplets, effectively contaminating everything on which it fell. A number of such weapons could be used to assure that the target was covered.

51. *Air-to-ground munitions.* Bombs dropped from aircraft are larger than most shells, and consequently would result in a higher concentration of the chemical near the point of ground impact. Bombs bursting close to the ground could be used to achieve a wider dissemination of the agent, especially with chemical agents.

52. A dispenser is a container for submunitions, which, after opening, could remain attached to the aircraft. The submunitions could be released simultaneously or in succession.

53. Small rockets or missiles could also be used to deliver chemical agents from aircraft. The pattern of dispersal would be much the same as that produced by ground-to-ground rockets or missiles.

54. *Ground-emplaced munitions.* Ground-emplaced munitions comprise generators and mines. The generator is a tank containing a chemical agent, a source of pressure, and a nozzle through which the agent is forced. Generators would be placed upwind of the target, and then activated by a suitable device.

55. Chemical mines would be placed in areas of anticipated enemy activity, and would be activated by pressure or trip wires.

2. Bacteriological (Biological) Agents

56. Like chemical agents, bacteriological (biological) agents may also be classified in terms of their intended use, whether designed to incapacitate or to kill human beings, to incapacitate or kill food and draft animals, or to destroy food plants and industrial crops.

57. Bacteria, viruses, fungi, and a group of microbes known as rickettsiae are by far the most potent agents which could be incorporated into weapon systems. There is no assurance, however, that other living organisms may not in the future become more important as potential agents for warfare.

The selection of agents for use in warfare

58. The number of bacteriological (biological) agents which could potentially be used in warfare is far fewer than those which cause naturally-occurring disease. To be effective for this purpose they should:

- (a) be able to be produced in quantity;
- (b) be capable of ready dissemination in the face of adverse environmental factors;

(c) be effective regardless of medical counter-measure;

(d) be able to cause a large number of casualties (this would imply that any agent chosen would be highly infectious, but whether the agent chosen would also be easily transmissible from man-to-man, would depend upon an intent to initiate an epidemic spread).

Agents affecting man

59. All the diseases under consideration occur naturally, and the causative organisms with few exceptions, are known to scientists throughout the world. Incapacitating agents are those which, in natural outbreaks, cause illness but rarely death. If the natural disease has an applicable mortality, the agent is regarded as a lethal one. However, these agents when used as aerosol weapons might cause more severe disease than occurs naturally.

60. Different populations have varying degrees of resistance to the diseases produced by bacteriological (biological) agents. An infectious disease which might be only mildly incapacitating in one population might prove disastrous to another. For example, when measles was first introduced into the Hawaiian Islands, it caused far more deaths than in the relatively resistant populations of Europe. A bacteriological (biological) weapon which might be intended only to incapacitate could be highly lethal against a population where resistance had been lowered as a result of malnutrition. Conversely, a weapon which was intended to spread a lethal disease might only cause occasional mild illness in people who had been given a protective vaccine or who had become immune as a result of natural infection. The history of epidemiology is rich with surprises.

61. *Viruses* are the smallest forms of life. Most of them can be seen only with the electron microscope, and must be grown on living tissue (tissue cultures, fertile eggs, etc.) Genetic manipulation of the whole virus or chemical manipulation of its nucleic acid, might be used to acquire strains of higher virulence or greater stability to environmental stresses.

62. *Rickettsiae* are intermediate between the viruses and bacteria. Like the viruses, they grow only in living tissue. Judging by the scientific literature, research into the genetics of rickettsiae has been less intense than into that of viruses and bacteria.

63. *Bacteria* are larger than viruses, ranging in size from 0.3 micron to several microns. They can be easily grown on a large scale employing equipment and processes similar to those used in the fermentation industry, but special skills and experience would be needed to grow them in quantity in the particular state in which they readily cause disease. Although many pathogenic (disease-producing) bacteria are susceptible to antibiotic drugs, antibiotic-resistant strains occur naturally, and can be selected or obtained through the use of suitable methods of genetic manipulation. Similarly, it is possible to select strains with increased resistance to inactivation by sunlight and drying.

64. *Fungi* also produce a number of diseases in man, but very few species appear

to have any potential in bacteriological (biological) warfare.

65. *Protozoa* are one-celled microscopic organisms which cause several important human diseases, including malaria. Because of their complex life cycles, they too appear to have little significance in the present context.

66. Parasitic *worms* such as hook-worm, and the filarial worms have very complicated life cycles. They cause illness and disability only after long exposure and repeated infection, and would be extremely difficult to produce in quantity, to store, to transport, or disseminate in a weapon. Insects are also difficult to conceive of as weapons. Some, such as the mosquito and the tick are transmitters of disease, and as "vectors", have to be looked upon as having potential military significance. Higher forms of life, such as rodents and reptiles can be dismissed in the context of the present discussion.

Agents affecting animals

67. Bacteriological (biological) anti-animal agents, such as foot-and-mouth disease and anthrax would be used primarily to destroy domestic animals, thereby indirectly affecting man by reducing his food supply.

68. Outbreaks of contagious disease in animal populations, known as epizootics, may spread much more readily than do epidemics among human beings. Viral infections are probably more serious for animals than those caused by other classes of micro-organisms.

69. Most of the bacterial diseases of animals which could probably be used in warfare are also transmissible to man. Human beings would be expected to get the disease if they were affected by the attacking aerosol cloud, and occasional individuals might contract the disease from infected animals.

Agents affecting plants

70. The natural occurrence of devastating plant diseases such as the blight of potatoes in Ireland in 1845, the coffee rust of the 1870s in Ceylon, the chestnut blight of 1904 in the United States of America, and the widespread outbreaks today of cereal (especially wheat) rusts has suggested that plant pathogens might be used for military purposes. There are four major requirements for the deliberate development of a plant disease into epidemic (epiphytotic), proportions: large amounts of the host plant must be present in the region; the agent should be capable of attacking the particular varieties of host plant that are grown; adequate quantities of the agent must be present; and the environmental conditions within the region should be favorable for the spread of the disease. An epiphytotic cannot develop if any one of the above requirements is not satisfied.

Methods of delivery

71. Bacteriological (biological) agents can, in principle, be loaded into the same type of munitions as can chemical agents. Other than for covert or "special-purpose missions", bacteriological (biological) weapons, if developed for military purposes, would in all probability be delivered by aircraft or by large ballistic missiles. Aircraft (including cruise missiles and drones) could drop a large number of bomblets from high altitude, or

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spray from a low altitude. Because a small amount of agent will cover relatively large areas, bombs would probably be small (1 kilo or less) and dispersed over as wide an area as possible. They could be released from clusters or from dispensers in the manner of chemical weapons, but probably from a higher altitude.

72. An aircraft could establish a line of agent which, as it traveled downwind, would reach the ground as a vast elongated infective cloud (see chapter II). The effectiveness of such a procedure would be highly dependent on weather conditions, but the larger the area, the larger the weather front involved, the greater the chances that the predicted results would be achieved. A small relative error might, however, involve a country not in the conflict.

73. It is conceivable that bacteriological (biological) weapons, probably bomblets, could be packaged in a ballistic missile. The bomblets could be released at a predetermined altitude to burst at ground level. The effect would be the same as bomblet delivery by aircraft except that it would be more costly.

74. Unless transmitted by insects, bacteriological (biological) agents have little power to penetrate the intact skin. Infections through the respiratory tract by means of aerosols is by far the most likely route which could be used in warfare.

75. Many naturally-occurring diseases (e.g. influenza, tuberculosis) are spread by the aerosol route, and some of them, notably influenza, can generate into large epidemics. When an infected person sneezes, coughs, or even speaks, an aerosol is formed which contains particles ranging widely in size. The larger particles are usually of little importance because they fall to the ground. But small particles (3 microns or less in diameter) dry out rapidly in the air, and are the most infectious. They may remain suspended in the atmosphere for a long time. Animal experiments have shown that a great many infectious agents (including many which are transmitted otherwise in nature) can be transmitted to animals by aerosols of small particle size. Laboratory accidents and experiments on volunteers have confirmed the effectiveness of the aerosol route of infection for man.

76. If bacteriological (biological) warfare ever occurred, the aerosol technique would thus be the one most likely to be used, simply because the respiratory tract is normally susceptible to infection by many micro-organisms; because of the wide target area which could be covered in a single attack; and because ordinary hygienic measures are ineffective in preventing the airborne route of attack. Since the particle size of an aerosol is crucial to its ability to penetrate into the lung (see chapter III for detailed discussion), the method for aerosolizing a bacteriological (biological) agent would have to be controllable so as to assure the dissemination of a large proportion of particles less than 5 microns in diameter.

77. Aerosols of bacteriological (biological) agents could be formed by three general methods. Agents could be disseminated by explosive means in much the same way as chemical agents. However, the size of the resulting particle is hard to control by this method, and much of the agent may be destroyed by the heat and shock of the exploding munition. Particles could also be formed by using pressure to force a suspension of the organisms through a nozzle. Particle size is determined by the amount of pressure, the size of the discharge orifices, the physical characteristics of the agent, and atmospheric conditions. Size control of solid particles (dry form of agent) can be achieved by "pre-sizing" before dissemination. Aerosol particles could also be produced by a spray by releasing the agent in liquid suspension into a high velocity air stream. This principle

can be applied to spray devices for use on high performance aircraft.

D. Defence of man against chemical and bacteriological (biological) agents

78. A comprehensive defensive system against attacks by chemical or bacteriological (biological) agents would have to provide for detection and warning, rapid identification of agents, protection of the respiratory tract and skin, decontamination, and medical prophylaxis and treatment. Some aspects of such a system could be dealt with by fairly simple equipment. Others would necessitate highly sophisticated apparatus. But the whole complex would necessitate a very effective organization manned by well-trained personnel. While military units and small groups of people could be equipped and trained to protect themselves to a significant extent, it would be impracticable for most (if not all) countries to provide comprehensive protection for their entire civil population.

1. Medical Protection

Chemical attacks

79. No general prophylactic treatment exists which could protect against chemical attacks. Antidotes (atropine and oximes) to nerve agents of value if administered within half an hour before or within a very short time after exposure. Atropine is itself toxic, however, and might incapacitate unexposed individuals given large doses. Skin can be protected from the vapours of blister agents by various ointments, but they are not effective against liquid contamination.

Bacteriological (biological) attacks

80. Vaccination is one of the most useful means of protecting people from natural infective disease, and the only useful means available for prophylaxis against bacteriological (biological) attacks. The protective value of vaccines against small-pox, yellow fever, diphtheria, and other diseases is fully established, although the protection they afford can be overcome if an immunized individual is exposed to a large dose of the infectious agent concerned. It is probable, however, that even those existing vaccines which are effective in preventing natural infectious diseases might afford only limited protection against respiratory infection by an agent disseminated into the air in large amounts by a bacteriological (biological) weapon. Moreover, whole populations could not be vaccinated against all possible diseases. The development, production, and administration of so many vaccines would be enormously expensive, and some vaccines might produce undesirable or dangerous reactions in the recipients.

81. This picture is not significantly altered by certain new developments in the field of vaccination: e.g. the use of living bacterial vaccines against tularemia, brucellosis and plague; or aerosol vaccination, which is particularly relevant to vaccination of large numbers of people. There have been recent advances in the control of virus diseases, but at present none of these is practicable for the protection of large populations against bacteriological (biological) warfare.

82. Prophylaxis against some diseases can also be provided by the administration of specific anti-sera from the blood of people or animals previously inoculated with micro-organisms, or products derived from them, to increase the anti-body levels (immunity) in their blood. Tetanus anti-toxin is used in this manner, and until more effective methods replaced them, such anti-sera were used for many diseases. It would, however, be impossible to prepare specific anti-sera against all possible bacteriological (biological) agents and to make them available for large populations.

83. Other possibilities, for example the use of therapeutic materials before symptoms appear, are equally remote from practical

realization. They include immune serum, gammaglobulin, or drugs such as antibiotics or sulfonamide drugs. The use of gammaglobulin to prevent, or mitigate the severity of, disease may be useful for individuals known to have been exposed. But since gammaglobulin is made by separation from human blood, stocks could never be available except for isolated cases. In theory, chemoprophylaxis (the use of drugs and antibiotics to prevent infection) might also be useful in the short term for small groups operating at especially high risk. But it would only be prudent to assume that the bacteriological (biological) agents which an enemy might use would be those which were resistant to such drugs.

2. Detection and Warning

84. The requirement is to detect a cloud of a chemical or a bacteriological (biological) agent in the air sufficiently quickly for masks and protective clothing to be donned before the attack can be effective. Usually the objective would be to try and detect the cloud upward of the target so that all those downwind could be warned. There are also requirements for the detection of ground contamination with chemical agents and for detection equipment to enable those under attack to decide when it would be safe to remove their protective equipment.

Chemical attacks

85. In World War I it was possible to rely upon odour and colour as the primary means of alerting personnel that a chemical attack had been launched. The newer more toxic chemical agents cannot be detected in this way. On the other hand, presumptive evidence that such weapons had been used would none the less still be of value as warning. Once an enemy had used chemical weapons, each subsequent attack would necessarily have to be presumed to be a possible chemical attack, and protective measures would have to be instituted immediately. Individuals would have to mask not only in the air attack in which spray was used, or when there was smoke or mist from an unknown source, or a suspicious smell, or when they suffered unexpected symptoms such as a runny nose, choking and tightness in the chest, or disturbed vision, but whenever any bombardment occurred. But because of the uncertainty, it would be clearly desirable to devise and provide a system of instruments which can detect the presence of toxic chemicals at concentrations below those having physiological effects, and which would give timely and accurate warning of a chemical attack. It would also be advantageous to have test devices, collectors and analytical laboratory facilities in order to determine whether the environment was safe, as well as to identify accurately the specific chemical agent used in an attack.

86. The first and essential component of a defensive system would be an instrument which could detect low concentrations of a chemical agent. However low the concentration, a person could inhale a toxic amount in a short time because he breathes 10-20 litres of air per minute. Since the human body can eliminate or detoxify very small amounts of many toxic materials, there is no need to consider very long periods of exposure—the concern is with the exposures of only a few hours. This is often referred to technically as the Ct (concentration time) factor. Essential requirements of a method of detection suitable for use by military or civil defence personnel are that it be simple, specific, sensitive and reliable. Typical detector kits contain sampling tubes and/or reagent buttons, papers, etc. After being exposed to particular chemical agents, these detectors change colour or exhibit some other changes easily observable without special instruments. Chemical detection kits could also be used to decide when it is safe to remove protective masks or other items of protective cloth-

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ing. Obviously, laboratories, whether mobile or fixed, can perform more elaborate chemical analyses than can detection kits.

87. Warning devices which have been devised incorporate sensitive detectors that actuate an automatic alarm which alerts individuals to take protective action before a harmful dose of agent is received. They are of two trends: point sampling devices, which sample the air at one location by means of an air pump, and area scanning devices, which probe a specific area for chemical agents. The disadvantage of point source alarms is that they must be placed upwind of the area that has to be protected, and a rather large number may be needed. If the wind shifts, they have to be repositioned. Successful area scanning alarms have not yet been developed.

88. It must be recognized that in spite of instrumental warning systems, personnel near the point of dissemination of a chemical agent might still not have sufficient time to take protective action.

Bacteriological (biological) attacks

89. Unlike chemical weapons, bacteriological (biological) weapons cannot readily be distinguished from the biological "background" of the environment by specific chemical or physical reactions, and much lower aerosol concentrations of bacteriological (biological) agents are dangerous than of chemical agents. The problem of early detection and warning is thus even more difficult than for chemical weapons. A partial solution to the problem has been achieved with certain non-specific but very sensitive physical devices such as particle-counters and protein detectors (protein is a typical constituent of micro-organisms). Presumptive evidence of a bacteriological (biological) attack might be obtained if there is an unusual deviation from the normal pattern of material in the air recorded by the instruments. The elevation of such a deviation, however, would necessitate intensive and prolonged study of the normal pattern in a given location. This subject is discussed further in annex A.

3. Physical Protection

90. The primary objective is to establish a physical barrier between the body and the chemical and bacteriological (biological) agents, and especially to protect the skin and the respiratory tract. Without this no warning system, however effective, has the slightest value. Protection could be achieved by using various types of individual protective equipment or by means of communal shelters.

Individual protection

91. Protective masks are the first line of defense against all chemical and bacteriological (biological) agents. Although protective masks differ in appearance and design, they have certain features in common: a fitted facepiece, made of an impermeable material soft enough to achieve an effective seal against the face, and some means of holding it in place, such as a head strap, and a filter and absorption system, in canister or other form, which will remove particulate (aerosol) agents by mechanical filtration. The canister also contains activated charcoal, sometimes impregnated to react with agents in the vapour state, but which in any case will absorb toxic vapours. Some masks are made so as to permit the drinking of water while the individual is masked, or attempts at resuscitation measures on casualties without unmasking them. Civil defense masks are often less elaborate versions of the military mask. Gas proof protectors can be provided for infants.

92. A protective mask, properly fitted and in good working condition, will provide complete respiratory protection against all known chemical and bacteriological (biological) agents. However, a certain percentage of masked personnel can be expected to become

casualties because of lack of training, failure to keep the mask in good condition, growth of beard, or because facial injuries prevent a good fit, etc. The amount of leakage that can be tolerated with bacteriological (biological) agents is much less because of their greater potency.

93. Since mustard gases and the nerve agents of low or intermediate volatility can penetrate the unbroken skin, even through normal clothing, the whole body surface must be protected by some form of special clothing, of which there are two kinds, one which is impermeable to liquid agents, and the other which, though permeable to air and moisture, has been treated so as to prevent chemical agents from getting through. Rubber coated fabrics, made into protective suits, constitute the first, while normal clothing, treated with chlorinides or absorbents, is an example of the second. In addition, some form of impermeable cover, ground sheet or cape, can be used to protect against gross liquid contamination. Feet and hands are usually protected by special gloves, and either by boot covers or treated boots.

94. Together with a mask, protective clothing, properly worn and in good condition, will afford excellent protection against known chemical and bacteriological (biological) agents. The greatest degree of protection is provided by the impermeable type but when worn continuously it becomes very burdensome because of heat stress, particularly in warm environments. Permeable clothing allows somewhat greater activity, but even so, physical activity is impaired.

Collective or communal protection

95. Collective protection takes the form of fixed or mobile shelters capable of accommodating groups of people, and has been devised not only for civilians but also for special groups of military personnel (e.g. command posts, field hospitals). Collective protection is the most effective physical means of protection against all forms of attack. Sealing or insulating the shelter will provide protection only for a limited time, because of lack of ventilation. Sealing plus a supply of oxygen and a means of eliminating carbon dioxide is better, but once again the time of occupancy is limited. The shelter could be none the less safe even though surrounded by fire or high concentrations of carbon monoxide. The best kind of shelter provides ventilation with filtered air to maintain a positive pressure relative to that outside. This positive internal pressure prevents the penetration of airborne agents, and permits entry or exit of personnel and equipment without contamination of the interior of the shelter. Extended periods of occupancy are possible.

96. These principles of collective protection as applicable to all enclosures arranged for human or animal occupancy. They have been used to provide protection by: hastily constructed or improvised field shelters, mobile vans and armoured vehicles, and permanent or fixed shelters designated for housing civilian or military personnel.

97. Once a bacteriological (biological) attack had been suspected or detected, it would be necessary to identify the specific agents involved so that proper protective measures could be taken and chemo-prophylaxis and treatment planned. Identification would also help to predict the incubation period and hence the time available for remedial measures to be taken. At present the only means of identifying specific micro-organisms is by normal laboratory procedures. Many routine laboratory methods of identification require as long as two to five days, but some recent developments have reduced this time appreciably. It is possible to collect the particles from large volumes of air and concentrate them in a small amount of fluid. Bacteria can then be trapped on special filters and trans-

ferred to nutrient media, where sufficient growth may take place to permit identification of some kinds of bacteria within fifteen hours. Another method, the fluorescent antibody technique, can be highly specific, and is applicable to bacteria and some viruses. In some cases, it allows of specific identification within a few hours. But despite all, these recent developments, laboratory identification of biological agents is still a complicated and unsatisfactory process.

4. Decontamination Chemical agents

98. Prolonged exposure to weather and sunlight reduces or eliminates the danger of most chemical agents, which are slowly decomposed by humidity and rain. But one could not rely on natural degradation to eliminate the risk and, in general, it would be essential to resort to decontamination. This would reduce the hazard but it is a time-consuming process and would greatly hamper military operations.

99. A wide range of chemicals could be used as decontaminants, the choice depending on the particular agent which has to be neutralized, the type of surface that needs to be treated, the extent of contamination, and the amount of time available. Decontaminants range from soap and detergent in water, to caustic soda, hypochlorite and various organic solvents, and their successful use calls for large numbers of people, a copious supply of water, and appropriate equipment.

100. Decontaminating solutions, powders, applicators and techniques have been developed for decontaminating skin, clothing, personal equipment and water. These would need to be used immediately after an attack.

101. Unless food has been stored in metal cans or other containers which were impermeable to chemical agents, it would have to be destroyed. Decontamination of complex equipment and vehicles is a difficult and time-consuming procedure. Special pressurized sprayers to disseminate powdered and liquid decontaminants have been developed for this purpose, as have paints or coatings to provide a smooth impermeable surface to preclude the penetration of chemical agents.

102. Decontamination might even need to be extended to roads and selected areas. This would involve the removal of contaminated soil by bulldozing, or covering it with earth, using explosives to spread a powdered decontaminant over a wide area.

Bacteriological (biological) agents

103. Decontamination procedures for biological agents are similar to those used for toxic chemical agents. Aeration and exposure to strong sunlight will destroy most micro-organisms, as will also exposure to high temperatures. Thoroughly cooking exposed food, and boiling water for at least fifteen minutes will kill almost all relevant micro-organisms. Calcium hypochlorite and chlorine can also be used to purify water. Certain chemical compounds, such as formaldehyde, ethylene oxide, calcium and sodium hypochlorites, sodium hydroxide and betapropiolactone, can be used to decontaminate materials and work areas. A hot, soapy shower is the best way to decontaminate human beings.

E. Protection of domestic animals and plants against chemical and bacteriological (biological) attacks

1. Chemical Attacks

104. The widespread protection of domestic animals and plants from chemical attack would be impracticable. Once a crop had been attacked with herbicides there is no effective remedial action. The damage could be made good only by a second planting of either the same or another crop, depending on the season.

2. Bacteriological (Biological) Attacks
Animals

105. Animals or flocks could be protected by collective shelters, although the cost would be great and, in the absence of automatic warning devices, it would be impossible to assure that the creatures would be sheltered at the time of attack.

106. The ideal means of protection for animals would be vaccination. Vaccines have been developed, and many are routinely produced, for foot-and-mouth disease, rinderpest, anthrax, Rift Valley fever, hog cholera, Newcastle disease and others. Vaccination of animal herds by aerosols is a promising area of investigation.

Plants

107. The only hopeful approach would be to breed disease resistant plants. This is a regular part of most national agricultural programmes, and has as its object the increase of crop yields. But unless the exact identity of the bacteriological (biological) agent which might be used were known well in advance (possibly years), it would not be feasible to apply this principle to provide protection to crops against this kind of attack.

108. Efforts devoted to spraying fungicides and similar preparations to reduce loss after attack do not appear to be economically effective. In most cases the best procedure is to utilize available manpower and machines in planting second crops.

ANNEX A: EARLY WARNING SYSTEMS FOR AIRBORNE BACTERIOLOGICAL (BIOLOGICAL) AGENTS

An ideal automatic system for early warning against an attack with bacteriological (biological) agents would comprise the following components:

(1) a device to collect large volumes of air and concentrate the particulate matter obtained, in a small volume of fluid or on a small surface;

(2) a device to quantify and identify the collected material;

(3) a mechanism to assess the results and to initiate an alarm if necessary.

To collect and identify bacteriological (biological) agents and to initiate an alarm so that protective measures can be taken in sufficient time to be useful is extremely difficult. This is so because, firstly, identification of agents is generally time-consuming and, secondly, large and fluctuating quantities of bacterial and other organic materials exist in the atmosphere at all times. Thus if pathogens from a cloud released by an aggressor were collected, the device would need, not only to determine whether the quantity collected was significantly above the normal amounts that might occur, but also what the agent was, or at least that, in the amount collected, it was highly dangerous to man.

At present, warning devices are available which are sensitive but non-specific and these, unfortunately, would give an unacceptably high proportion of false alarms. Others are being developed which attempt to incorporate both rapid response with high specificity, but none to date is in the production stage. Research on this important problem is being continued and some of the approaches and techniques that are being used in this study are listed below.

Classification of automated biodetection approaches *

General category: Physical particle detection.

Suggested approach: magnification, light scattering, volume displacement.

* Adapted from Greene, V.W. "Biodetecting and Monitoring Instruments Open New Doors for Environmental Understanding", *Environmental Science Technology*, February 1968, pp. 104-112.

General category: key biochemical components.

Suggested approach: antigen detection by fluorescent labelling, dyes and staining, bioluminescence and fluorescences, optical activity, pyrolysis products detection, ATP detection, proteins, nucleic acids, or others.

General category: Biological activity.
Suggested approach: Growth (increase in cell mass or numbers), CO₂ evolution, phosphatase activity, substrate change (pH, Eh, O₂ interchange), Pathogenic effects.

CHAPTER II. THE PROBABLE EFFECTS OF CHEMICAL AND BACTERIOLOGICAL (BIOLOGICAL) WEAPONS ON MILITARY AND CIVILIAN PERSONNEL, BOTH PROTECTED AND UNPROTECTED
A. The effects of chemical agents on individuals and populations

109. The effects of chemical warfare agents on humans, animals and plants depend on the toxic properties of the agent, the dose absorbed, the rate of absorption and the route by which the agent enters the organism. Toxic agents may enter the body through the skin, the eyes, the lungs, or through the gastro-intestinal tract (as a result of eating contaminated food or drinking contaminated liquids).

110. For a given agent absorbed under the same conditions, the effect will be proportional to the dose absorbed. This is why it is possible to define for each agent certain characteristic doses, such as the dose which, under given conditions, will on average cause death in 50 per cent of the individuals exposed (the 50 per cent lethal dose, or "LD 50"), or the dose which will cause 50 per cent non-fatal casualties, or the dose which will have no appreciable military effect. These are expressed in milligrams of agent, with reference to a healthy adult of average weight. They may also be given in terms of milligrams per kilogram of body weight.

111. For purposes of evaluation it is convenient to express the same idea somewhat differently in the case of gases, vapours and aerosols absorbed through the respiratory passages. Here the absorbed dose depends on the concentration of the agent in the air, on the respiration rate of the subject, and on the duration of the exposure. If, for the sake of illustration, it is assumed that the average respiration rate for groups of individuals engaged in various activities remains relatively constant, it follows that the dose, and therefore the effect produced, will be directly proportional to the product of the concentration of the agent in the air (C in milligrams/cubic metre) and the exposure time (t in minutes). This is called the dosage (or Ct factor), certain characteristic values of which (for example the LD

50) are used in particular situations for quantitative estimates of the effects produced.

112. For toxic agents acting on or through the skin, the dose absorbed by contact will often be related to the "contamination rate," expressed in grams/square metre, which indicates to what extent surfaces are contaminated by the liquid.

113. The consequences of an attack on a population are a combination of the effects on the individuals in it, with both the concentration of agent and the susceptibility of individuals varying over the whole area exposed to risk. Different individuals would respond differently to an attack, and might have different degrees of protection. Possible long-term contamination of personnel from chemical warfare agents persisting on the ground and vegetation may add to the immediate, direct effects.

114. Protective masks, protective clothing and shelters and, to a certain extent, decontamination when applicable, give substantial protection against all chemical warfare agents. But, as already emphasized, the mere possession of a means of protection by no means constitutes an absolute safeguard against contamination by poisons. Alarm and detection equipment is important, sometimes vital, because without it timely warning, which is essential to the proper use of protective equipment, would be lacking. Since protective measures are most effective when performed by trained personnel working effectively in units, military personnel are more likely to be provided with adequate protection than a civilian population. In any event, the civilian population in most countries is simply not provided with protection against chemical warfare.

115. Several chemical warfare agents which were known during World War I, and others developed since, have been reported on in the scientific literature. However, the effects of the more lethal modern chemical weapons have not been studied under conditions of actual warfare. Furthermore, no complete and systematic field studies of the use of defoliants, herbicides and riot control agents are available. The following descriptions of the probable effects of chemical weapons, based both upon evidence and on technical judgment, must therefore be regarded as somewhat conjectural.

1. Effects of Lethal Chemical Agents on Individuals

116. Table 1 provides a classification of the most important lethal chemical agents, and notes some of their characteristics in terms of the effects they produce. More details are given in annex A.

TABLE 1.—GENERAL CHARACTERISTICS OF LETHAL CHEMICAL AGENTS

Type	Mechanism	Time for onset of effects	Examples
Nerve agent G.....	Interferes with transmission of nerve impulses.	Very rapid by inhalation (a few seconds).	Tabun, Sarin, Soman.
Nerve agent V.....	Interferes with transmission of nerve impulses.	Very rapid by inhalation (a few seconds); Relatively rapid through skin (a few minutes to a few hours).	VX.
Blister agent.....	Cell poison.	Blistering delayed hours to days; eye effects more rapid.	Sulfur mustard. Nitrogen mustard.
Choking agent.....	Damages lungs.	Immediate to more than three hours.	Phosgene.
Blood agent.....	Interferes with all respiration.	Rapid (a few seconds or minutes).	Hydrogen cyanide.
Toxin.....	Neuromuscular paralysis.	Variable (hours or days).	Botulinum toxin.

Nerve agents

118. These lethal compounds are readily absorbed through the lungs, eyes, skin and intestinal tract without producing local irritation, and they interfere with the action of an enzyme (cholinesterase) essential to the functioning of the nervous system. The nerve-agent casualty who has been exposed to a lethal dose will die of asphyxiation within a few minutes if he is not treated swiftly by means of artificial respiration and drugs such as atropine or oximes. Otherwise

117. Lethal chemical agents kill in relatively small doses, and as a rule the amount that causes death is only slightly greater than that which causes incapacitation. Death may occasionally be caused by high doses of presumed incapacitating agents and, conversely, minor effects could be caused by low doses of lethal agents. Blister agents are considered with the lethal agents, since a small but significant fraction of the personnel attacked with such agents may die or suffer serious injury.

recovery is generally rapid and complete. Occasionally, it may take several weeks, but will be complete unless anoxia or convulsions at the time of exposure were so prolonged as to cause irreversible brain damage.

119. The route of entry of the agent into the body has some influence on the appearance of symptoms. These develop more slowly when the agent is absorbed through the skin than when it is inhaled. Low dosages cause a running nose, contraction of the pupil of the eye and difficulty in visual accommodation. Constriction of the bronchi causes a feeling of pressure in the chest. At higher dosages, the skeletal muscles are affected—weakness, fibrillation, and eventually paralysis of the respiratory muscles occurring. Death is usually caused by respiratory failure, but heart failure may occur. It is estimated that the most toxic nerve gases may cause death at a dosage of about ten mg min/m³. * Less toxic ones are lethal at dosages of up to 400 mg min/m³.

Blister agents or vesicants

120. Mustard is a typical blister agent which, like other members of this class, also has general toxic effects. Exposure to concentrations of a few mg/m³ in the air for several hours results at least in irritation and reddening of the skin, and especially irritation of the eyes, but may even lead to temporary blindness. Exposure to higher concentrations in the air causes blisters and swollen eyes. Severe effects of this kind also occur when liquid falls on the skin or into the eyes. Blistering with mustard is comparable to second degree burns. More severe lesions, comparable to third degree burns, may last for a couple of months. Blindness may be caused, especially if liquid agent has entered the eyes. Inhalation of vapour or aerosol causes irritation and pain in the upper respiratory tract, and pneumonia may supervene. High doses of blister agents cause a general intoxication, similar to radiation sickness, which may prove lethal.

121. The first step in treating a person who has been exposed to a vesicant or blister agent, is to wash it out of the eyes and decontaminate the skin. Mild lesions of the eyes require little treatment. The blisters are treated in the same way as any kind of second-degree burn.

Other lethal agents

122. *Phosgene* and compounds with similar physiological effects were used in World War I. Death results from damage to the lungs. The only treatment is inhalation of oxygen and rest. Sedation is used sparingly.

123. *Hydrogen cyanide* in lethal doses causes almost immediate death by inhibiting cell respiration. Lower doses have little or no effect.

124. Most of the so-called blood agents contain cyanide, and all act rapidly. The casualty would either die before therapy could begin, or recover soon after breathing fresh air.

125. *Botulinum toxin* is one of the most powerful natural poisons known, and could be used as a chemical warfare agent. There are at least six distinct types, of which four are known to be toxic to man. Formed by the bacterium *Clostridium botulinum*, the toxin is on occasion accidentally transmitted by contaminated food. The bacteria do not grow or reproduce in the body, and poisoning is due entirely to the toxin ingested. It is possible that it could be introduced into the body by inhalation.

126. Botulism is a highly fatal poisoning characterized by general weakness, headache, dizziness, double vision, dilation of the pupils, paralysis of the muscles concerned in swallowing, and difficulty of speech. Respiratory paralysis is the usual cause of death.

*A dosage of one mg min/m³ consists of an exposure of one minute to gas at a concentration of one milligram per cubic metre.

After consumption of contaminated food, symptoms usually appear within twelve to seventy-two hours. All persons are susceptible to botulinum poisoning. The few who recover from the disease develop an active immunity of uncertain duration and degree. Active immunization with botulinum toxoid has been shown to have some protective value, but antitoxin therapy is of limited value, particularly where large doses of the toxin have been consumed. Treatment is mainly supportive.

2. Effects of Lethal Agents on Populations

127. As already indicated, the possible effects of an attack on populations with lethal chemical warfare agents would depend upon the agent used, upon the intensity of the attack, whether the population was mainly under cover or in the open, on the availability of protective facilities, on the physiological state of the individuals affected, and upon the meteorological conditions, which might differ from what had been predicted, and alter during the course of an attack.

128. The importance of meteorological conditions on the spread of agent from its point or area of release is illustrated by Figures 1(a), 1(b) and 1(c) which show in an idealized diagrammatic form the type of dosage contours to be expected from a point source, from multiple sources and from a linear aerial source respectively when exposed to the effects of wind.

129. Figure 1 (a) shows the shape of the zone travelled by the chemical cloud produced by a point source (for example, one isolated munition), at the far left of the innermost cigar-shaped figure under conditions of a strong wind (say, 5-20 km/h) in the direction indicated.

130. The number on each line indicates the dosage (Ct = concentration times time) on the line. The dosage at any point inside the area delimited by the curve is greater than the number indicated. On the basis of these data, it is possible to estimate the casualties when the characteristic dosages of the agent used are known. For example, if the LD 50 value of the agent were 30 milligram-minutes/cubic metre, there would be more than 50 per cent fatalities in the area inside the contour marked 30.

131. This figure applies to a volatile agent such as Sarin, which is usually released in the form of a vapour or an aerosol cloud. In the case of a non-volatile liquid released in the form of droplets which fall onto the ground and contaminate it, a corresponding map could be drawn for the level of contamination of the soil (expressed in milligrams/square metre).

132. Figure 1 (b) shows the same phenomenon in relation to an area source such as would result, for example, from attack by a missile warhead filled with small bombs or by an artillery salvo.

133. In the case of a volatile agent released in the form of a vapour or aerosol, the resulting cloud, carried downwind, covers a zone whose general shape is the same as in the case of a point source (Figure 1 (a)), but its dimensions are obviously much larger and the dosage values are also larger.

134. If a non-volatile agent were released in the form of droplets, the hazard would be very great in the impact area because all surfaces (skin, clothing, vehicles, equipment, vegetation, etc.) would be contaminated. The downwind hazard caused by the drift of the most minute particles would extend over a much smaller area than in the previous case because only a relatively small number of minute particles would be carried by the wind.

135. Figure 1(c) shows the zone covered by a linear aerial source, as in the case of dissemination of a non-volatile agent from an aircraft.

136. The emitted cloud is carried by the wind and does not touch the ground until it has travelled some distance away from the

line of flight of the disseminating aircraft; this depends on the altitude of the aircraft and on the wind velocity. Since the cloud has already been subjected to the influence of turbulent diffusion before reaching the ground, the dosage values or contamination rates will be highest some distance away from the zone boundary nearer the source.

137. Because of meteorological and other variables, it is impossible to make general statements about the quantitative effects of chemical weapons on populations. The following hypothetical examples, therefore, are intended merely to illustrate what might happen and the degree to which protective measures could reduce casualties. To provide representative illustrations, the examples chosen include the different hazards created by nerve agents used in a battle zone, on military targets in the rear and on civilians in a town.

Effects of nerve gas on protected troops in combat

138. A heavy attack with air-burst munitions dispersing non-volatile liquid nerve agent would create concentrations on the ground that could range from one-tenth of a gram to ten grams of liquid per square metre, giving a mean value of about five grams. This would be extremely hazardous. At the same time, aerosol concentrations would be created over almost the entire impact area (dosages about twenty mg. min/m³). This would produce casualties even if there were no liquid hazard.

139. To counter this type of attack, protective measures of a very high order of efficiency, including protective masks, light protective clothing, means for decontamination, detection systems, antidotes and medical care, would have to be available. Protective clothing and rapid utilization of gas masks would give a certain measure of protection. But in this case, subsequent decontamination and medical care would be necessary to avoid heavy lethal losses.

Effects of nerve gas on a military target in the rear

140. An attack from the air with a volatile nerve agent against a military installation in a rear area would cause an intense liquid and vapor hazard in the installation itself, and a vapour hazard downwind in the surrounding area. As suggested in figure 1(b), the impact area would be very heavily contaminated; gas dosages inside and close to the impact area would be very high. Further downwind the gas concentration would decrease gradually, and finally become innocuous. A general picture of the way casualties would occur in a downwind area is indicated in figure 1(a).

141. After an attack in which tons of Sarin were used against an area of one square kilometre, the impact area and the area immediately downwind from it would be highly lethal to all unprotected personnel. Lethal casualties would occur at dosages above eighty mg. min/m³ and severe casualties down to thirty mg. min/m³. Some very light casualties would result at dosages around five mg. min/m³. The distance between the impact area and the area of lowest effective dosage would depend on the local topography and on weather conditions, but would rarely exceed a few tens of kilometres.

142. Personnel provided only with gas masks, but not wearing them at the moment of the attack, would suffer substantial losses in and close to the impact area, both because of the effects of the liquid and because of the high gas concentration inhaled before they could don their masks. Further downwind, masks would give essentially complete protection if warning were provided reasonably quickly.

Effects of a nerve gas attack on a town

143. The population density in a modern city may be 5,000 people per square kilometre.

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A heavy surprise attack with non-volatile nerve gas by bombs exploding on impact in a wholly unprepared town would, especially at rush hours, cause heavy losses. Half of the population might become casualties, half of them fatal, if about one ton of agent were disseminated per square kilometre.

144. If such a city were prepared for attack, and if the preparations included a civil defence organization with adequately equipped shelters and protective masks for the population, the losses might be reduced to one half of those which would be anticipated in conditions of total surprise.

145. Although it would be very difficult to achieve, if there were a high level of preparedness, comprising adequate warning and effective civil defence procedures, it is conceivable that most of the population would be sheltered at the time of the attack, and that very few would be in the streets.

146. Given a town with a total population of 80,000, a surprise attack with nerve gas could thus cause 40,000 casualties, half of them fatal, whereas under ideal circumstances for the defence, fatalities might number no more than 2,000. It is inconceivable, however, that the ideal would ever be attained.

3. Effects of Incapacitating Chemical Agents

147. Incapacitating chemicals, like tear gases and certain psychochemicals, produce in normal health people a temporary, reversible disability with few if any permanent effects. In your children, old people and those with impaired health, the effects may sometimes be aggravated. They are called incapacitating because the ratio between the lethal and incapacitating doses is very high. The types which could have a possible military use are limited by requirements of safety, controlled military effectiveness and economic availability.

Tear and harassing gases

148. Many chemical compounds fall into this category, of which ω -chloracetophenone (CN), ortho-chlorobenzylidene malonitrile (CS), and adamsite (DM) are probably the most important. They are solids when pure, and are disseminated as aerosols.

149. Either as vapour or in aerosol, tear and harassing gases rapidly produce irritation, smarting and tears. These symptoms disappear quickly after exposure ceases. The entire respiratory tract may also be irritated, resulting in a running nose and pain in the nose and throat. More severe exposures can produce a burning sensation in the trachea. As a result, exposed persons experience difficulty in breathing, attacks of coughing and occasionally, nausea and headaches.

150. Extremely high dosages of tear and harassing gases can give rise to pulmonary edema (fluid in the lungs). Deaths have been reported in three cases after extraordinary exposure to ω -chloracetophenone (CN) in a confined space.

151. The effects of adamsite (DM) are more persistent. Nausea is more severe and vomiting may occur.

152. Results of experiments on various species of animals (see annex B) and some observations of human responses lead to the following tentative conclusions. First, CS is the most irritating of these gases followed by adamsite (DM) and ω -chloracetophenone (CN). Second, the tolerance limits (highest concentration which a test subject can tolerate for one minute) of DM and CS are about the same. Third, the least toxic of the tear gases is CS, followed by DM and then CN. Fourth, human beings vary in their sensitivity to, and tolerance of, tear and harassing gases. And finally, the toxicity of these gases varies in different animal species and in different environmental conditions.

153. The symptoms caused by tear gases disappear, as tears wash the agent from the eyes, and if the victim gets out of the tear gas atmosphere. Some, however, cause red-

dening or rarely even blistering of the skin when the weather is hot and wet.

Toxins

154. Staphylococcus toxin occurs naturally in outbreaks of food poisoning—which is the only medical experience with this toxin. The symptoms have a sudden, sometimes violent, onset, with severe nausea, vomiting and diarrhea. The time from ingestion of the toxin to the onset of symptoms is usually two to four hours, although it may be as short as a half hour. Most people recover in 24–48 hours and death is rare. Treatment is supportive and immunity, following an attack, is short-lived. The toxin is resistant to freezing, to boiling for thirty minutes, and to concentrations of chlorine used in the treatment of water. Staphylococcus toxin could be considered as an incapacitating chemical warfare agent. Symptoms can be produced in animals by intravenous injection, and the toxin may also be active by the respiratory route.

Psychochemicals

155. These substances have been suggested for use in war as agents which could cause temporary disability by disrupting normal patterns of behavior. The idea cannot be accepted in its simple form, since these substances may lead to more permanent changes, particularly in individuals who are mentally unbalanced or who are in the early stages of a nervous and mental disease. Moreover, very high doses, which would be difficult to exclude during use in war, can cause irreversible damage to the central nervous system or even death. Psychochemicals could also have particularly severe effects on children.

156. Compounds such as LSD, mescaline, psilocybin, and a series of benzilates which cause mental disturbance—either stimulation, depression or hallucination—could be used as incapacitating agents. Mental disturbance is, of course, a very complex phenomenon, and the psychological state of the person exposed to a psychochemical, as well as the properties of the agent, would profoundly influence its manifestations. But, despite the variation in responses between individuals, all those affected could neither be expected to act rationally, nor to take the initiative, nor make logical decisions.

157. Psychochemicals do more than cause mental disturbance. For example, the general symptoms from the benzilates are interference with ordinary activity; dry, flushed skin; irregular heartbeat; urinary retention; constipation; slowing of mental and psychical activity; headache, giddiness; disorientation; hallucinations; drowsiness; occasional maniacal behaviour; and increase in body temperature. While these effects have not been fully studied, there would be a significant risk of affected individuals, particularly military personnel, becoming secondary casualties due to unco-ordinated behaviour. A single dose of 0.1 to 0.2 mg LSD25 will produce profound mental disturbance within half an hour, the condition persisting for about ten hours. This dose is about a thousandth of the lethal dose.

158. Treatment of the symptoms of psychochemicals is mainly supportive. Permanent psychotic effects may occur in a very small proportion of individuals exposed to LSD.

159. It is extremely difficult to predict the effects which an attack with psychochemical agents would produce in a large population. Apart from the complication of the varying reaction of exposed individuals, there could be strange interactions within groups. A few affected individuals might stimulate their fellows to behave irrationally, in the same way as unaffected persons might to some extent offset the reactions of those affected. Since the probability of fatal casualties resulting directly from exposure is low, some normal group activity might be sustained.

Protective masks would probably provide complete protection since practically all potential psychochemical agents, if used as offensive weapons, would be disseminated as aerosols.

4. Other Effects of Chemical Agents

Effects on animals

160. The effects of lethal chemical agents on higher animals are, in general, similar to those on man. The nerve agents also kill insects.

Effects on plants

161. A variety of chemicals kill plants, but as already indicated, little is known about their long-term effects. The effective dose ranges of defoliants vary according to the particular species of plant attacked, its age, the meteorological conditions and the desired effect: e.g., plant death or defoliation. The duration of effect usually lasts weeks or months. Some chemicals kill all plants indiscriminately, while others are selective. Most defoliants produce their effects within a few weeks, although a few species of plant are so sensitive that defoliation would occur in a period of days.

162. An application of defoliating herbicide* of approximately 3 gallons (32 pounds) per acre (roughly 36 kg per hectare) can produce 65 per cent defoliation for six to nine months in very densely forested areas, but in some circumstances some species of trees will die. Significantly lower doses suffice for most agricultural and industrial uses throughout the world. Defoliation is, of course, a natural process—more common in trees in temperate zones than in the tropics. Essentially what defoliants do is trigger defoliation prematurely.

163. Desiccation (the drying out) of leaves results in some defoliation, although usually the leaf-drop is delayed, and the plant would not be killed without repeated application of the chemical. Chemical desiccants cause a rapid change in colour, usually within a few hours.

B. The effects of bacteriological (biological) agents on individuals and populations

164. Mankind has been spared any experience of modern bacteriological (biological) warfare, so that any discussion of its possible nature has to be based on extrapolation from epidemiological knowledge and laboratory experiment. The number of agents which potentially could be used in warfare is limited by the constraints detailed in chapter I. On the other hand, the variability which characterizes all living matter makes it conceivable that the application of modern knowledge of genetic processes and of selection could remove some of these limitations. Some species of micro-organisms consist of a number of strains characterized by different degrees of virulence, antigenic constitution, susceptibility to chemotherapeutic agents, and so on. For example, strains of tularemia bacilli isolated in the United States are generally much more virulent in human beings than those found in Europe or Japan. Foot-and-mouth disease virus is another well-known example of an organism with various degrees of virulence. The situation with bacteriological (biological) weapons is thus quite different from that of chemical weapons, where the characteristics of a given compound are more specific.

1. Effects on Individuals

165. Bacteriological (biological) agents could be used with the intention of killing people or of incapacitating them either for a short or a long period. The agents, however, cannot be rigidly defined as either lethal or incapacitating, since their effects are de-

*For example, the commonly used "2,4-D" and "2,4,5-T" which are the butyl esters of (2,4-dichlorophenoxy) acetic acid and (2,4,5-trichlorophenoxy) acetic acid.

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pendent upon many factors relating not only to themselves but also to the individuals they attack. Any disease-producing agent intended to incapacitate may, under certain conditions, bring about a fatal disease. Similarly, attacks which might be intended to provoke lethal effects might fail to do so. Examples of naturally occurring lethal disease are shown in table 2 and representative incapacitating diseases in table 3. A detailed list of possible agents, with a brief description of their salient characteristics is given in annex C.

166. A number of natural diseases of man and domestic animals are caused by mixed infections (e.g., swine influenza, hog cholera). The possible use of two or more different organisms in combination in bacteriological (biological) warfare needs to be treated seriously because the resulting diseases might be aggravated or prolonged. In

some instances, however, two agents might interfere with one another and reduce the severity of the illness they might cause separately.

167. The effects of some forms of bacteriological (biological) warfare can be mitigated by chemotherapeutic, chemoprophylactic and immunization measures (for protection see chapter I and annex C of this chapter). Specific chemotherapeutic measures are effective against certain diseases, but not against those caused by viruses. But it may not always be possible to apply such measures, and they might not always be successful. For example, with some diseases early therapy with antibiotics is usually successful, but relapses may occur. Moreover, resistance against antibiotics may develop in almost all groups of micro-organisms, and resistant strains may retain full virulence for man as well as for animals.

of the illness, and can be significant for proper diagnosis. Treatment presents great difficulties.

174. *Plague*: Under natural conditions, small rodents, from which the disease is transmitted by fleas, are the main source of human infection with plague. This is how "bubonic" plague develops. If the plague microbes are inhaled, pneumonic plague develops after a three-to-five-day incubation period. The patient suffers from severe general symptoms and if untreated, normally dies within two to three days. A patient with pneumonic plague is extremely contagious to contacts.

175. Preventive vaccination is moderately effective against bubonic, but not pneumonic, plague. If administered early, streptomycin treatment may be successful.

176. In a study of experimental pulmonary plague in monkeys, it was found that an average dose of only 100 bacteria caused fatal disease in half the animals tested. Animal experiments have also show that particles of 1 micrometre diameter (1.25,000 of an inch), containing single microbial cells, can cause primary pneumonia, with a rapid and fatal outcome. If the aerosol is formed by larger particles (5-10 micrometres diameter) microbial cells are deposited in the nose and other regions of the upper respiratory tract, and primary foci of the disease develop in the corresponding lymphatic nodes. A fatal generalized infection may then follow.

177. A large mass of plague bacteria could be grown, and probably lyophilized (freeze-dried) and kept in storage. The agent is highly infectious by the aerosol route and most populations are completely susceptible. An effective vaccine against this type of disease is not known. Infection might also be transmitted to urban and/or field rodents and natural foci of plague may be treated.

178. *Q-fever*: Under natural conditions, Q-fever is a disease of animals, the main sources of infection to man being sheep, goats and cattle. The infection is transmitted most frequently by the air route.

179. An incubation period of two to three weeks follows the inhalation of the infectious material. A severe attack of influenza-like illness follows, with high fever, malaise, joint and muscle pains, which may be followed in five to six days by pneumonia. In untreated cases, the illness lasts two to three weeks; the patient feels exhausted and is unable to do normal work for several weeks. But the disease can be successfully treated with broad spectrum antibiotics (tetracyclines). Prophylactic vaccines have been prepared in some countries, but have not yet been proved suitable for large-scale use.

180. The agent causing the disease is a rickettsia, and is extremely infectious for man. An epidemic of Q-fever once occurred due to contaminated dust which was carried by the wind from a rendering plant some ten kilometers away. Q-fever is also a common and significant laboratory hazard, even though it is only rarely transmitted from man to man. The high susceptibility of humans to this agent has been demonstrated in volunteers.

181. Q-fever rickettsiae are extraordinarily resistant to environmental factors such as temperature and humidity. Very large amounts can be produced in embryonated chicken eggs (20,000 million micro-organisms per millilitre) and can be stored for a long period of time. A Q-fever aerosol could produce an incapacitating effect in a large proportion of the population of an attacked area. The infective agent could persist in the environment for months and infect animals, possibly creating natural foci of infection.

182. *Tularaemia*: Under natural conditions, tularaemia is a disease of wild animals, the source of human infection being rodents, especially rabbits and hares. When it occurs naturally in human beings, who are very susceptible to the disease, skin lesions with swelling of the lymph nodes are its usual

TABLE 2.—EXAMPLES OF AGENTS THAT MIGHT BE USED TO CAUSE DEATH

Agents	Diseases	Incubation period (days)	Effect of specific therapy	Likelihood of spread from man to man
Viruses	Eastern equine encephalitis	5 to 15	Nil	Nil ¹
	Tick-borne encephalitis	7 to 14	do	Do.
	Yellow fever	3 to 6	do	Do.
Rickettsiae	Rocky Mountain spotted fever	3 to 10	Good	Do.
	Epidemic typhus	6 to 15	do	Do.
Bacteria	Anthrax	1 to 5	Moderate	Low.
	Cholera	do	Good	High.
	Plague, pneumonic	2 to 5	Moderate	Do.
	Tularaemia	1 to 10	Good	Low.
	Typhoid	7 to 21	do	High.

¹ Unless vector present.

TABLE 3.—EXAMPLES OF AGENTS THAT MIGHT BE USED TO CAUSE INCAPACITATION

Agents	Diseases	Incubation period (days)	Effect of specific therapy	Likelihood of spread from man to man
Viruses	Chikungunya fever	2 to 6	Nil	Nil ¹
	Dengue fever	5 to 8	do	Do.
	Venezuelan equine encephalitis	2 to 5	do	Do.
Rickettsiae	Q-fever	10 to 21	Good	Low.
Bacteria	Brucellosis	7 to 21	Moderate	Nil.
Fungi	Coccidioidomycosis	7 to 21	Poor	Do.

¹ Unless mosquito vector present.

Possible bacteriological (biological) agents

168. Victims of an attack by bacteriological (biological) weapons would, in effect, have contracted an infectious disease. The diseases would probably be known, but their symptoms might be clinically modified. For example, apart from the deliberate genetic modification of the organism, the portals of infection might be different from the natural routes, and the disease might be foreign to the geographical area in which it was deliberately spread. Possible bacteriological (biological) agents representing diseases caused by the main groups of relevant micro-organisms are:

169. *Anthrax*: Under natural conditions, anthrax is a disease of animals, the main source of infection for man being cattle and sheep. Its vernacular synonym "wool sorter's disease" indicates one way men used to contract the disease. Depending on the mechanism of transmission, a cutaneous (skin) form (contact infection), an intestinal form (alimentary infection), or pulmonary form (airborne infection) may develop. The lung or respiratory form is most severe, and unless early treatment with antibiotics is resorted to, death ensues within two-three days in nearly every case.

170. Antibiotic prophylaxis is possible, but would have to be prolonged for weeks, since it has been shown that monkeys exposed to anthrax aerosol die if antibiotic treatment is discontinued after ten days. In certain countries, several types of vaccines are employed, but their value has not been fully evaluated.

171. The anthrax bacillus forms very resistant spores, which live for many years in contaminated areas, and which constitute the most dangerous risk the disease presents. From epidemiological observations, the inhalation, infectious dose for man is estimated at 20,000 spores. Experiments on animals show that anthrax can be combined with influenza infection or with some noxious chemical agent, and that the susceptibility of the animal to airborne anthrax infection is then markedly enhanced.

172. With suitable expertise and equipment large masses of anthrax bacilli can be easily grown, and heavy concentrations of resistant anthrax spore aerosols can be made. Such aerosols could result in a high proportion of deaths in a heavily exposed population. Immunization could not be expected to protect against a heavy aerosol attack. The soil would remain contaminated for a very long time, and so threaten live-stock farming.

173. *Coccidioidomycosis*: This disease, which is also called desert fever, is caused by a fungus found in the soil of deserts in the United States, South America and the USSR. The spores of the fungus are very stable, and can easily be disseminated as an aerosol. If they are inhaled, pneumonia with fever, cough, and night-sweating, and muscle pains follow after an incubation period of one-three weeks. In most cases, recovery from the disease occurs after some weeks of illness. An allergic rash sometimes breaks out during the first or second week

manifestation (infection by contact with sick and dead animals, or by way of ticks and other vectors). Infection can also occur through the eye and the gastro-intestinal tract. The pulmonary form (airborne infection) is the more serious. Pulmonary tularaemia is associated with general pain, irritant cough, general malaise, etc., but in Europe and Japan mortality due to this form of the disease was never higher than 1 percent even before antibiotics became available. American tularaemia strains in the other epidemics have been associated with a mortality rate as high as 20 percent despite antibiotic treatment. Usually treatment with streptomycin or tetracycline is highly effective. A tularaemia vaccine developed in the Soviet Union is also highly effective.

183. The agent causing the disease is a microbe which is very sensitive to common disinfectants, but which is able to survive for as long as a few weeks in contaminated dust, water, etc.

184. Aerosols of tularaemia have been tested on volunteers. The inhalation infectious dose for man is about ten to twenty-five microbes, and the incubation period five days. By increasing the inhaled dose a hundred times, the incubation period shortens to two to three days. Owing to its easy aerosol transmission, tularaemia has often infected laboratory workers.

185. The microbiological characteristics are similar to those of the plague bacillus (although antibiotic treatment and vaccination prophylaxis are effective). Both lethal and incapacitating effects are to be expected. The disease is not transferred from man to man, but long-lasting natural foci might be created.

186. *Venezuelan equine encephalitis virus (VEE)*: In nature, VEE is an infection of animals (equines, rodents, birds) transmitted to man through mosquitos which have fed on infected animals.

187. The disease has sudden onset, with headache, chills and fever, nausea and vomiting, muscle and bone pains, with encephalitis occurring in a very small proportion of cases. The mortality rate is very low and recovery is usually rapid after a week, with residual weakness often persisting for three weeks. No specific therapy is available. The vaccine is still in the experimental stage.

188. Numerous laboratory infections in humans have been reported, most of them airborne. In laboratory experiments, monkeys were infected with aerosolized virus at relatively low concentrations (about 1,000 guinea pig infectious doses).

189. Since the virus can be produced in large amounts in tissue culture or embryonated eggs, and since airborne infection readily occurs in laboratory workers, concentrated aerosols could be expected to incapacitate a very high percentage of the population exposed. In some areas, persistent endemic infection in wild animals would be established.

190. *Yellow fever*: In nature, yellow fever is primarily a virus disease of monkeys, transmitted to man by a variety of mosquitos (*Aedes aegypti*, *Aedes simpsoni*, *Hamagogus* species, etc.). After an incubation period of three-six days, influenza-like symptoms appear with high fever, restlessness and nausea. Later the liver and the kidneys may be seriously affected, with jaundice and diminished urinary excretion supervening. The very severe forms end in black vomitus and death. In a non-immune population, mortality rates for yellow fever may be as high as 30-40 percent. There is no specific treatment, but prophylactic vaccination, being highly effective is widely used in yellow fever endemic areas.

2. Effects on Populations

191. Other than for sabotage, the use of aerosol clouds of an agent is the most likely form of attack in bacteriological (biological) warfare. For example, material can be produced containing infective micro-organisms at a concentration of 10,000 million per gram.

Let us suppose that an aircraft were to spray such material so as to produce an aerosol line source 100 kilometres in length across a 10 kilometre per hour wind. Then, assuming that 10 per cent of organisms survived aerosolization, and that subsequent environmental stresses caused them to die at a rate of 5 per cent per minute, about 5,000 square kilometres would be covered at a concentration such that 50 per cent of the unprotected people in the area would have inhaled a dose sufficient to infect them, assuming that the infective dose is about 100 micro-organisms per person. This particular calculation is valid for agents such as those which cause tularaemia, plague, as well as for some viruses. The decay rate of the causative agents of Q-fever, anthrax and some other infections is much lower and the expected effect would be still greater.

192. The effects of bacteriological (biological) attacks would obviously vary according to circumstances. Military personnel equipped with adequate protective measures, well trained in their use and provided with good medical services could, if warned of an attack, be able to protect themselves to a considerable degree. But effective early warning and detection systems do not yet exist. On the other hand, attacks on civil populations are likely to be covert and by surprise and, at present no civilian populations are protected. Unprotected military or civilian personnel would be at complete risk, and

panic and irrational behaviour would complicate the effects of the attack. The heavy burden which would be imposed on the medical services of the attacked region would compound disorganization, and there would be a major risk of the total disruption of all administrative services.

193. In view of the extensive anti-personnel effects associated with agents of the kind with which this report is concerned, it is useful to view them against the area of effect of a one-megaton nuclear explosion, which as is well recognized, would be sufficient to destroy utterly a town with a population of a million. It should of course be emphasized that direct comparisons of the effects of different classes of weapons are, at best, hypothetical exercises. From the military point of view, effectiveness of a weapon cannot be measured just in terms of areas of devastation or numbers of casualties. The final criterion will always be whether a specific military objective can be achieved better with one than another set of weapons. The basic hypotheses chosen for the comparison are rather artificial; and in particular, environmental factors are ignored. But despite this limitation, table 4 gives data that help to place chemical, bacteriological (biological) and nuclear weapons in some perspective as to size of target area, numbers of casualties inflicted, and cost estimates for development and production of each type of weapon. The figures speak for themselves.

TABLE 4.—COMPARATIVE ESTIMATES OF DISABLING EFFECTS OF HYPOTHETICAL ATTACKS ON TOTALLY UNPROTECTED POPULATIONS USING A NUCLEAR, CHEMICAL, OR BACTERIOLOGICAL (BIOLOGICAL) WEAPON THAT COULD BE CARRIED BY A SINGLE STRATEGIC BOMBER

Criterion for estimate	Type of weapon		
	Nuclear (1 megaton)	Chemical (15 tons of nerve agent)	Bacteriological (biological) (10 tons ¹)
Area affected.....	Up to 300 km ²	UP to 60 km ²	UP to 100,000 km ²
Time delay before onset of effect.....	Seconds.....	Minutes.....	Days.....
Damage to structures.....	Destruction over an area of 100 km ²	None.....	None.....
Other effects.....	Radioactive contamination in an area of 2,500 km ² for 3-6 months.....	Contamination by persistence of agent from a few days to weeks.....	Possible epidemic or establishment of new endemic foci of disease.....
Possibility of later normal use of affected area after attack.....	3-6 months after attack.....	Limited during period of contamination.....	After end of incubation period or subsidence of epidemic.....
Maximum effect on man.....	90 percent deaths.....	50 percent deaths.....	50 percent morbidity; 25 percent deaths if no medical intervention.....
Multiyear investment in substantial research and development production capability. ²	\$5,000-10,000 million.....	\$1,000-5,000 million.....	\$1,000-5,000 million.....

¹ It is assumed that mortality from the disease caused by the agent would be 50 percent if no medical treatment were available.
² It is assumed that indicated cumulative investments in research and development and production plants have been made to achieve a substantial independent capability. Individual weapons could be fabricated without making this total investment.

3. Effects on Animals

194. The way bacteriological (biological) weapons might be used against stocks of domestic animals would probably be the same as that used in attacks against man. Representative diseases and their characteristics are shown in table 5.

195. Viral infections probably cause the most important diseases of domestic animals and could have more devastating effects than diseases produced by other types of pathogens. Since many of the organisms which cause infectious diseases in domestic animals are also pathogenic for man, and since some of them may also be readily transmitted from animals to man, either directly or by vectors, such attacks might also affect the human population directly. Attacks upon livestock would not only result in the immediate death of animals, but also might call for compulsory slaughter as a means of preventing the spread of infection.

196. Covert bacteriological (biological) attack during peacetime directed against domestic animals could give rise to serious political and economic repercussions if large numbers of stock were affected. For example,

African swine fever occurs endemically on the African continent as a subclinical disease of warthogs. In 1957 it was accidentally brought from Angola to Portugal, and then in 1960 to Spain. Despite strict and extensive veterinary measures that were enforced, losses in pig breeds were estimated to amount within a single year to more than \$9,000,000.

197. Isolated attacks against stocks of domestic animals during wartime would have only a nuisance value. However, if a highly infectious agent (e.g., foot-and-mouth disease) were used, even a local attack could have very widespread effects because of spread by the normal commercial movement of animals, particularly in highly developed countries. Extensive attacks with travelling clouds could, however, lead to a disastrous state of affairs. The history of myxomatosis (a rabbit disease) in Europe provides a parallel. Not only did it drastically reduce the rabbit population in France, into which it was first introduced; it immediately spread to other countries of Europe, including the United Kingdom. The risk of the uncontrolled spread of infection to a number of countries is an important consideration in

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the use of some bacteriological (biological) weapons.

198. The possibilities of protecting domestic animal stocks against bacteriological (biological) attacks are so remote that they are not worth discussing.

TABLE 5.—EXAMPLES OF DISEASES THAT MIGHT BE USED TO ATTACK DOMESTIC ANIMALS

DISEASE	ANIMALS ATTACKED
Viruses:	
African swine fever	Hogs.
Equine encephalitis	Horses.
Foot-and-mouth disease	Cattle, sheep, hogs.
Fowl plague	Chickens, turkeys.
Hog cholera	Hogs.
Newcastle disease	Chickens, turkeys.
Rift Valley fever	Cattle, goats, sheep.
Rinderpest	Cattle, sheep, oxen, goats, water buffaloes.
Vesicular stomatitis	Cattle, horses, mules, hogs.
Rickettsiae:	
Veldt disease	Cattle, sheep, goats.
Q-fever	Do.
Bacteria:	
Anthrax	Cattle, sheep, horses, mules.
Brucellosis	Cattle, sheep, goats, hogs, horses.
Glanders	Horses, mules.
Fungi:	
Lumpy jaw	Cattle, horses, hogs.
Aspergillosis	Poultry, cattle.

4. Effects on Plants

199. Living micro-organisms could also be used to generate diseases in crops which are economically important either as food or as raw material (e.g., cotton and rubber). Significant food crops in this respect include potatoes, sugar-beet, garden vegetables, soya beans, sorghum, rice, corn, wheat and other cereals and fruits. Obviously the selection of the target for a biological attack would be determined by the relative importance of the crop in the national diet and economy. Deliberately induced epiphytotic (plants disease epidemics) could in theory have serious national and international consequences.

200. The fungal, bacterial, or viral agents which could be used against plants are shown in table 6.

201. With a few minor exceptions, the plant viruses could be cultured only in living plant systems, the causal agent being found only in the plant tissues and juices. Virus diseases are transmitted principally by insect vectors and to some extent by mechanical means.

202. Bacterial agents which attack plants can persist for months on or in the plants. All of them can be cultured on artificial media. Normally, plant bacteria are not disseminated to any great extent by winds; the principal methods for spread in nature are insects, animals (including man) and water. Rain can spread bacteria locally, while insects and animals are responsible for their more extensive spread. It is conceivable that bacterial plant pathogens could be adapted for deliberate aerial dissemination.

203. Plant fungi, which cause some of the most devastating diseases of important agricultural crops, are disseminated mainly by winds, but also by insects, animals, water and man. Many fungal pathogens produce and liberate into the air countless numbers of small, hardy spores which are able to withstand adverse climatic conditions. The epidemic potential of a number of fungal pathogens is considerable.

204. In theory there are measures which could protect crops against bacteriological (biological) attacks; but at present their potential cost rules them out in practice. There is no essential difference between the counter-measures which would have to be introduced to counter bacteriological (biological) weapons and those employed normally to control plant diseases in peacetime. But the use of bacteriological (biological) weapons to destroy crops on a large scale would imply that the attacker would choose agents capable of overcoming any known, economical method

of protection. Advanced countries might, as a precautionary measure exchange susceptible plants by more resistant strains. This would be difficult for countries whose agricultural standards were not high, and which would be the most vulnerable to bacteriological (biological) attacks on their crops.

TABLE 6.—EXAMPLES OF DISEASES THAT MIGHT BE USED TO ATTACK PLANTS

Diseases	Likelihood of spread
Viruses:	
Corn stunt	High.
Hoja blanca (rice)	Do.
Fiji disease (sugar cane)	Do.
Sugar beet curly top	Do.
Potato yellow dwarf	Do.
Leaf blight (rice)	Do.
Blight of corn	Do.
Gummosis of sugarcane	Low.
Fungi:	
Late blight (potato)	Very high.
Cereal rusts	Do.
Rice blast	Do.
Corn rust	High.
Coffee rust	Very high.

5. Factors Influencing the Effects of Bacteriological (Biological) Attacks

Exotic diseases

205. Any country which resorted to bacteriological (biological) warfare would presumably try to infect, with a single blow, a large proportion of an enemy population with an exotic agent to which they had not become immune through previous exposure. Such exotic agents would lead to the appearance of diseases which normally had not occurred before in a given geographical area, either because of the absence of the organism involved (e.g., foot-and-mouth disease in North America or Japan), and/or of natural vectors (e.g., Japanese or Venezuelan encephalitis in Europe, Rocky Mountain spotted fever in many countries). In addition, a disease which had been controlled or eradicated from an area (e.g., urban or classical yellow fever from many tropical and sub-tropical countries, epidemic typhus from developed countries) might be reintroduced as a result of bacteriological (biological) warfare.

Altered or new diseases

206. Deliberate genetic steps might also be taken to change the properties of infectious agents, especially in antigenic composition and drug resistance. Apart from genetic changes that could be induced in known organisms, it is to be expected that new infectious diseases will appear naturally from time to time and that their causative agents might be used in war. However, it could not therefore be assumed that every outbreak of an exotic or new disease could necessarily be a consequence of a bacteriological (biological) attack. The Marburg disease, which broke out suddenly in 1967 in Marburg, Frankfurt and Belgrade, was a good example. It was acquired by laboratory workers who had handled blood or other tissues of vervet monkeys which had been recently caught in the wild, and by others who came into contact with them. Because the outbreak occurred in medical laboratories it was very skillfully handled. In other circumstances, it might have spread widely before it was controlled.

Epidemic spread

207. As already emphasized, a wide variety of agents can infect by the inhalation route, so that in a bacteriological (biological) attack a large number of persons could be infected within a short time. From the epidemiological point of view, the consequences would differ depending on whether the resultant disease was or was not transmissible from man to man. In the latter case the result would be a once-for-all disaster, varying in scale and lethality according to the nature of the organism used and the numbers of people affected. The attack would

undoubtedly have a strong demoralizing effect on the unaffected as well as the affected population, and it would be in the nature of things that there would be a breakdown of medical services.

208. If the induced disease were easily transmissible from man to man, and if it was one against which the population had not been effectively immunized, it is possible to imagine what could happen by recalling say, the periodical appearance of new varieties of influenza virus, e.g. the 1957 influenza pandemic. In Czechoslovakia (population about 14 million), 1,500,000 influenza patients were actually reported; the probable total number was 2,500,000. About 50 per cent of the sick were people in employment and their average period away from work was six days. Complications necessitating further treatment developed in 5-6 per thousand of the cases, and about 0.2 per thousand died. Those who are old enough to remember the 1918 influenza pandemic, which swept over most of the world, will judge the 1957 outbreak as a mild affair.

Susceptibility of population

209. A very important factor in the effectiveness of an aerosol attack is the state of immunity of the target population. Where the population is completely lacking in specific immunity to the agent which is disseminated, the incidence and severity of disease are likely to be exceptionally high. Naturally occurring examples of very severe epidemics in virgin populations are well known (e.g. measles in Fiji, poliomyelitis and influenza in the Arctic). A similar result follows the introduction of a susceptible population (often a military force) into an already infected area. Thus there was a high prevalence of dengue fever in military forces operating in the Pacific in World War II—sometimes affecting as many as 25 per cent of the operational strength of a unit. The local population suffered relatively little from the disease because they had usually been infected early in life, and were subsequently immune.

Populations of increased vulnerability

210. *Malnutrition:* Recent statistical studies reveal a clear association between malnutrition and the incidence of infectious diseases. FAO, WHO and UNICEF have pointed out that in developing countries, a shortage of nutritious food is a major factor in the high mortality rate due to infectious diseases, particularly in children.

211. *Housing and clothing:* Primitive housing and inadequate clothing would lead to an increased vulnerability to bacteriological (biological) and more particularly chemical weapons. Millions of people live in houses which are permeable to any sort of airborne infection or poison, and millions are inadequately clothed and walk barefooted.

212. Other conditions which characterize poor populations have a definite influence on the spread of infections. Large families increase the opportunities for contagious contact. Inadequate housing, lack of potable water and, in general, bad sanitation, a low educational level, numerous vectors of infectious disease (e.g. insects), and, of course, lack of medical services are factors which also favour the spread of disease. The agents used might also persist in the soil, on crops, grasses, etc., so that delayed action might need to be taken into account.

Social effects and public health measures

213. A basic factor which influences the risk of epidemic situation during every war is a rapid impairment of standards of hygiene. Widespread destruction of housing and of sanitary facilities (water works, water piping, waste disposal, etc.), the inevitable decline in personal hygiene, and other difficulties, create exceptionally favourable conditions for the spread of intestinal infections, or louse-transmitted disease, etc.

214. The importance of adequate public health services is well illustrated by an explosive water-borne epidemic of infectious hepatitis in Delhi in 1955-1956, which affected some 30,000 persons, and which occurred because routine water treatment was ineffective. This epidemic was caused by the penetration into the water supply of waste waters heavily contaminated with hepatitis virus. However, there was no concurrent increase in the incidence of bacillary dysentery and typhoid fever, showing that the routine treatment of the water had been adequate to prevent bacterial but not viral infections.

215. Air streams, migrating animals and running water may transport agents from one country to the other. Refugees with contagious diseases pose legal and epidemiological problems. In areas with multinational economies, losses in livestock and crops may occur in neighbouring countries by the spread of the disease through regional commerce.

216. The experiences from fairly recent smallpox epidemics can also be used to illustrate the social effects of an accidentally introduced, highly dangerous airborne infection. In New York (1947) one patient started

an epidemic, in which twelve persons became ill and two died. Within a month more than 5 million persons were revaccinated. Similarly in Moscow, in January 1960, a smallpox epidemic of forty-six cases (of whom three died) developed, caused by a single patient. At that time 5,500 vaccination teams were set up and vaccinated 6,372,376 persons within a week. Several hundreds of other health workers searched a large area of the country for contacts (9,000 persons were kept under medical supervision, of these 662 had to be hospitalized as smallpox suspects).

ANNEX A.—CHEMICAL PROPERTIES, FORMULATIONS AND TOXICITIES OF LETHAL CHEMICAL AGENTS (EXCERPT FROM MATERIAL SUPPLIED BY WORLD HEALTH ORGANIZATION)

[Key to table: (1) Trivial name; (2) military classification; (3) approximate solubility in water at 20° C.; (4) volatility at 20° C.; (5) physical state (a) at -10° C., (b) at 20° C.; (6) approximate duration of hazard (contact, or airborne following evaporation) to be expected from ground contamination (a) 10° C., rainy, moderate wind, (b) 15° C., sunny, light breeze, (c) -10° C., sunny, no wind, settled snow; (7) casualty producing dosages (lethal or significant incapacitating effects); (8) estimated human respiratory LC50 (m³/d activity: breathing rate ca. 15 liters/min.); (9) estimated human percutaneous toxicity.]

(1)	Sarin	VX	Hydrogen cyanide	Cyanogen chloride	Phosgene	Mustard gas	Botulinal toxin A
(2)	Lethal agent (nerve gas)	Lethal agent (nerve gas)	Lethal agent (blood gas)	Lethal agent (blood gas)	Lethal agent (lung irritant)	Lethal agent (vesicant)	Lethal agent
(3)	100 percent	1 to 5 percent	100 percent	6 to 7 percent	Hydrolysed	0.05 percent	Soluble
(4)	12, 100 mg/m ³	3 to 18 mg/m ³	873, 000 mg/m ³	3, 300, 000 mg/m ³	6, 370, 000 mg/m ³	630 mg/m ³	Negligible
(5)	Liquid	Liquid	Liquid	Solid	Liquid	Solid	Solid
(6)	1/4 to 1 hour	1 to 12 hours	Few minutes	Vapour	Vapour	Liquid	Do.
(a)	1/4 to 4 hours	3 to 21 days	do	Few minutes	Few minutes	12 to 48 hours	2 to 7 days
(b)	1 to 2 days	1 to 16 weeks	do	do	do	2 to 8 weeks	> 100 mg.-min./m ³
(c)	> 5 mg.-min./m ³	> 0.5 mg.-min./m ³	1 to 4 hours	1/4 to 4 hours	1/4 to 1 hour	1,500 mg.-min./m ³	0.001 mg. (oral)
(7)	> 100 mg.-min./m ³	10 mg.-min./m ³	> 2,000 mg.-min./m ³	> 7,000 mg.-min./m ³	> 1,600 mg.-min./m ³	4,500 mg./man l.	0.02 mg.-min./m ³
(8)	100 mg.-min./m ³	10 mg.-min./m ³	5,000 mg.-min./m ³	11,000 mg.-min./m ³	3,200 mg.-min./m ³	1,500 mg.-min./m ³	0.001 mg. (oral)
(9)	1,500 mg./man	6 mg./man					

¹ A drop of mustard weighing a few milligrams can produce a serious blister which will be incapacitating if it interferes with the normal activities of an individual.

ANNEX B—TEAR AND HARASSING GASES

Three parameters will be used to qualify the effects of tear gases. These are defined as follows:

Threshold of irritation is the atmospheric concentration of the substance (in mg per m³), which, in one minute of exposure, causes irritation.

Tolerance limit is the highest atmospheric concentration (in mg per m³) which a test subject can tolerate during one minute of exposure.

Lethal index is a dosage, and thus the product of the concentration in the air (in

mg per m³) and the time of exposure (in minutes), which causes mortality. Data for various tear gases are given in the following table.

The data given under "Lethal index" are from animal experiments with various species.

Tear gas	Threshold of irritation (mg/m ³)	Tolerance limit (mg/m ³)	Lethal index (mg.min/m ³)
Adamside (DM)	0.1	2-5	15,000-30,000
Ethyl bromacetate	5	5-50	25,000
Bromacetone	1.5	10	30,000
Omega-chloroacetophenone (CN)	0.3-1.5	5-15	8,500-25,000
O-chlorobenzylidene malonitrile (CS)	.05-1	1-5	40,000-75,000

ANNEX C.—SOME BIOLOGICAL AGENTS THAT MAY BE USED TO ATTACK MAN

Disease	Infectivity ¹	Transmissibility ²	Incubation period ³	Duration of illness ³	Mortality ³	Antibiotic therapy	Vaccination ⁴
Viral:							
Chikungunya fever	Probably high	None	R to 6 days	2 weeks to a few months	Very low (less than 1 percent)	None	None
Dengue fever	High	do	5 to 8 days	A few days to weeks	do	do	Do.
Eastern equine encephalitis	do	do	5 to 15 days	1 to 3 weeks	High (greater than 60 percent)	do	Under development
Tick-borne encephalitis	do	do	1 to 2 weeks	1 week to a few months	Variable up to 30 percent	do	Do.
Venezuelan equine encephalitis	do	do	2 to 5 days	3 to 10 days	Low (less than 1 percent)	do	Do.
Influenza	do	do	1 to 3 days	3 to 10 days	Usually low, except for complicated cases	do	Available
Yellow fever	do	do	3 to 6 days	1 to weeks	High (up to 40 percent)	do	Do.
Smallpox	do	High	7 to 16 days	12 to 24 days	Variable but usually high (up to 30 percent)	do	Do.
Rickettsial:							
Q-fever	do	None or negligible	10 to 21 days (sometimes shorter)	1 to 3 weeks	Low (usually less than 1 percent)	Effective	Under development
Psittacosis	do	Moderately high	4 to 15 days	1 to several weeks	Moderately high	do	None
Rocky Mountain spotted fever	do	None	3 to 10 days	2 weeks to several months	Usually high (up to 80 percent)	do	Under development
Epidemic typhus	do	do	6 to 15 days	A few weeks to months	Variable but usually high (up to 70 percent)	do	Available
Bacterial:							
Anthrax (pulmonary)	Moderately high	Negligible	1 to 5 days	3 to 5 days	Almost invariably fatal	Effective if given very early	Do.
Brucellosis	High	None	1 to 3 weeks	Several weeks to months	Low (less than 5 percent)	Moderately effective	Under development
Cholera	High	High	1 to 5 days	1 to several weeks	Usually high (up to 80 percent)	do	Available
Glanders	High	None	2 to 14 days	4 to 6 weeks	Almost invariably fatal	do	None
Melioidosis	do	do	1 to 5 days	4 to 20 days	Almost 100 percent fatal	Little effective	do
Plague (pneumonic)	do	High	2 to 5 days	1 to 2 days	do	Moderately effective if given early	Available
Tularemia	do	Negligible	1 to 10 days	2 to several weeks	Usually low sometimes high (up to 60 percent)	Effective	Do.
Typhoid fever	Moderately high	Moderately high	1 to 3 weeks	A few to several weeks	Moderately high up to (10 percent)	Moderately effective	Do.
Dysentery	High	High	1 to 3 days	A few days to weeks	Low to moderately high depending on strain	Effective	None
Fungal: Coccidioido mycosis	do	None	1 to 3 weeks	A few weeks to months	Low	None	Do.

¹ Infectivity: indicates the potency of the parasite to penetrate and multiply in the host's organism, regardless of the clinical manifestation of illness. In fact, there are several agents by which the great majority of the exposed population will be infected without developing clinical symptoms.

² Transmissibility: This refers to direct transmission from man to man without the intervention of any arthropod vector.

³ The figures listed under incubation period, duration of disease, and mortality are based on epidemiological data. They vary, according to variations in virulence and dose of the infecting

agent, resistance of the host and many other factors. It also should be noted that if the agents concerned would be deliberately spread in massive concentrations as agents of warfare, the incubation periods might be shorter and the resulting symptoms more serious. As to mortality, this refers to the ratio between the number of fatalities to the number of diseased (not to that of infected) individuals, if no treatment is given.

⁴ The availability of vaccines is no indication of their degree of effectiveness.

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CHAPTER III. ENVIRONMENTAL FACTORS AFFECTING THE USE OF CHEMICAL AND BACTERIOLOGICAL (BIOLOGICAL) CONSIDERATIONS

A. General considerations

217. Extraneous factors influence the behaviour of chemical and bacteriological (biological) weapons to a far greater extent than they do any other kind of armament. Some, such as wind and rain, relate to the state of the physical environment, and to a certain extent can be evaluated quantitatively. Others, which reflect the general ecological situation, and the living conditions and physiological state of the populations exposed to the effects of the weapons, are more difficult to define; their influence—though they could be considerable—cannot be quantified.

218. This limitation applies particularly to bacteriological (biological) weapons. The natural course of infectious diseases—for example in influenza epidemics—shows that they are governed by so many uncontrollable factors that the way they develop cannot as a rule be foreseen. This would also be probably true of pathogenic agents which were deliberately dispersed. On the other hand, the knowledge gained through the study of epidemiology, and in the study of artificial dispersions of bacteriological (biological) agents, both in the laboratory and the field, has shed some light on some of the factors concerned.

219. The ecological problem is the main theme of chapter IV. The factors which concern the variability of the human target, e.g. physiological and living conditions, and levels of protection, have already been described in chapters I and II. This chapter is concerned with physical environment (climate, terrain).

1. Phenomena Associated With the Dispersal of Chemical and Bacteriological (Biological) Agents

220. It has already been pointed out that chemical substances and living organisms capable of being used as weapons are extremely varied in their nature and in their effects. On the other hand, regarded solely from the standpoint of their physical state after dispersion in the atmosphere, they can clearly be placed in one or the other of the following categories:

Liquid drops and droplets of varying size; (diameters greater than about 10 Microns).
More or less finely divided liquid and solid aerosols; (diameters less than about 10 Microns).

Vapours.

221. Almost always, moreover, especially in the case of liquid chemical agents, the result of dispersion is a mixture of these different phases; thus, a liquid dispersed by an explosive charge gives rise to a mixture of aerosol and vapour, while aerial spraying may produce a mixture of droplets and aerosols. Solid chemical substances will be in aerosol form, and this will also be true, as has already been pointed out, of bacteriological (biological) agents.

222. Thus, chemical attacks would usually take effect simultaneously in two forms:

Contamination of the ground at, and in the immediate vicinity of, the target by direct deposition of the agent at the time of dispersion, and by subsequent settling of large particles;

Formation of a toxic cloud consisting of fine particles or droplets, of aerosol, and possibly of vapour.

223. Most bacteriological (biological) attacks would be designed primarily to create an infectious aerosol as an inhalation hazard. Some ground contamination might, however, also result when infectious particles settled on the ground.

224. Both ground contamination and toxic or infectious clouds would be immediately subject to the physical action of the atmosphere.

225. If the soil contaminants are liquid chemical agents, they would either evaporate, producing a sustained secondary cloud, or be absorbed by the ground, or diluted or destroyed by atmospherical precipitation. If they were solid agents, whether chemical or biological, they might be returned to a state of suspension by air currents, and perhaps carried out of the initially contaminated zone.

226. As it becomes formed, the toxic or infectious cloud is immediately exposed to atmospheric factors, and is straightaway carried along by air currents. At the same time, the particles within it are deposited at different rates according to their mass, and reach the ground at varying distances from the point of emission, depending on wind velocity (up to several kilometres in the case of particles less than a few tens of microns in diameter). The mechanically stable fraction of the aerosol (particles under 5 microns in diameter) remains in suspension, and may be carried along for considerable distances.

B. The influence of atmospheric factors on clouds of aerosols or vapours

227. The movement of a toxic or infectious cloud after its formation depends chiefly on the combined effects of wind and atmospheric conditions. The cloud is carried a longer or shorter distance by the wind; at the same time it is dispersed and diluted at a faster or slower rate by turbulence of the atmosphere and by local disturbances of mechanical origin resulting from the roughness of the ground.

228. The cloud may rise rapidly in the atmosphere or remain in the immediate vicinity of the ground, thus retaining its destructive power for a greater or lesser time depending on whether the air layer in which it is released is in a stable or unstable state.

1. State of the Atmosphere

229. The state of the atmosphere plays such an important role in the behaviour of aerosol clouds that one might almost say that it is the predominant factor in determining the outcome of an attack, the effect of which could be considerably reduced, or almost nullified, were the atmosphere very unstable, or very serious if it was in a state of pronounced and prolonged stability. For this reason the mechanisms governing the turbulent movements of air, caused by differences in temperatures between superimposed air layers require some explanation (see fig. 2).

230. Disregarding the frictional layer of air close to the ground, where mechanical turbulence resulting from friction between the air and the rough ground over which it moves creates special conditions, air temperature in the troposphere decreases on average at the rate of 0.64° C for every 100 metres of altitude. Very frequently, however, as a result of thermal exchange between the air and the ground, a cooler air layer may be formed beneath a mass of hot light air; in such conditions, the lower air layer, with its greater density, does not tend to rise and the atmosphere is said to be in "stable equilibrium".

231. The situation, in which the vertical temperature gradient becomes inverted, is known as "temperature inversion", while the air layer affected by the phenomenon is termed as "inversion layer". When present it is eminently favourable to the persistence of toxic clouds.

232. After a day of sunshine, the surface of the ground cools rapidly, with the result that the layer of air close to the ground cools more rapidly than those above it. Both the intensity of the inversion and the thickness of the air layer involved increase to a maximum towards 4 a.m., and then decrease again, finally disappearing shortly after sunrise. This variation is very marked when the sky is clear, and in favourable conditions

the inversion may last from fourteen to eighteen hours a day, depending on the season.

233. Very often, however, especially in winter or in overcast weather, when the rays of the sun are not sufficiently intense to heat the surface of the ground, the temperature inversion may last for several days. This condition has characterized all the disasters caused by industrial pollution; for example, the smog which claimed 4,000 victims in London in 1952 took its toll during a period of atmospheric stability which lasted for seven days.

234. Figure 2 shows the evolution of a toxic cloud depending on the state of the atmosphere. (Fig. 2 not printed.)

235. Apart from this kind of low-altitude inversion, which is most important in the context of this report since it governs the behaviour of toxic clouds released close to the ground, similar process may take place on a large scale at higher altitudes (hundreds of thousands of metres) whenever a cool air layer is formed beneath a hot air mass. This may take place over large, cold expanses (i.e. large expanses of land or sea, cloud or fog masses, etc.). Because of the high altitude at which they form, these inversion layers have little effect on toxic clouds released at ground level; but in the case of the long-distance transfer of spores they may act as a screen or reflector.

236. The configuration of the surface of the earth in a particular area, which alters the thermal exchange pattern, may also be conducive to the formation of an inversion. For example, inversions are a customary phenomenon in winter in deep valleys surrounded by high peaks, and occur more frequently in the neighbourhood of slopes facing the north than on southern slopes. This also occurs whenever hills of any size enclose a plain or basin, interrupting the general flow of air and preventing mixing from taking place. It is interesting to note that apart from the periodic appearance of smog in London, all the other major accidents resulting from air pollution have occurred in regions where the land configuration fits this description. For example, the small town of Donora, in the United States, lies in a relatively narrow plain bordered by high hills. In 1948 air pollution in the course of an inversion lasting five days led to twenty deaths and 6,000 cases of illness among the town's 14,000 inhabitants.

2. Urban Areas

237. The case of urban built-up areas is more complex, and it may even be said that each one possesses its own micro-climate, depending on its geographical situation, its topography and the layout and nature of its buildings.

238. Because the materials from which they are constructed are better conductors, and because their surfaces face in very varied directions, buildings usually capture and reflect solar radiation better than does the natural ground. Urban complexes therefore heat up more quickly than does the surrounding countryside, and the higher temperature is still further augmented by domestic and industrial heating plants. The results in a flow of cool air from the neighbouring countryside towards the hot centre of the town, beginning shortly after sunrise, decreasing at the beginning of the afternoon and then rising again to a maximum shortly before sunset. This general flow, which is of low velocity, is disturbed and fragmented at ground level by the buildings, forming local currents flowing in all directions.

239. This constant mechanical turbulence, to which is added the thermal turbulence caused by numerous heat-generating sources, should prevent the establishment in towns of a temperature inversion at low altitude. In fact, however, inversions do occur, when conditions are otherwise favourable, but the inversion layer is situated at a higher

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altitude than over the surrounding countryside (30 to 150 metres).

240. At night, local inversions may be generated at low altitude as a result of rapid radiation from the roofs of houses; thus in a narrow street lined with buildings of equal height, an inversion layer may be created at roof-top level which will persist until dawn.

241. Fog is more frequent over towns than over open country (+30 per cent in summer and +100 per cent in winter). The process of fog formation is accelerated by the particles, dust and smoke which form a dome over the town. At night these particles act as nuclei around which the fog condenses, the fog contributing in its turn to the retention of the particles in the dome. Fog will obviously have the same concentrating effect on particles originating in toxic clouds.

242. One final point which should be noted is that toxic aerosols and vapours may take some time to penetrate enclosed spaces. Once they have done so, they may continue as a hazard for very long unless adequate ventilation is provided.

3. Effect of Wind and Topography

243. The wind carries and spreads the toxic or infectious cloud, which is simultaneously diluted by turbulence. The distance which the cloud travels before its concentration has fallen to a level below which it is no longer harmful depends on the velocity of the wind and the state of the atmosphere. Since topography also produces changes in the normal wind pattern, it too plays an important part in determining the direction of travel of toxic clouds, sometimes focusing their effects in individual areas. Local winds may also be established as a result of differences in the heat absorbed by, and radiated from, different ground surfaces.

244. These local, surface winds, which affect the air layer nearest the ground up to 300 metres, are frequent and widespread in mountain ranges and near sea coasts. There are slope breezes, valley breezes, sea breezes and land breezes; and they could shift a toxic cloud in directions which cannot be predicted from a study of the general meteorology of the area. The breezes develop according to a regular cycle. During the day, under the influence of solar radiation, the air moves up the valleys and slopes, and moves from the sea towards the land; at night these currents are reversed. In temperate climates land and sea breezes are predominant during the summer; but they are masked by the general wind pattern during the other seasons of the year. They are predominant in subtropical and tropical regions throughout the year.

4. Example of Combined Effects of Wind and the State of the Atmosphere on a Cloud

245. There is some similarity between the evolution of toxic clouds which could be produced by chemical and bacteriological (biological) attacks and that of clouds containing industrial pollutants, so much so that the mathematical models developed for forecasting atmospheric pollution can be applied, with a few modifications, to toxic clouds. But the initial characteristics of the two are as a rule different. Characteristic features of chemical or bacteriological (biological) attacks are the multiplicity and high yield of the sources of emission and their very short emission time, all of which are factors making for a greater initial concentration in the cloud than the concentration of pollutants in industrial clouds.

246. Figure 4 indicates the order of magnitude of these phenomena, and demonstrates the schematic form, and for different atmospheric conditions, the size of area which would be covered by toxic clouds originating from a chemical attack using Sarin, with an intensity arbitrarily chosen at 500 kg/km. It shows that the theoretical distance of travel by the cloud, determined for bare and

unobstructed ground, may exceed 100 km. In practice the atmosphere must remain stable for more than ten hours in order to enable the cloud to travel such distances, a condition which, although certainly not exceptional, is fairly uncommon. (Figure 4 not printed.)

247. This figure illustrates the effect of atmospheric conditions on the distance a toxic cloud can be carried by the wind.

248. The example chosen is that of a medium-intensity (500 kg) attack with Sarin on a circular objective 1 km in diameter. The wind velocity is 7 km/h.

249. Each of the lines represents a contour of the hazard zone, i.e. the zone in which any unprotected person would be exposed to the effects of the agent.

250. Under highly unstable conditions (for example, on a very sunny day), this hazard zone is no greater than the area of objective aimed at (the circle at the left end of the figure). On the other hand, in any other situation—(1) slightly unstable, (2) neutral, (3) slightly stable, (4) moderately stable or (5) highly stable—the distance traveled will be greater, and it may extend almost 100 km if conditions remain highly stable for a sufficiently long time. It must be noted, however, that the distance of 100 km could be reached only if a very marked inversion persisted for about fourteen hours (100-7); such a situation is quite rare.

251. Corresponding evaluations cannot be made for an urban area, since the parameters involved are too numerous and too little understood. But it may be presumed that most of the characteristics of the urban micro-climate would tend to increase the persistence of chemical clouds. This is serious cause for concern, when it is remembered that in highly industrialized countries 50 to 90 per cent of the population live in urban areas.

252. To sum up, a stable or neutral atmosphere in equilibrium might cause a toxic cloud produced by a chemical or bacteriological (biological) attack to persist for hours after it had exercised its military effect, which could generally be expected to materialize in the first few minutes following the attack. These conditions could obtain not only at night, but also during long winter periods over vast continental expanses. If a neutral atmosphere in equilibrium were associated with a light wind irregular in direction, then the area affected could be relatively large, and, assuming an adequately heavy initial attack, the concentrations would be high.

5. Special Features of Bacteriological (Biological) Aerosols

253. So far as physical phenomena are concerned (horizontal and vertical movements, sedimentation, dilution, etc.), bacteriological (biological) aerosols would be generally affected in the same way as chemical clouds of aerosol and vapour, but not necessarily to the same extent. But since the effective minimum does for bacteriological (biological) agents are considerably smaller than for chemical agents, bacteriological (biological) aerosols would be expected to remain effective even in a very dilute state and, consequently, that they could contaminate much larger areas than could chemical clouds. An example is given in chapter II.

254. There would be no limit to the horizontal transport of micro-organisms, if there were none to the capacity of the organisms to survive in the atmosphere. Thus if the microbial aerosol particles were so small that their speed of fall remained close to the speed of the vertical air movements in the frictional layer (under average conditions this is on the order of 10 cm/s), the agents, whether alive or dead, would remain suspended and travel very considerable distances. Even if bacteriological (biological)

clouds were to move only in the air layer nearest the ground, they could cover very large areas. For example, in one experiment 600 litres of *Bacillus globigii* (a harmless spore-forming bacterium which is highly resistant to aerosolization and environmental stresses) were released off shore; bacteria were found more than 30 km inland. Organisms were found over 250 km² which was the entire area within which there were monitoring stations during the trial. The actual area covered was much more extensive.

255. On the other hand, most pathogenic agents are highly vulnerable when outside the organism in which they normally reproduce, and are liable to biological inactivation, which is sometimes rapid, in the aerosol state. This inactivation process is governed by several factors (such as temperature, humidity, solar radiation, etc.) which are now the subject of aerobiological research.

256. The size of the infective particles in a bacteriological (biological) aerosol is highly significant to their ability to initiate disease as a result of inhalation. It has been established that the terminal parts of the respiratory tract are the most susceptible sites for infection by inhalation. As with chemical agents, the penetration and retention of inhaled bacteriological (biological) particles in the lungs is very dependent on particle size, which is primarily determined by the composition of the basic material and the procedure of aerosolization, as pointed out in chapter I.

257. The influence of particle size of aerosol infectivity is illustrated in table 1, which shows that there is a direct relationship between the LD₅₀ and particle diameter of an aerosol of *Francisella tularensis*.

TABLE 1.—NUMBERS OF BACTERIA OF *FRANCISCELLA TULARENSIS* REQUIRED TO KILL 50 PERCENT OF EXPOSED ANIMALS

Diameter of particles (microns)	Numbers of bacterial cells LD ₅₀	
	Guinea pigs	Rhesus monkeys
1	3	17
7	6,500	240
12	20,000	540
22	170,000	3,000

C. Influence of atmospheric factors on chemical agents

1. Influence of Temperature

258. An attack with a liquid chemical agent, as already pointed out, would be as a rule result in the formation of a cloud of small droplets, aerosol and vapour in varying proportions, as well as in ground contamination, all of which would be affected by air temperature.

259. *Influence on droplet and aerosol clouds:* Only particles having dimensions within certain limits penetrate and are retained by the lungs. The larger ones are trapped in the upper part of the respiratory tract (e.g. nose and trachea), whereas the smaller ones are exhaled. Penetration and retention have maximum values in the size range of 0.5 to 3 microns.

260. Liquid chemical agents exercise their effects both by penetrating the skin and by inhalation. The material absorbed by the lungs acts immediately, whereas there is a delay before the effects become manifest from an agent absorbed through the skin or the mucous membrane of the upper air passages.

261. A high temperature favours the evaporation of particles which will decrease in size and thus reach the lungs, contributing to the immediate effect; an additional quantity of vapour is produced which contributes to the same effect.

262. *Effect on ground contamination:* The temperature of the air, and even more that

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of the ground, have a marked effect on the way ground contamination develops and persists. The temperature of the ground, which depends on the thermal characteristics of its constituent materials and on the degree of its exposure to the sun, either increases or reduces evaporation, and consequently decreases or increases the duration of contamination. The surface temperature is extremely variable from point to point, depending on the type and colour of the soil; a temperature difference of 20° has been noted between the asphalt surface of a road and the surrounding fields. The temperature gradient also varies during the course of the day; in clear weather the differences may range from 15 to 30° C. in a temperate climate, and up to 50° C. in a desert climate. High temperatures of both air and ground favour the rate of evaporation, thus reducing the persistence of surface contamination; wind, because of the mechanical and thermal turbulence it creates, has a similar effect.

263. To illustrate the effect of these variable factors, it is worth noting that the contamination of bare ground by unpurified mustard, at a mean rate of 30 g/m², will persist for several days or even weeks at temperatures below 10° C at medium wind velocities, whereas it lasts for only a day and a half at 25° C. Furthermore, because of accelerated evaporation at high temperatures, the cloud produced is more concentrated, and the danger of vapour inhalation in, and downwind of, the contaminated area becomes greater.

2. Influence of Humidity

264. In contrast to high temperature, high relative humidity may lead to the enlargement of aerosol particles owing to the condensation of water vapour around the nuclei which they constitute. The quantity of inhalable aerosol would thus diminish, with a consequent reduction in the immediate effects of the attack.

265. On the other hand, a combination of high temperature and high relative humidity causes the human body to perspire profusely. This intensifies the action of mustard-type vesicants, and also accelerates the transfer through the skin of percutaneous nerve agents.

3. Influence of Atmospheric Precipitation

266. Light rain disperses and spreads the chemical agent which thus presents a larger surface for evaporation, and its rate of evaporation rises. Conversely a heavy rain dilutes and displaces the contaminating product, facilitates its penetration into the ground, and may also accelerate the destruction of certain water-sensitive compounds (e.g. lewisite, a powerful blistering agent).

267. Snow increases the persistence of contamination by slowing down the evaporation of liquid contaminants. In the particular case of mustard gas, the compound is converted into a pasty mass which may persist until the snow melts.

268. Soil humidity, atmospheric precipitation and temperature also exercise a powerful influence on the activity of herbicides, which are much more effective at higher humidities and temperatures, than in dry weather and at low temperatures. This applies equally to preparations applied to plants and to those introduced into the soil.

4. Influence of Wind

269. As vapors emanating from ground contaminated by liquid chemical agents begin to rise, the wind comes into play. The distance the vapour will be carried depends on the wind velocity and the evaporation rate of the chemical, which will itself change with variations in ground and air temperatures. The distance is maximal (several kilometres) when there is a combination of the conditions promoting evaporation (high soil temperature) persistence of the cloud

(stable atmosphere) and dispersal of the cloud (gentle winds). These conditions exist in combination at the end of a sunny day, at the time when a temperature inversion exists.

5. Influence of Soil—Dependent Factors

270. *Nature of the soil.* The soil itself, through its texture and the porosity of its constituent materials, plays an important role in the persistence of liquid chemical contaminants, which may penetrate to a greater or lesser extent, or remain on the surface. In the former case the risk of contamination by contact is reduced in the short term, but persistence will be increased to the extent that factors favourable to evaporation (temperature, wind) are prevented from acting. In the latter case, when the contaminant remains on the surface, the danger of contact contamination remains considerable, but persistence is reduced. Thus persistence in sandy soils may be three times as long as in clay.

271. *Vegetation.* Vegetation prevents a liquid contaminant from reaching the soil and also breaks it up, thus encouraging evaporation. But at the same time the short-term danger is enhanced because of the widespread dispersion of the contaminant on foliage, and the consequently increased risk of contact contamination.

272. The canopy of foliage in dense forests (e.g. conifers, tropical jungle), traps and holds a considerable portion of a dispersed chemical agent, but the fraction which none the less reaches the soil remains there for a long time, since the atmospheric factors involved in the process of evaporation (temperature, wind, over the soil, turbulence) are hardly significant in such an environment as compared with open spaces.

273. Too little is known about the absorption and retention of toxic substances by plants to make it possible to assess the resulting danger to the living creatures whose food supply they may constitute. Like certain organic pesticides, it is probable that other toxic chemicals may penetrate into plant systems via the leaves and roots. Cases could then arise where all trace of contaminant had disappeared from the soil but with the toxic substance persisting in vegetation.

274. *Urban areas.* It can also be assumed that, in spite of a surface temperature which is on the average higher, contaminants might persist longer in built-up areas than over open ground. There are two reasons for this. Structural, finishing and other building materials are frequently porous, and by absorbing and retaining liquid chemical agents more readily, they increase the duration of contamination. Equally the factors which, in open country, tend to reduce persistence (sunshine, wind over ground) play a less important part in a built-up city.

275. *Climate,* in general, may exercise an indirect influence on the effect of percutaneous chemical agents, simply because of the fact that in hot climates the lightly clad inhabitants are very vulnerable to attacks through the skin.

276. The predominating influence of climatic factors and terrain on the persistence of contamination indicates that the *a priori* classification of chemical agents as persistent or non-persistent, solely on the basis of different degrees of volatility, is somewhat arbitrary since, depending on circumstances, the same material might persist for periods ranging from a few hours to several weeks, or even months.

D. Influence of atmospheric factors on bacteriological (biological) agents

277. Infectious agents, when used to infect by way of food and water, or by means of animal vectors are, of course, hardly subject to the influence of climatic factors. But any large-scale attack by bacteriological (biological) agents would probably be carried

out by aerosols, in which the agents would be more susceptible to environmental influences than chemical agents.

278. Physico-chemical atmospheric factors have a destructive effect on aerosol-borne micro-organisms. Their viability decreases gradually over a period of hours or days at a progressively diminishing rate. Some decay very rapidly: for example, certain bio-aerosols used for pest control in temperate climates, and dispersed under average conditions in the cold and transitional seasons, show a rate of decay of 5 per cent per minute.

279. This apparent vulnerability of micro-organisms in aerosols might cast some doubt on the possible effectiveness of bacteriological (biological) attacks. However there are various means by which the rate of decay in the aerosol can be considerably reduced. For example: the use of very high concentrations of agent; the use of suitably "modeled" pathogenic strains; or the protection of aerosol particles by encapsulating them in certain organic compounds.

280. These procedures, which prolong the survival of micro-organisms in air, could presumably also be applied to potential agents of bacteriological (biological) warfare. Means are also available for prolonging the survival of micro-organisms in water, soil, etc.

1. Influence of Temperature

281. The effect of temperature on the survival of micro-organisms in bacteriological (biological) aerosols is not highly significant in the temperature ranges generally encountered. As a general rule, aerosol-borne biological agents will be destroyed more rapidly the more the temperature rises. On the other hand, in some circumstances high temperatures may act on bacteriological (biological) aerosols in the same way as on chemical aerosols, that is to say, particle size will be diminished by evaporation, and thus their rate of entry into the lungs will be enhanced.

2. Influence of Humidity

282. Relative humidity is the most important of the atmospheric conditions which affect the rate of decrease of viability of micro-organisms in the air. The extent of its effect varies with different micro-organisms, with the nature of the suspending fluid from which the aerosol is disseminated, with the manner of its dissemination (as a spray or as a dry powder). As a general rule, the rate of inactivation is greater at lower relative humidity although with some organisms maximum inactivation occurs in the middle range of relative humidity (30–70 per cent). The rate of inactivation will, however, tend to decrease with time, and may become extremely low when a state of equilibrium (stabilization) between the particles and their environment has been established. This implies that irrespective of relative humidity values, the final infective concentration of a stabilized aerosol may still be above the threshold minimum dose for infection by inhalation. Even so, microbial survival in a stabilized aerosol may be further reduced by sudden variations in atmospheric humidity.

283. The effectiveness of aerosol-borne bacteriological (biological) agents depends not only on their capacity to survive in the air. Also important is their low rate of sedimentation, combined with the capacity of the micro-organisms to spread and penetrate into buildings, so contaminating surfaces and materials indoors as well as outdoors. The possibility that some infective agents can survive for a long time in such conditions, and the fact that environmental dust particles may exercise a protective influence on organisms have been demonstrated on many occasions. Studies made in hospitals have shown that surviving micro-organisms can be dispersed from sites which have come to be called "secondary reservoirs", and that they may become sources of new infections, carried either through the air or by contact.

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3. Influence of Solar Radiation

284. The ultra-violet part of the solar spectrum has a powerful germicidal effect. Bacterial spores are much less sensitive to this radiation than are either viruses or vegetative bacteria, and fungal spores are even less sensitive than bacterial spores. The destructive effect of solar radiation on microorganisms is reduced when relative humidity is high (over 70 per cent). Air pollution, including a high proportion of atmospheric dust, also provides some protection.

285. Ultra-violet light exercises its destructive effects on microorganisms through the structural degradation of the nucleic acids which carry the genetic information. Most research on this subject has been carried out on microbes in liquid suspensions, but the results of studies of aerosol-borne microbes seem to lead to similar conclusions.

286. The germicidal effect of ultra-violet radiation has been known for a long time and used in combating airborne infections in schools, military buildings and hospitals. The problem of proper radiation dosage, and proper techniques, however, still remain to be solved.

287. The lethal effect of sunlight on microorganisms is less marked, although still apparent, in diffuse light. This is why a bacteriological (biological) attack, if one ever materialized, would be more probably undertaken in darkness.

4. Influence of Atmospheric Precipitation

288. Rain and snow have relatively little effect on bacteriological (biological) aerosols.

5. Influence of the Chemical Composition of the Atmosphere

289. Little is known about the influence on the viability of microorganisms of the chemical compounds present in the atmosphere. Oxygen promotes the inactivation of aerosol-borne agents, particularly in conditions of low humidity, and recent studies have also demonstrated that an unstable bactericidal factor (formed by combination between ozone and gaseous combustion products of petroleum) is present in the air, particularly downwind of heavily populated areas.

6. General Effects of Climate

290. Climate may also have a general and considerable influence on the development of epidemics and epizootics, in so far as the proliferation of vectors which spread disease may be encouraged, given the right conditions. This is indicated by the way myxomatosis developed in Australia. Although several attempts in 1927, and then from 1936 to 1943, to impart the disease to Australian rabbits failed, the epizootic spread rapidly from 1950 onwards, apparently for the sole reason that that summer, which was particularly rainy that year, was associated with an exceptional proliferation in the flooded Murray River valley of the mosquitoes which carry the disease.

291. Atmospheric humidity and temperature also have a strong influence on microorganisms acting upon vegetation.

CHAPTER IV. POSSIBLE LONG-TERM EFFECTS OF CHEMICAL AND BACTERIOLOGICAL (BIOLOGICAL) WARFARE ON HUMAN HEALTH AND ECOLOGY

A. Introduction

292. So far this report has dealt essentially with the potential short-term effects of chemical and bacteriological (biological) warfare. The possible long-term effects of the agents concerned need to be considered against the background of the trends whereby man's environment is being constantly modified, as it becomes transformed to meet his ever-increasing needs. Some of the changes that have occurred have been unwittingly adverse. The destruction of forests has created deserts, while grasslands have been destroyed by over-grazing. The air we breathe and our rivers become polluted, and chemical pesticides, despite the good they do, also

threaten with undesirable secondary effects. The long-term impact of possible chemical and bacteriological (biological) warfare clearly needs to be considered within an adequate ecological framework.

293. Ecology may be defined as the study of the interrelationships of organisms on the one hand and of their interactions with the physical environment in which they are found on the other. The whole complex of plants and animals within a specific type of environment—a forest, a marsh, a savannah—forms a community comprising all the plant life and all the living creatures—from the microorganisms and worms in the soil, to the insects, birds and mammals above the ground—within that environment, and the understanding of their interrelationships also necessitates a knowledge of the physical characteristics of the environment which bear on the living complex. Ecological communities are normally in dynamic equilibrium, which is regulated by the interaction of population density, available food, natural epidemics, seasonal changes and the competition of species for food and space.

294. Man has his special ecological problems. His numbers are multiplying fast, and increasing population requires commensurate increases in food production. The production and distribution of adequate food for the population which is predicted for the latter part of this century, and which will go on increasing through the next, will allow no relaxation in the effort which has already proved so successful. Food production has increased phenomenally in the past fifty years, primarily because of (1) improved agricultural practices, and particularly because of a marked increase in the use of chemical fertilizers and pesticides; (2) the development of genetically improved plants, herbs and flocks; and (3) increased industrialization of food-producing processes. There is hope that steps such as these will continue to bear fruit.

295. But while the use of fertilizers, herbicides and pesticides has brought about a massive increase in food production, it has also added to the pollution of soil and water, and as a result has altered our ecological environment in an enduring way. So too have other features of our industrial civilization. The motor car has been a very potent factor in increasing air pollution in towns and cities. The increasing population of the world creates unprecedented wastes, and the methods used to dispose of it—burying it, burning it, or discharging it into streams or lakes—have further polluted the environment. The remarkable development of synthetic and plastic materials in recent years has also added a new factor to the short- and long-term biological effects on man. Every new advance on our technological civilization helps to transform the ecological framework within which we evolved. From this point of view the existence and possible use of chemicals and bacteriological (biological) agent in warfare have to be regarded as an additional threat, and as a threat which might have enduring consequences, to our already changing environment.

B. Consequences to man of upsetting the ecological equilibrium

296. The chemical industry doubled its output between 1953 and 1960 and it is still growing fast but the useful results of its continued development are none the less of the utmost importance to man's future. The good effects on food production of the use of artificial fertilizers alone far outweigh any secondary deleterious consequences of their use. The facts are too well known to need spelling out. It is enough to point out, as one example, that maize production in the United States increased between 1923 and 1953, a thirty-year period, by barely four quintals per hectare, but that in the ten years between 1953 and 1964, when the use of fer-

tilizers and more productive hybrid seeds came widespread, the increase was eleven quintals. This is characteristic of what has happened everywhere where fertilizers have been used on a large scale.

297. The beneficial effect of the use of modern chemical pesticides also does not need spelling out. It is estimated that the present annual world loss in production due to weeds and parasites is still approximately 460 million quintals of wheat and 360 million quintals of maize, and that to eliminate this waste will mean the use of even more pesticides than are now being consumed.

298. What has to be realized about modern agricultural practices is that without them the increases in the output of food which the world needs could never be achieved. Unless production mounts everywhere, those who have not yet cast off the burdens of living in a primitive agricultural world will never reach the level of civilization to which all aspire.

299. But, as already indicated, the great increase in the use of fertilizers, pesticides and herbicides does have deleterious side effects. For example, in Switzerland, surface waters and springs have been contaminated in times of high rainfall by excessive amounts of fertilizers corresponding to 0.3-0.5 kg of phosphorous and 45 kg of nitrogen per hectare per year. This kind of thing occurs elsewhere as well, and it cannot but help transform—for all we know adversely—the environment in which living matter including fish otherwise thrive.

300. The dangers of the side effects of modern pesticides are also beginning to be appreciated, and are already beginning to be guarded against in advanced countries. Except in high dosage, these substances act only on lower organisms, although some organophosphorous compounds are toxic to man and other vertebrates. Less selective agents may be toxic to soil bacteria, plankton, snails and fish. Chlorinated hydrocarbons, such as DDT, are toxic only in unusually high dosages, but accumulate in fat, and deposit in the liver and the central nervous system. Following surface application, pesticides enter the soil and seep into underground waters; or become washed by rain into rivers, lakes and reservoirs. It is theoretically possible that in some situations, in which non-selective chemical pesticides are used, disruption of the ecological equilibrium could lead to the long-term suppression of useful animals and plants. These are dangers which only constant vigilance will avert.

301. Detergents are another modern chemical development whose use has had to be regulated, since they have a direct short-term effect on certain types of natural food such as daphniae and the algae which are eaten by fish. The first detergents which came on the market led to enormous quantities of foam on river, and this in turn reduced the supply of oxygen for organisms living in the water. They also damage the earth by affecting soil bacteria. Such detergents, which resist destruction even by the most modern water treatment methods, have all but disappeared from use and have been replaced by others, which can be almost completely destroyed by waste water treatment.

302. In the context of the possible long-term effects of chemical and bacteriological (biological) weapons, we have finally to note that towns and cities are growing all over the world, and that in the developed countries, conurbations (fusion of cities with loss of suburbs) have reached population levels approaching 50 million. Such great concentrations of people require very complicated arrangements for supply of food, water and other materials, transport and general administration. The use of chemical or bacteriological (biological) weapons against cities would undoubtedly have an ex-

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ceptionally severe disorganizing effect, and the full re-establishment of the services necessary for health, efficient government, and the smooth operation of industry might take a very long time.

C. Possible long-term effects of chemical and bacteriological (biological) means of warfare on man and his environment

303. Chemical weapons, in addition to their highly toxic short-term effects, may also have a long-term effect on the environment in which they are disseminated. If used in very high concentration they might cause damage by polluting the air, by polluting the water supplies and by poisoning the soil.

304. Bacteriological (biological) weapons could be directed against man's sources of food through the spread of persistent plant diseases or of infectious animal diseases. There is also the possibility that new epidemic diseases could be introduced, or old ones reintroduced, which could result in deaths on the scale which characterized the medieval plagues.

1. Chemical Weapons

305. There is no evidence that the chemical agents used in World War I—chlorine, mustard, phosgene, and tear-gas—had any untoward ecological consequences. As already observed, over 120,000 tons of these agents were used during that war, and in some areas which were attacked, concentrations must have added up to hundreds of kilograms per hectare. These regions have long since returned to normal and fully productive use.

306. The organophosphorous, or nerve, agents have never been used in war, and no corresponding experience is available to help form a judgment about their possible long-term effects. But since these agents are toxic to all forms of animal life, it is to be expected that if high concentrations were disseminated over large areas, and if certain species were virtually exterminated, the dynamic ecological equilibrium of the region might be changed.

307. On the other hand there is no evidence to suggest that nerve agents affect food chains in the way DDT and other pesticides of the chlorinated hydrocarbon type do. They hydrolyze in water, some of them slowly, so there could be no long-term contamination of natural or artificial bodies of water.

308. The use of herbicides during the course of the Viet-Nam conflict has been reported extensively in news media, and to a lesser extent in technical publications. The materials which have been used are 2,4-dichlorophenoxyacetic acid, 2,4,5-trichlorophenoxyacetic acid, cacodylic acid and picloram.

309. Between 1963 and 1968 these herbicides were used to clear forested areas for military purposes over some 9,100 km². This may be divided by forest type as shown in the following table.

TABLE 1.—TYPE OF FOREST AND EXTENT AND AREA TREATED WITH HERBICIDES IN SOUTH VIETNAM, 1963-68

Type of forest	Extent kilometers ²	Area treated kilometers ²
Open forest (semideciduous)....	50,150	8,140
Mangrove and other aquatic.....	4,800	960
Coniferous.....	1,250	0
Total.....	56,200	9,100

310. South Viet-Nam is about 172,000 km² in area, of which about one-third is forested. The area treated with herbicides up to the end of 1968 thus amounts to about 16 per cent of the forested area, or a little over 5 per cent of the total.

311. There is as yet no scientific evaluation of the extent of the long-term ecological changes resulting from these attacks. One estimate is that some mangrove forests may

need twenty years to regenerate, and fears have been expressed about the future of the animal population they contain. Certain species of bird are known to have migrated from areas that have been attacked. On the other hand, there has been no decline in fish catches, and as fish are well up in the food chain, no serious damage would seem to have been done to the aquatic environment.

312. When a forest in a state of ecological equilibrium is destroyed by cutting, secondary forest regenerates, which contains fewer species of plants and animals than were there originally, but larger numbers of those species which survive. If secondary forest is replaced by grassland, these changes are even more marked. If one or more of the animal species which increases in number is the host of an infection dangerous to man (a zoonosis), then the risk of human infection is greatly increased. This is exemplified by the history of scrub typhus in South-East Asia, where the species of rat which maintains the infection and the vector mite are much more numerous in secondary forest, and even more so in grassland, so increasing the risk of the disease being transmitted to people as forest is cleared.

313. In high rainfall areas, deforestation may also lead to serious erosion, and so to considerable agricultural losses. Deserts have been created in this way.

2. Bacteriological (Biological) Weapons Against man

314. New natural foci, in which infection may persist for many years, may be established after an aerosol or other type of bacteriological (biological) attack. This possible danger can be appreciated when one recalls the epidemiological consequences of the accident introduction of rabies and other veterinary infections (blue-tongue, African swine fever) into a number of countries. The spread of rabies in Europe following World II, as a consequence of the disorganization caused by the war, shows how an epidemiologically complicated and medically dangerous situation can emerge even with an infection which had long been successfully controlled. In 1945 there were only three major foci of infection in Czechoslovakia. In the following years, foxes multiplied excessively because farms were left unworked, because of the increased number of many kinds of wild creatures, and also because of the discontinuation of systematic control. Foxes also came in from across frontiers, and the epizootic gradually worsened. In the period 1952/1966 a total of 888 foci were reported, 197 new ones in 1965 alone. Bringing the situation under control demand extraordinary and prolonged efforts by the health service: in 1966 alone, 775,000 domestic animals were vaccinated in affected areas of the country. Non the less, the disease has not yet been stamped out. Natural foci cannot be eliminated without organized and long-term international co-operation.

315. Arthropods (insects, ticks) also play an important part, along with other creatures, in the maintenance of pathogenic agents in natural foci. A man exposed to a natural focus risks infection, particularly from arthropods, which feed on more than one species of host. A bacteriological (biological) attack might lead to the creation of multiple and densely distributed foci of infection from which, if ecological conditions were favourable, natural foci might develop in regions where they had previously never existed, or in areas from which they had been eliminated by effective public health measures.

316. On the other hand, the large-scale use of bacteriological (biological) weapons might reduce populations of susceptible wild species below the level at which they could continue to exist. The elimination of a species or group of species from an area would create in the ecological community an empty niche

which might seriously disturb its equilibrium, or which might be filled by another species more dangerous to man because it carried a zoonosis infection acquired either naturally or as a result of the attack. This would result in the establishment of a new natural focus of disease.

317. The gravity of these risks would depend on the extent to which the community of species in the country attacked contained animals which were not only susceptible to the infection, but were living in so close a relationship to each other that the infection could become established. For example, not all mosquito species can be infected with yellow fever virus, and if the disease is to become established, those which can become vectors must feed frequently on mammals, such as monkeys, which are also sufficiently susceptible to the infection. A natural focus of yellow fever is therefore very unlikely to become established in any area lacking an adequate population of suitable mosquitos and monkeys.

318. Endemics or enzootics of diseases (i.e. infections spreading at a low rate, but indefinitely, in a human or animal population) could conceivably follow a large-scale attack, or might be started by a small-scale sabotage attack, for which purpose the range of possible agents would be much wider, and might even include such chronic infections as malaria.

319. *Malaria* is a serious epidemic disease in a susceptible population, but it is difficult to envisage its possible employment as a bacteriological (biological) weapon, because of the complex life cycle of the parasite. Drug-resistant strains of malaria exist in, for example, areas of Asia and South America, and their possible extension to areas where mosquitos capable of transmitting the disease already exist, would greatly complicate public health measures, and cause a more serious disease problem because of the difficulties of treatment.

320. *Yellow fever* is still enzootic in the tropical regions of Africa and America. Monkeys and other forest-dwelling primates, together with mosquitos which transmit the virus, constitute natural foci and ensure survival of the virus between epidemics.

321. Importation of this disease is possible wherever a suitable environment and susceptible animal and mosquito hosts exist. This occurred naturally in 1980 when a previously uninfested area of Ethiopia was invaded by yellow fever and an epidemic resulted in about 15,000 deaths. Because of the inaccessibility of the area, some 8,000-9,000 people had died before the epidemic was recognized. The epidemic was extinguished but it is likely that a permanent focus of yellow fever infection has been established in this area, previously free of the disease. It might be extremely serious if the virus were introduced into Asia or the Pacific Islands where the disease appears never to have occurred, but where local species of mosquito are known to be able to transmit it. Serious problems could also arise if the virus were introduced into the area of the United States where vector mosquitos still exist, and where millions of people live in an area of a few square kilometers.

322. Another consideration is the possible introduction of a new species of animal to an area to cause either long-term disease or economic problems. For example, mongooses were introduced many years ago to some Caribbean islands, and in one at least they have become a serious economic pest of the sugar crop, and an important cause of rabies. The very large economic effect on the introduction of rabbits to Australia is well known. Certain mosquito species (a yellow fever mosquito, *Aedes aegypti*, and a malaria mosquito, *Anopheles gambiae*) have naturally spread to many areas of the world from their original home in Africa, and have been responsible for serious disease problems in the areas that have been invaded. It is con-

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ceivable that in the war the introduction of such insects on a small scale might be tried for offensive purposes.

323. In addition to the development of new natural foci, another long-term hazard, but one which is very much more speculative than some of the possibilities mentioned above, is that of the establishment of new strains of organisms of altered immunological characteristics or increased virulence. This might occur if large numbers of people or other susceptible animal species became infected in an area through a bacteriological (biological) attack, thus providing opportunities for new organisms to arise naturally. The appearance from time to time of immunologically different forms of influenza shows the type of thing which might happen. Such altered forms of agents might cause more severe and perhaps more widespread epidemics than the original attack.

Against domestic animals

324. *Foot-and-mouth disease* is a highly infectious but largely non-fatal disease of cattle, swine and other cloven-footed animals. It is rarely transmitted from a diseased animal to man, and when it is, the order is a trivial one.

325. The milk yield of diseased cows decreases sharply and does not reach its normal yield even after complete recovery. Losses range from 9 to 30 per cent of milk yield. In swine, loss from foot-and-mouth are estimated at 80-80 per cent among suckling pigs. Foot-and-mouth is endemic in many countries and breaks out from time to time even in countries which are normally free of the disease. Some countries let it run its course without taking any steps to control it; others try to control it by the use of vaccines; and some pursue a slaughter policy in which all affected animals and contacts are killed.

326. It is obvious that a large epizootic could constitute a very serious economic burden, for example, by bringing about a serious reduction in the supply of milk. It is in this context that foot-and-mouth disease could conceivably serve as a bacteriological (biological) weapon, especially since war conditions would greatly promote its spread. Efficient prevention is possible through active immunization, but the immunity is rather short-lived and annual vaccination is required.

327. *Brucellosis* is an example of chronic disease which could possibly result from bacteriological (biological) weapon attacks. There are three forms known, which attack cattle, swine and goats respectively. Any of these may be transmitted to man, in whom it causes a debilitating but rarely fatal disease lasting for four to six months or even longer. It is enzootic in most countries of the world, and an increased incidence of the disease resulting from its use as a weapon could be dealt with, after the initial blow, in the same way as is the natural disease. But the cost of eliminating disease such as brucellosis from domestic animals is very high.

328. *Anthrax* was described in chapter II and what concerns us here is that if large quantities of anthrax spores were disseminated in bacteriological (biological) weapons, thus contaminating the soil of large regions, danger to domestic animals and man might persist for a very long time. There is no known way by which areas could be rendered safe. The use of large quantities of anthrax as a weapon might therefore cause long-term environmental hazards.

Against crops

329. The *rust fungus*, as already noted, is one of the most damaging of natural pathogens which affects wheat crops. Each rust pustule produces 20,000 uredospores a day for two weeks, and there may be more than 100 pustules on a single infected leaf. The ripe uredospores are easily detached from the plant even by very weak air currents. The spores are then carried by the wind over dis-

tances of many hundreds of kilometres. It is estimated that the annual total world loss of wheat from rust is equivalent to about \$500 million.

330. Weather plays a decisive role in the epiphytotic spreading of rust. Temperature influences the incubation period and the rate of uredospore germination. Germination and infection occur only when there is a water-saturated atmosphere for three to four hours. Thus, epiphytotic spread occurs when there are heavy dews and when the temperature is between 10° and 30° C. The principal means of prevention is to destroy the pathogen and to breed resistant species. Recently, ionizing radiation has been employed to develop resistant strains.

331. The cereal rusts die out during winter unless some other susceptible plant host, such as barberry, is present, and therefore their effect on crops would be limited to a single season. As they are capable of reducing man's food reserves considerably, rust spores could be extremely dangerous and efficient bacteriological (biological) weapons, especially if deployed selectively with due regard to climatic conditions. Artificial spreading of an epiphytotic would be difficult to recognize and delivery of the pathogen to the target would be relatively simple.

332. Rust epiphytotics might have a very serious effect in densely populated developing countries, where the food supply might be reduced to such an extent that a human population already suffering from malnutrition might be driven to starvation, which, depending on the particular circumstances, might last a long time.

333. Another conceivable biological weapon, although neither a practical nor a bacteriological one, is the *potato beetle*. To use it for this purpose, the beetle would have to be produced in large numbers, and introduced, presumably clandestinely, into potato growing regions at the correct time during maturation of the crop. In the course of spread the beetle first lives in small foci, which grow and increase until it becomes established over large territories. The beetle is capable of astonishing propagation: the progeny of a single beetle may amount to about 8,000 million in one-and-a-half years.

334. Since beetles prefer to feed and lay their eggs in plants suffering from some viral disease, they and their larvae may help transmit the virus thereby increasing the damage they cause. The economic damage caused by the beetle varies with the season and the country affected, but it can destroy up to 80 per cent of the crop. Protection is difficult because it has not been possible to breed resistant potato species and the only means available at present is chemical protection.

335. Were the beetle ever to be used successfully for offensive purposes, it could clearly help bring about long-term damage because of the difficulty of control.

3. Genetic and Carcinogenic Changes

336. The possibility also exists that chemical and bacteriological (biological) weapons might cause genetic changes. Some chemicals are known to do this. LSD, for example, is known to cause genetic changes in human cells. Such genetic changes, whether induced by chemicals or viruses, might conceivably have a bearing on the development of cancer. A significantly increased incidence of cancer in the respiratory tract (mainly lung) has been reported recently among workers employed in the manufacture of mustard gas during World War II. No increased prevalence of cancer has been reported among mustard gas casualties of World War I although it is doubtful if available records would reveal it. However, most of these casualties were exposed for only short periods to the gas whereas the workers were continuously exposed to small doses for months or years.

CHAPTER V. ECONOMIC AND SECURITY IMPLICATIONS OF THE DEVELOPMENT, ACQUISITION AND POSSIBLE USE OF CHEMICAL AND BACTERIOLOGICAL (BIOLOGICAL) WEAPONS AND SYSTEMS OF THEIR DELIVERY

A. Introduction

337. Previous chapters have revealed the extent to which developments in chemical and biological science have magnified the potential risks associated with the concept of chemical or bacteriological (biological) warfare. These risks derive not only from the variety of possible agents which might be used, but also from the variety of their effects. The doubt that a chemical or bacteriological (biological) attack could be restricted to a given area means that casualties could occur well outside the target zone. Were these weapons used to blanket large areas and cities, they would cause massive loss of human life, affecting non-combatants in the same way as combatants, and in this respect, they must clearly be classified as weapons of mass destruction. The report has also emphasized the great problems and cost which would be entailed in the provision of protection against chemical and bacteriological (biological) warfare. It is the purpose of this final chapter to explore in greater depth the economic and security implications of matters such as these.

B. Production

1. Chemical Weapons

338. It has been estimated that during the course of the First World War, at a time when the chemical industry was in a relatively early stage of development, about 180,000 tons of chemical agents were produced, of which more than 120,000 tons were used in battle. With the rapid development of the industry since then, there has been an enormous growth in the potential capacity to produce chemical agents.

339. The scale, nature, and cost of any programme for producing chemical weapons, and the time needed to implement it, would clearly be largely dependent on the scientific, technical and industrial potential of the country concerned. It would depend not only on the nature of the chemical industry itself, and on the availability of suitably trained engineers and chemists, but also on the level of development of the chemical engineering industry and of the means of automating chemical processes, especially where the production of highly toxic chemical compounds is involved. Whatever the cost of developing a chemical or bacteriological (biological) capability, it needs to be realized that it would be a cost additional to, and not a substitute for, that of acquiring an armoury of conventional weapons. An army could be equipped with the latter without having any chemical or bacteriological (biological) weapons. But it could never rely on chemical or bacteriological (biological) weapons alone.

340. Today a large number of industrialized countries have the potential to produce a variety of chemical agents. Many of the intermediates required in their manufacture, and in some cases even the agents themselves, are widely used in peace time. Such substances include, for example, phosgene, which some highly developed countries produce at the rate of more than 100,000 tons a year and which is commonly used as an intermediate in the manufacture of synthetic plastics, herbicides, insecticides, paints and pharmaceuticals. Another chemical agent, hydrocyanic acid, is a valuable intermediate in the manufacture of a variety of synthetic organic products and is produced in even greater quantities. Ethylene-oxide, which is used in the manufacture of mustard gases, is also produced on a large scale in various countries. It is a valuable starting material in the production of a large number of important substances, such as detergents, disinfectants and wetting agents. The world

production of ethylene-oxide and propylene-oxide is now well in excess of 2 million tons per year. Mustard gas and nitrogen mustard gases can be produced from ethylene-oxide by a relatively simple process. Two hundred and fifty thousand tons of ethylene-oxide would yield about 500,000 tons of mustard gas.

341. The production of highly toxic nerve agents, including organophosphorus compounds, presents problems which, because they are relatively difficult, could be very costly to overcome. To a certain extent this is because of the specialized safety precautions which would be needed to protect workers against these very poisonous substances, a need which, of course, applies to all chemical agents, especially to mustard gas. However, many intermediates used in the manufacture of nerve agents have a peacetime application: for example, dimethylphosphite, necessary for the production of Sarin, is used in the production of certain pesticides. But even leaving operating expenses aside, the approximate cost of acquiring one plant complex to produce munitions containing up to 10,000 tons of Sarin a year would be about \$150 million. The cost would, of course, be considerably less if existing munitions could be charged with chemical agents.

342. A country which possesses a well-developed chemical industry could clearly adapt it to produce chemical agents. But were it to embark on such a step, it would be only the beginning. The establishment of a comprehensive chemical warfare capability would also involve special research centres, experimental test grounds, bases, storage depots and arsenals. The development of sophisticated and comprehensive weapons systems for chemical or bacteriological (biological) warfare would be a very costly part of the whole process. None the less, the possibility that a peacetime chemical industry could be converted to work for military purposes, and of chemical products being used as weapons, increases the responsibility of Governments which are concerned to prevent chemical warfare from ever breaking out.

2. Bacteriological (Biological) Weapons

343. The microbiological expertise necessary to grow agents of bacteriological (biological) warfare exists to a large extent in many countries, since the requirements are similar to those of a vaccine industry and, to a lesser extent, a fermentation industry. Apart from the combination of the highly developed technologies of these two industries, there remains only a need for some specialized knowledge, expertise and equipment to permit the safe handling of large quantities of bacteriological (biological) agents. Consequently, existing facilities in the fermentation, pharmaceutical and vaccine industries could be adapted for the production of bacteriological (biological) agents. But the technological complexities of producing bacteriological (biological) agents in dry powder form are very much greater than for wet spray systems. Moreover, it would be desirable to provide an effective vaccine with which to protect production staff. The technical difficulties would increase with the scale and complexity of the weapons systems that were being developed. But the fact remains that any industrially advanced country could acquire whatever capability it set out to achieve in this field.

344. The difficulty and cost of providing for the transport and storage of bacteriological (biological) weapons are considerable, since special storage conditions, e.g., refrigeration, and stringent safety and security precautions are essential. In addition, testing to determine the potential effectiveness of the material produced would require considerable and costly testing facilities both in the laboratory and in the field.

345. Despite the fact that the development and acquisition of a sophisticated armoury of chemical and bacteriological (biological) weapons systems would prove very costly in resources, and would be dependent on a sound industrial base and a body of well-trained scientists, any developing country could in fact acquire, in one way or another, a limited capability in this type of warfare—either a rudimentary capability which it developed itself, or a more sophisticated one which it acquired from another country. Hence, the danger of the proliferation of this class of weapons applies as much to developing as it does to developed countries.

C. Delivery systems

346. Practically all types of explosive munitions (artillery shells, mines, guided and unguided rockets, serial bombs, landmines, grenades, etc.) can be adapted for the delivery of chemical agents. A modern bomber, for example, can carry about fifteen tons of toxic chemical agents, and it is estimated that only 250 tons of V-gas, an amount which could be delivered by no more than fifteen or sixteen aircraft, is enough to contaminate a great city with an area of 1,000 square kilometres and a population of 7 to 10 million. Were such a population mainly in the open and unprotected, fatal casualties might reach the level of 50 per cent.

347. Existing armaments which (with some modification) could be used to deliver agents in order to generate local outbreaks of disease, could also contaminate large areas with pathogens. For example, a single aircraft could cover with a bacteriological (biological) agent an area of up to 100,000 square kilometres, although the area of effective dosage might be much smaller due to loss of the infectivity of the airborne agent.

348. While the development and production costs of chemical and bacteriological (biological) agents might well be high, the cost of the complete weapons system (see chapter I) would be even greater. The cost of developing, procuring and operating a squadron of modern bombers far outweighs the cost of the bombs it could carry. However, for some purposes, an existing weapon system or a far less sophisticated means of disseminating might be used.

D. Protection

349. The measures which would be required to protect a population, its livestock and plants against chemical or bacteriological (biological) attack are immensely costly and complex (chapter I). At present, warning systems for the detection of aerosol clouds are fairly rudimentary. Systems for the detection of specific chemical and bacteriological (biological) agents might be devised, but again they are likely to prove very expensive, if indeed they are feasible.

350. With certain agents, contamination of the environment, for example of buildings and soil, could persist for several days or weeks. Throughout this period people would be exposed to the risk of contamination by contact and by inhalation. Protective clothing, even if adequately prefabricated and distributed or improvised, would make it difficult to carry on with normal work. The prolonged wearing of respirators causes physiological difficulties, and it would prove necessary to provide communal shelters with air filtration and ventilations systems for civil populations. Shelters would be extremely costly to build and operate, and a programme for their construction would constitute a heavy burden on the economy.

351. Even if protective measures were provided against known agents, it is conceivable that new ones might be developed whose physical or chemical properties would dictate a need for new individual and communal protective equipment. This could constitute an even greater economic burden.

352. Defensive measures, especially against chemical agents, would also have to include the extremely laborious and expensive task of decontaminating large numbers of people, as well as equipment, weapons and other materials. This would mean setting up decontamination centres and training of people in their use. Stocks of decontaminating agents and replacement clothing would also be required.

353. A very important part of a defence system against chemical or bacteriological (biological) weapons would be the means of very rapidly detecting an attack and identifying the specific agent used in an attack. Methods for doing this rapidly and accurately are still inadequate. Specific protection against bacteriological (biological) agents would necessitate the use of vaccines and perhaps antibiotics (see annex C of chapter II). Vaccines vary in their effectiveness, even against naturally-occurring infections, and even those which are highly effective in natural circumstances may not protect against bacteriological (biological) agents deliberately disseminated into the air and inhaled into the lungs. Antibiotics used prophylactically are a possible means of protection against bacteria and rickettsiae but not against viruses. But the large and complex problems of their use in large populations would be all but insuperable.

354. It would be extremely difficult to arrange for the medical treatment of a civilian population which had been attacked with chemical or bacteriological (biological) weapons. Mobile groups of specialists in infectious disease, of microbiologists, and of well-trained epidemiologists, would have to be organized to provide for early diagnosis and treatment, while a network of reserve hospitals and a massive supply of drugs would have to be prepared in advance. The maintenance of a stockpile of medical supplies is extremely costly. Many drugs, especially antibiotics, deteriorate in storage. Huge amounts would have to be discarded as useless from time to time, and the stock would have to be replenished periodically.

E. Cost to society

355. The extent to which the acquisition, storage, transport and testing of chemical and bacteriological (biological) munitions would constitute an economic burden, would depend on the level of a country's industrial and military capability, although compared to nuclear weapons and advanced weapons systems in general, it might not seem excessive. But the task of organizing delivery systems and deployment on a large or sophisticated scale could well be economically disastrous for many countries. Moreover the preparation of an armoury of chemical and bacteriological (biological) weapons would constitute a possible danger to people in the vicinity of production, storage and testing facilities.

356. Chemical and bacteriological (biological) attacks could be particularly dangerous in towns and densely populated areas, because of the close contacts between individuals, and because of the centralized provision of services for every day necessities and supply (services, urban transport networks, trade, etc.). The consequences might also be particularly serious in regions with a warm, moist climate, in low lying areas, and in areas with poorly developed medical facilities.

357. The technical and organizational complexity, as well as the great financial cost, of providing adequate protection for a population against attack by chemical and bacteriological (biological) agents have already been emphasized. The costs would be formidable by any standards. The construction of a system of fall-out shelters to protect only part of the population of one large and highly developed country against nuclear weapons has been estimated at no less than \$5,000-\$10,000 million. Such shelters could be

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modified, at a relatively modest additional cost, to provide protection against chemical and bacteriological (biological) weapons. To construct communal shelters for a corresponding part of the population against chemical and bacteriological (biological) weapons alone would cost much the same as protection against nuclear fall-out. If all other necessary related expenditures are considered—such as detection and warning systems, communications, and medical aid—the total costs of civil defence against chemical and bacteriological (biological) agents would be greater than \$15,000–\$25,000 million for a developed country of 100–200 million people. But even if such a programme were ever planned and implemented, there could be no assurance that full protection could be achieved.

358. For whatever its cost, no shelter programme could provide absolute protection against attack by chemical or bacteriological (biological) agents. Protective measures would be effective only if there were adequate warning of an attack, and if civil defence plans were brought into operation immediately and efficiently. However, many shelters were available, the likelihood would be that large numbers of people would be affected to varying degrees, and would be in urgent need of medical attention, and once hostilities had ceased, that there would be large numbers of chronic sick and invalids, requiring care, support and treatment, and imposing a heavy burden on a society already disorganized by war.

359. It is almost impossible to conceive of the complexity of the arrangements which would be necessary to control the consequences of a large-scale bacteriological (biological) attack. Even in peacetime, the development of an epidemic of a highly contagious disease started by a few individual cases, introduced from abroad, necessitates enormous material expenditure and the diversion of large numbers of medical personnel. Examples of widespread disruption due to a few smallpox contacts are given in chapter II. No estimates are given of the actual costs involved in dealing with these events, but in some cases they must have run into millions of dollars. Large-scale bacteriological (biological) attacks could thus have a serious impact on the entire economy of the target country and, as is observed in chapter II, depending on the type of agent used, the disease might well spread to neighbouring countries.

360. Whatever might be done to try to save human beings, nothing significant could be done to protect crops, livestock, fodder and food-stuffs from a chemical and bacteriological (biological) weapons attack. Persistent chemical agents could constitute a particular danger to livestock.

361. Water in open reservoirs could be polluted as a result of deliberate attack, or perhaps accidentally, with chemical or bacteriological (biological) weapons. The water supply of large towns could become unusable, and rivers, lakes and streams might be temporarily contaminated.

362. Enormous damage could be done to the economy of a country whose agricultural crops were attacked with herbicides. For example, only ten to 10 grammes per hectare of 2, 4D could render a cotton crop completely unproductive (see annex A). Fruit trees, grape vines and many other plants could also be destroyed. Mixtures of 2, 4D, of 2, 4, 5T and picloram are particularly potent. The chemical known as paraquat can destroy virtually all annual plants, including leguminous plants, rice, wheat and other cereals. Arsenic compounds desiccate the leaves of many crops and make them unusable as food. There are no means known at present of regenerating some of the plants which are affected by herbicides. Experience has shown, however, that in the case of some species, either natural or artificial seeding

can easily produce normal growth in the next growing season. But the destruction of fruit trees, vines and other plants, if achieved could not be overcome for many years. For most practical purposes, it would be impossible to prevent the destruction of cultivated plants on which herbicides have been used, and depending on a country's circumstances, widespread famine might follow.

363. If the induced disease were to spread, bacteriological (biological) weapons could affect even more extensive agricultural areas. The effect would however be more delayed and more specific to the crops affected. Annex A gives examples of the extent of the decrease in a wheat harvest and in a rice harvest affected by blast. The uredospores of the rust are easily transported by air currents so that down-wind sections would be affected by rust to a considerable distance, with a corresponding sharp reduction in the crop, while the upwind sections gave a good yield.

364. Over and above all these possible effects of chemical and bacteriological (biological) warfare on farm animals and crops is the possibility discussed in the previous chapter, of widespread ecological changes due to deleterious changes brought about in wild fauna and flora.

F. The relevance of chemical and bacteriological (biological) weapons to military and civil security

365. The comparison of the relative effectiveness of different classes of weapons is a hazardous and often futile exercise. The major difficulty is that from the military point of view, effectiveness cannot be measured just in terms of areas of devastation or of numbers of casualties. The final criterion would always be whether a specific military purpose had been more easily achieved with one rather than another set of weapons.

366. Clearly, from what has been said in the earlier chapters of this report, chemical weapons could be more effective than equivalent weights of high explosive when directed against densely populated targets. Similarly, so far as mass casualties are concerned, bacteriological (biological) weapons could, in some circumstances, have far more devastating effects than chemical weapons, and effects which might extend well beyond the zone of military operations.

367. From the military point of view, one essential difference between anti-personnel chemical and bacteriological (biological) weapons on the one hand, and a conventional high explosive weapon on the other (including small arms and the whole range of projectiles), is that the area of the effects of the latter is more predictable. There are, of course, circumstances where, from the point of view of the individuals attacked, an incapacitating gas would be less damaging than high explosives. On the other hand, whereas military forces can, and do, rely entirely upon conventional weapons, no country, as already observed, could entrust its military security to an armoury of chemical and bacteriological (biological) weapons alone. The latter constitute only one band in the spectrum of weapons.

368. As previous chapters have also shown, neither the effectiveness nor the effects of chemical and bacteriological (biological) weapons can be predicted with assurance. Whatever military reasons might be advanced for the use of these weapons, and whatever their nature, whether incapacitating or lethal, there would be significant risk of escalation, not only in the use of the same type of weapon but also of other categories of weapons systems, once their use had been initiated. Thus, chemical and bacteriological (biological) warfare could open the door to hostilities which could become less controlled, and less controllable, than any war in the past. Uncontrollable hostilities cannot be reconciled with the concept of military security.

369. Since some chemical and bacteriological (biological) weapons constitute a major threat to civilian populations and their food and water supplies, their use cannot be reconciled with general national and international security. Further, because of the scale and intensity of the potential effects of their use, they are considered as weapons of mass destruction. Their very existence thus contributes to international tension without compensating military advantages. They generate a sense of insecurity not only in countries which might be potentially belligerent, but also in those which are not. Neutral countries could be involved through the use of chemical and bacteriological (biological) weapons, especially those whose territories bordered on countries involved in conflict in the course of which chemical and bacteriological (biological) casualties had been suffered by garrisons and civilians close to frontiers. The effects of certain bacteriological (biological) weapons used on a large scale might be particularly difficult to confine to the territory of a small country. Large-scale chemical and bacteriological (biological) agents and chemical agents might be used for acts of sabotage. Such events might occur as isolated acts, even carried out in defiance of the wishes of national leaders and military commanders. The continued existence and manufacture of chemical weapons anywhere may make such occurrences more likely.

370. Obviously any extensive use of chemical weapons would be known to the country attacked. The source of the attack would probably also be known. On the other hand, it would be extremely difficult to detect isolated acts of sabotage in which bacteriological (biological) weapons were used, especially if the causative organism were already present in the attacked country. Because of the suspicions they would generate, acts of sabotage could thus provoke a conflict involving the widespread use of chemical and bacteriological (biological) weapons.

ANNEX A

ECONOMIC LOSS FROM POSSIBLE USE OF CHEMICAL AND BACTERIOLOGICAL (BIOLOGICAL) WEAPONS AGAINST CROPS

TABLE 1.—ECONOMIC LOSS WHICH COULD RESULT FROM THE USE OF CHEMICAL WEAPONS DUE TO THE DESTRUCTION OF CROPS PER HECTARE OF LAND

Type of plant	Average harvest (in tons per hectare)	Price of 1 ton in U.S. dollars	Sum total of losses in U.S. dollars per hectare
Cotton.....	3	600	1,800
Rice.....	5	84	420
Wheat.....	3	69	207
Apple tree.....	30	1140	1,800

¹ Will not produce apples for 2 years.

TABLE 2.—ECONOMIC LOSS DUE TO THE USE OF BACTERIOLOGICAL (BIOLOGICAL) WEAPONS AGAINST CROPS

Plant	Type of agent	Losses		Loss in U.S. dollars per hectare
		Per-cent	Tons per hectare	
Wheat.....	Cereal rust (<i>Puccinia graminis</i>)	80	24	165
Rice.....	Rice blast (<i>Piricularia oryzae</i>)	70	35	294

CONCLUSION

371. All weapons of war are destructive of human life, but chemical and bacteriological (biological) weapons stand in a class of their own as armaments which exercise their effects solely on living matter. The idea that bacteriological (biological) weapons could deliberately be used to spread disease generates a sense of horror. The fact that cer-

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tain chemical and bacteriological (biological) agents are potentially unconfined in their effects, both in space and time, and that their large-scale use could conceivably have deleterious and irreversible effects on the balance of nature adds to the sense of insecurity and tension which the existence of this class of weapons engenders. Considerations such as these set them into a category of their own in relation to the continuing arms race.

372. The present inquiry has shown that the potential for developing an armoury of chemical and bacteriological (biological) weapons has grown considerably in recent years, not only in terms of the number of agents, but also in their toxicity and in the diversity of their effects. At one extreme, chemical agents exist and are being developed for use in the control of civil disorders; and others have been developed in order to increase the productivity of agriculture. But even though these substances may be less toxic than most other chemical agents, their ill-considered civil use, or use for military purposes could turn out to be highly dangerous. At the other extreme, some potential chemical agents which could be used in weapons are among the most lethal poisons known. In certain circumstances the area over which some of them might exercise their effects could be strictly confined geographically. In other conditions some chemical and bacteriological (biological) weapons might spread their effects well beyond the target zone. No one could predict how long the effects of certain agents, particularly bacteriological (biological) weapons might endure and spread and what changes they could generate.

373. Moreover, chemical and bacteriological (biological) weapons are not a cheap substitute for other kinds of weapon. They represent an additional drain on the national resources of those countries by which they are developed, produced and stockpiled. The cost cannot of course be estimated with precision; this would depend on the potential of a country's industry. To some the cost might be tolerable; to others it would be crippling, particularly, as has already been shown, when account is taken of the resources which would have to be diverted to the development of testing and delivery systems. And no system of defence, even for the richest countries in the world, and whatever its cost, could be completely secure.

374. Because chemical and bacteriological (biological) weapons are unpredictable, in varying degree, either in the scale or duration of their effects, and because no certain defence can be planned against them, their universal elimination would not detract from any nation's security. Once any chemical or bacteriological (biological) weapon had been used in warfare, there would be a serious risk of escalation, both in the use of more dangerous weapons belonging to the same class, and of other weapons of mass destruction. In short, the development of a chemical or bacteriological (biological) armoury, and a defence, implies an economic burden without necessarily imparting any proportionate compensatory advantage to security. And at the same time it imposes a new and continuing threat to future international security.

375. The general conclusion of the report can thus be summed up in a few lines. Were these weapons ever to be used on a large scale in war, no one could predict how enduring the effects would be, and how they would affect the structure of society and the environment in which we live. This overriding danger would apply as much to the country which initiated the use of these weapons as to the one which had been attacked, regardless of what protective measures it might have taken in parallel with its development of an offensive capability. A particular danger also derives from the fact that any country could develop or acquire, in one

way or another, a capability in this type of warfare, despite the fact that this could prove costly. The danger of the proliferation of this class of weapons applies as much to the developing as it does to developed countries.

376. The momentum of the arms race would clearly decrease if the production of these weapons were effectively and unconditionally banned. Their use, which could cause an enormous loss of human life, has already been condemned and prohibited by international agreements, in particular the Geneva Protocol of 1925, and, more recently, in resolutions of the General Assembly of the United Nations. The prospects for general and complete disarmament under effective international control, and hence for peace throughout the world, would brighten significantly if the development, production and stockpiling of chemical and bacteriological (biological) agents intended for purposes of war were to end and if they were eliminated from all military arsenals.

377. If this were to happen, there would be a general lessening of international fear and tension. It is the hope of the authors that this report will contribute to public awareness of the profoundly dangerous results if these weapons were ever used, and that an aroused public will demand and receive assurances that Governments are working for the earliest effective elimination of chemical and bacteriological (biological) weapons.

APPENDICES

Protocol for the prohibition of the use in war of asphyxiating, poisonous or other gases, and of bacteriological methods of warfare, signed at Geneva, 17 June 1925

The undersigned plenipotentiaries, in the name of their respective Governments:

Whereas the use in war of asphyxiating, poisonous or other gases, and of all analogous liquids, materials or devices, has been justly condemned by the general opinion of the civilized world;

Whereas the prohibition of such use has been declared in Treaties to which the majority of Powers of the world are Parties; and

To the end that this prohibition shall be universally accepted as a part of International Law, binding alike the conscience and the practice of nations;

Declare:

That the High Contracting Parties, so far as they are not already Parties to Treaties prohibiting such use, accept this prohibition, agree to extend this prohibition to the use of bacteriological methods of warfare and agree to be bound as between themselves according to the terms of this declaration.

The High Contracting Parties will exert every effort to induce other States to accede to the present Protocol. Such accession will be notified to the Government of the French Republic, and by the latter to all signatory and acceding Powers, and will take effect on the date of the notification by the Government of the French Republic.

The present Protocol, of which the French and English texts are both authentic, shall be ratified as soon as possible. It shall bear today's date.

The ratifications of the present Protocol shall be addressed to the Government of the French Republic, which will at once notify the deposit of such ratification to each of the signatory and acceding Powers.

The Instruments of ratification of and accession to the present Protocol will remain deposited in the archives of the Government of the French Republic.

The present Protocol will come into force for each signatory Power as from the date of deposit of its ratification, and, from that moment, each Power will be bound as regards other Powers which have already deposited their ratifications.

In witness whereof the Plenipotentiaries have signed the present Protocol.

Done at Geneva in a single copy, the seventeenth day of June, One Thousand Nine Hundred and Twenty-Five.

RESOLUTION 2162 B (XXI)

(1484th plenary meeting, December 5, 1966)

The General Assembly,
Guided by the principles of the Charter of the United Nations and of international law,

Considering that weapons of mass destruction constitute a danger to all mankind and are incompatible with the accepted norms of civilization,

Affirming that the strict observance of the rules of international law on the conduct of warfare is in the interest of maintaining these standards of civilization,

Recalling that the Geneva Protocol for the Prohibition of the Use in War of Asphyxiating, Poisonous or Other Gases, and of Bacteriological Methods of Warfare, of 17 June 1925, has been signed and adopted and is recognized by many States,

Noting that the Conference of the Eighteen-Nation Committee on Disarmament has the task of seeking an agreement on the cessation of the development and production of chemical and bacteriological weapons and other weapons of mass destruction, and on the elimination of all such weapons from national arsenals, as called for in the draft proposals on general and complete disarmament now before the Conference.

1. Calls for strict observance by all States of the principles and objectives of the Protocol for the Prohibition of the Use in War of Asphyxiating, Poisonous or Other Gases, and of Bacteriological Methods of Warfare, signed at Geneva on 17 June 1925, and condemns all actions contrary to those objectives;

2. Invites all States to accede to the Geneva Protocol of 17 June 1925.

RESOLUTION 2454 A (XXIII)

(1750th plenary meeting, December 20, 1968)

The General Assembly,

Reaffirming the recommendations of its resolution 2182 B (XXI) calling for strict observance by all States of the principles and objectives of the Protocol for the Prohibition of the Use in War of Asphyxiating, Poisonous or other Gases, and of Bacteriological Methods of Warfare signed at Geneva on 17 June 1925, condemning all actions contrary to those objectives and inviting all States to accede to that Protocol,

Considering that the possibility of the use of chemical and bacteriological weapons constitutes a serious threat to mankind,

Believing that the people of the world should be made aware of the consequences of the use of chemical and bacteriological weapons,

Having considered the report of the Eighteen-Nation Disarmament Committee which recommended that the Secretary-General appoint a group of experts to study the effects of the possible use of such weapons,

Noting the interest in a report on various aspects of the problem of chemical, bacteriological and other biological weapons which has been expressed by many Governments and the welcome given to the recommendation of the Eighteen-Nation Disarmament Committee by the Secretary-General in his Annual Reports for 1967-68,

Believing that such a study would provide a valuable contribution to the consideration in the Eighteen-Nation Disarmament Committee of the problems connected with chemical and bacteriological weapons,

Recalling the value of the report of the Secretary-General on the effects of the possible use of nuclear weapons,

1. Requests the Secretary-General to prepare a concise report in accordance with the proposal in Part II of his Introduction to the Annual Report for 1967-68 and in accordance with the recommendation of the Eighteen-Nation Disarmament Committee

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contained in paragraph 26 of its report (document A/7189);

2. *Recommends* that the report be based on accessible material and prepared with the assistance of qualified consultant experts by the Secretary-General, taking into account the views expressed and the suggestions made during the discussion of this item at the twenty-third session of the General Assembly;

3. *Calls upon* Governments, national and international scientific institutions and organizations to co-operate with the Secretary-General in the preparation of the report;

4. *Requests* that the report be transmitted to the Eighteen-Nation Disarmament Committee, the Security Council and the General Assembly at an early date, if possible by 1 July 1969, and to the Governments of Member States in time to permit its consideration at the twenty-fourth session of the General Assembly;

5. *Recommends* that Governments give the report wide distribution in their respective languages, through various media of communication, so as to acquaint public opinion with its contents;

6. *Reiterates* its call for strict observance by all States of the principles and objectives of the Geneva Protocol of 17 June 1925 and invites all States to accede to that Protocol.

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Mr. NELSON. Mr. President, it is the most comprehensive document of this kind that has been called to my attention. I think it is in the interest of the Congress and the public that it be printed in full in the RECORD. The United Nations report was compiled by an internationally distinguished group of scientists, representing many nations, and I think presents, in the most effective

fashion I have seen, the implications of engaging in this kind of warfare.

The Secretary General, in his conclusion, states that:

The general conclusion of the report can thus be summed up in a few lines. Were these weapons ever to be used on a large scale in war, no one could predict how enduring the effects would be, and how they would affect the structure of society and the environment in which we live. This overriding danger would apply as much to the country which initiated the use of these weapons as to the one which had been attacked, regardless of what protective measures it might have taken in parallel with its development of an offensive capability. A particular danger also derives from the fact that any country could develop or acquire, in one way or another, a capability in this type of warfare, despite the fact that this could prove costly. The danger of the proliferation of this class of weapons applies as much to the developing as it does to developed countries.

The momentum of the arms race would clearly decrease if the production of these weapons were effectively and unconditionally banned. Their use, which could cause an enormous loss of human life, has already been condemned and prohibited by international agreements, in particular the Geneva Protocol of 1925, and, more recently, in resolutions of the General Assembly of the United Nations.

The PRESIDING OFFICER. The time of the Senator has expired.

Mr. STENNIS. Mr. President, does the Senator from New Hampshire desire more time?

Mr. MCINTYRE. Not at the present moment.

Mr. NELSON. Mr. President, I would like to ask for 2 minutes to complete the reading of that statement.

Mr. STENNIS. Oh, I thought the Senator had concluded.

Mr. NELSON. No.

Mr. STENNIS. Mr. President, I yield 2 minutes to the Senator from Wisconsin.

Mr. NELSON. I thank the Senator.

I just want to read the completion of this summary:

The prospects for general and complete disarmament under effective international control, and hence for peace throughout the world, would brighten significantly if the development, production and stockpiling of chemical and bacteriological (biological) agents intended for purposes of war were to end and if they were eliminated from all military arsenals.

"If this were to happen, there would be a general lessening of international fear and tension. It is the hope of the authors that this report will contribute to public awareness of the profoundly dangerous results if these weapons were ever used, and that an aroused public will demand and receive assurances that Governments are working for the earliest effective elimination of chemical and bacteriological (biological) weapons."

I have given the study prepared by the consultant experts my earnest consideration and I have decided to accept their unanimous report in its entirety, . . .

I simply say I wish to endorse that statement of the Secretary General. I think the elimination of the production, distribution, and stockpiling of this kind of weapon is our ultimate goal.

I thank the Senator from Mississippi for yielding.

Mr. STENNIS. Mr. President, I yield myself such time as I may take.

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The Senator from Indiana has indicated that he may want some time.

Mr. HARTKE. Five minutes.

Mr. STENNIS. I yield the Senator from Indiana 5 minutes.

Mr. HARTKE. Mr. President, first, I should like to thank the committee for the action it has taken in concerning itself with the very important question of chemical and biological warfare, and also to express my special thanks to the distinguished Senator from New Hampshire (Mr. McINTYRE) for the fine work he has done with regard to this rather complicated but at the same time very important legislation dealing with a matter of general concern not alone to the people of this country, but the whole world.

In the statement of the Senator from New Hampshire (Mr. McINTYRE), he also made mention of the fact that we are dealing with the shipment of such materials which are shipped by those other than the Defense Department itself. I think it is very important for us to recognize that the shipment of any type of material of this kind which is dangerous to the public generally should be dealt with; that it is not just the Pentagon itself which is the one unit which is shipping material which can be hazardous to the public health.

It is my intention to support legislation by the Senator from New Hampshire to prohibit the shipment of such materials by other agencies, including private corporations, because we know that a large number of potentially dangerous biological agents which are shipped through the country generally are not under any real control. It has been a matter of great concern to me, and the committee has held hearings on surface transportation.

Also, the whole question of chemical and biological warfare is not a new issue in the Senate. Many of us can recall the intense publicity campaign waged by the Army Chemical Corps nearly 10 years ago—a campaign designed to inform the Congress as to the supposed economy and humanity of gas and germ warfare. At that time we were told that chemicals and biologicals were “Tomorrow’s weapons,” and that they would some day make it possible for Nations to wage a “war without death.”

This publicity campaign succeeded in boosting the status of the chemical corps and our CBW budget increased threefold between 1961 and 1963.

Also, as our involvement in Vietnam deepened, R. & D. gradually gave way to manufacturing, stockpiling, and combat use. Procurement budgets, now shrouded in wartime secrecy, have grown to disturbing proportions. “Tomorrow’s Weapons” are now costing us more than \$1 million a day. Our CBW program—once an underfunded vision—has grown into an uncontrolled nightmare. “Tomorrow’s Weapons” are with us today—but they have brought with them fear, suffering, and disaster. The use of tear gas in Vietnam to flush the enemy from cover, and the use of herbicides to destroy Vietnamese food supplies, is not the humane “war without death” that we were promised. The Utah sheep-kill episode and

the nerve gas disposal issue have brought the dangers of CBW closer to home. Accidents in Okinawa and open air testing in Maryland have only served to intensify public fears about lethal gases and germs.

I recall one instance in which I was rather severely criticized for complaining about the utilization of this type of material; and the man in charge of the operation said, “Well, this is just killing without a ‘bang.’” I think killing is effective whether with a “bang” or not.

Predictably, as CBW budgets have grown, the Army’s craving for publicity has disappeared. Today, the issue of chemical and biological warfare is being raised primarily by civilian opponents rather than by Pentagon advocates.

The PRESIDING OFFICER. The time of the Senator has expired.

Mr. STENNIS. Mr. President, I yield the Senator 2 minutes.

Mr. HARTKE. I thank the Senator. The Senate action today has been prompted by a profound public concern—a concern that becomes harder to control the longer we delay. The American people are demanding the Congress take a hard look at our chemical and biological warfare program—a hard, critical look.

The amendment we are considering today is a modest step in the right direction. It puts mild restrictions on certain kinds of testing, limits the development of certain kinds of delivery systems, prohibits stockpiling of CB weapons overseas, and provides greater safety in transportation of lethal chemicals and biologicals. But most important, in my mind, it strips away some of the unnecessary secrecy which surrounds our CBW program. My own contributions to the amendment are embodied in the report requirement, the prohibition on “backdoor” financing, and the rail shipment notification restrictions. These provisions, providing the Congress with basic information on the scope and the purpose of our CBW program, will make the other restrictions easier to enforce, and will prevent ungrounded public fears from turning CBW into a dangerous and emotional issue.

Mr. President, the CBW issue need not grow into a symbolic attack on military spending, or a ritualistic defense of military preparedness. It can be judged on its own terms, thanks to the collective efforts of those who have brought this widely accepted amendment to the floor. This amendment provides the Senate with an opportunity to answer its own questions, to express its concern, and to respond to public demands, without impairing our military capabilities or compromising our Nation’s security.

I thank the Senator from Mississippi for yielding me this time.

Mr. McINTYRE. Mr. President, will the Senator from Mississippi yield me 2 minutes to respond?

Mr. STENNIS. Yes. Mr. President, I yield the Senator from New Hampshire 2 minutes.

Mr. McINTYRE. Mr. President, I commend the Senator from Indiana wholeheartedly for his interest in this field, particularly in this year of 1969,

and I commend, too, the fact that his staff, working together with my staff and Pentagon personnel, have done a lot of hard work. There was much give and take in working out these compromises. The Senator and his staff have displayed great merit, and deserve our commendation.

The Senator made mention, in his remarks, about shipments of biological agents throughout the United States, not by the Department of Defense but by others. The Senator may be aware of what I am about to say. I think he has made reference to the fact that his committee has oversight of the matter.

Mr. HARTKE. That is correct.

Mr. McINTYRE. The American Type Culture Collection, which is a private group in Washington, D.C., made shipments of nearly 20,000 different cultures of bacteria and viruses, many of them deadly, in 1967 and again in 1968.

During these same years Fort Detrick made shipments totally about 400—about 200 a year.

Figures are not readily available for the shipments of these bacteria and viruses by the communicable disease lab with headquarters in Atlanta, Ga., but I understand that there is a heavy movement of these agents by the laboratories.

Mr. HARTKE. I thank the Senator from New Hampshire for this information. We will certainly bring it up in committee, and I think we can come forward with some legislation this year which will be effective in making it possible for us to provide greater protection for the people generally in transporting these agents, which are potentially so dangerous and so deadly.

Mr. McINTYRE. I think that will be fine, because I think the whole group of amendments sponsored by the Senator from Indiana, the Senator from Wisconsin, the Senator from New York, the Senator from Texas, the Senator from Rhode Island, and others, have demonstrated that Congress feels the need for more control over shipments of these deadly germs and deadly gases, and not only for more control, but for more knowledge about them.

I thank the Senator.

Mr. STENNIS. Mr. President, I yield myself 2 minutes.

As chairman of the committee, I highly congratulate the Senator from New Hampshire (Mr. McINTYRE) for the splendid work he has done on this subject during our hearings. I also commend him and the authors of the various amendments for the work that they have done in this highly important field, which has developed to the point where it needs such regulation as is reflected by these amendments. I believe the Senators and the staffs have done a splendid job; and in fact I support the amendments. We have not had a chance to have a committee meeting, and I cannot speak for the committee, but I have discussed the matter with the Senator from Maine (Mrs. SMITH), and I am sure she will have a word to say in their support.

I point out that the committee took out the \$16 million for research and development of lethal offensive chemical and biological items. This is follow-on to

the work of the McIntyre subcommittee, with the other Senators who authored these amendments. I believe they have done a splendid job.

I discussed this matter on the telephone Saturday morning with Secretary Laird, and he thinks some regulation is desirable.

The PRESIDING OFFICER. The Senator's time has expired.

Mr. STENNIS. I yield myself 1 additional minute.

He expressed concern about the situation, and an inclination to support the amendment; and later, at a press conference, he did express support for it.

So I commend it to the Senate. As I say, I think the Senator from Maine will have a few words in its favor also. I thank the Senator from Wisconsin, for the committee, for his very generous words with respect to our efforts on this bill.

Mr. MCINTYRE. Mr. President, will the Senator yield?

Mr. STENNIS. I yield to the Senator from New Hampshire.

Mr. MCINTYRE. I ask for the yeas and nays.

The yeas and nays were ordered.

Mr. STENNIS. Mr. President, if I have any time left, I yield to the Senator from Arizona.

Mr. GOLDWATER. Mr. President, I merely wish to say that I believe the chairman has made a very wise move in accepting this amendment. While, as he said, I cannot speak for the whole committee, I want him to know that at least he has the backing of the junior Senator from Arizona.

We did a good bit of work on this subject in committee. It is a very touchy, very sensitive field, that all of us believe should have regulation, or more regulation, and I am very happy that the distinguished Senator from New Hampshire was able to work out the compromise that he did, with the large number of amendments with which he had to work. He has done an outstanding job all through the writing of this bill and its defense on the floor. So, Mr. President, I am glad that the chairman has indicated the position which he has with respect to the action which is about to be taken.

Mr. STENNIS. Mr. President, I thank the Senator very much.

The PRESIDING OFFICER. Who yields time?

Mr. DIRKSEN. Mr. President, I yield 1 minute to the Senator from Maine.

Mrs. SMITH. Mr. President, I join the very able chairman of the Committee on Armed Services, and concur with what he has said with respect to this amendment. I also commend the several sponsors of the various amendments for getting together and bringing in what seems to me to be an excellent compromise, and I am glad to support it.

Mr. DIRKSEN. I yield 1 minute to the Senator from California.

Mr. MURPHY. Mr. President, I associate myself with the remarks made by the ranking minority member of the Committee on Armed Services, and by the chairman of the committee, and say that I should like to join in congratulat-

ing the Senators who have agreed upon this amendment. I think it is most helpful, most progressive, and certainly would help bring back the control to Congress, where it should be.

Mr. DIRKSEN. Mr. President, I yield myself such time as I may require.

Hideous as the words "chemical and biological warfare" seem to be to the sensitivities of people, yet there are other countries which have had and do have capabilities in the field. I recall very vividly, for example, lying in a ditch with a gas mask over my nose when the first burst of chlorine came over from the enemy in World War I; and I remember when I was a horse officer, how badly those artillery horses were galled and beaten by mustard gas.

That was one time when it was used. The Italians used it in Ethiopia, and the Egyptians used it in Yemen; and we know, from the Penkovsky papers, that there is a capability on the part of the Soviet Union, because he wrote, among other things:

Many places in the country have experimental centers for testing various chemical and bacteriological devices.

He amplifies that, of course. So there is a capability in this field; and it occurs to me that we have to have some kind of a retaliatory facility for the very purpose of deterring others from ever using it.

So I fully concur in what has been fashioned here by way of a modified amendment.

Mr. President, we have heard many voices recently questioning the need for chemical warfare and biological research programs as a part of this country's defense. I would like to go on record in support of these two programs and at the same time I encourage the increasing interest of the Members of this body in the why and wherefore of these programs.

First, we should recognize that the President recently directed the executive branch to undertake a detailed review of our policies and posture in chemical and biological warfare, including the U.S. position on arms control and the ratification of the 1925 Geneva Protocol.

Second, I remind my colleagues that the Defense Department has consistently followed congressional advice in their chemical and biological defense activities, and I do not believe they have attempted to hide these activities, some of which are necessarily classified, from congressional inquiries made by the committees directly concerned.

A congressional committee in 1959 made several recommendations pertinent to our considerations today. One of the recommendations stated it is recognized that in the present world situation, with other countries pursuing vigorous programs of chemical and biological development, the best immediate guarantee the United States can possess to insure that chemical and biological warfare is not used anywhere against the free world is to have a strong capability in this field, and this will only come with a stronger program of research. Another recommendation was that if chemical and biological weapons are to be consid-

ered a deterrent force in the U.S. arsenal of weapons, the program of research advocated here will have to be accompanied by an adequate program of manufacture and deployment of chemical and biological munitions.

The first recommendation alluded to the threat as it existed in 1959. Has there been any reduction in the threat since then? We do not believe so. In 1967, the then Deputy Secretary of Defense testified on chemical and biological warfare before the Senate Subcommittee on Disarmament, saying:

At long as other nations, such as the Soviet Union, maintain large programs, we believe we must maintain our defensive and retaliatory capability.

I am informed that the Soviets conduct chemical research that is related to offensive and defensive chemical warfare and that they have means which are suitable to deliver them. Col. Oleg Penkovsky, the former Soviet intelligence agent, wrote in his "Penkovsky Papers" about the chemical and biological programs of the U.S.S.R.:

Many places in the country have experimental centers for testing various chemical and bacteriological devices.

He further wrote:

Soviet artillery units all are regularly equipped with chemical-warfare shells. They are at the gun sites, and our artillery is routinely trained in their use. And let there be no doubt: if hostilities should erupt, the Soviet Army would use chemical weapons against its opponents. The political decision has been made, and our strategic military planners have developed a doctrine which permits the commander in the field to decide whether to use chemical weapons, and when and where.

The U.S.S.R. has a capability in biological warfare; they have the technological capability to produce, store, and deliver biological warfare agents.

On the defensive side, the Soviets are believed to possess a chemical defensive capability in terms of equipment and training, superior to those of the Western powers. Training in the use of defensive equipment, reconnaissance measures, and means for survival are taught and practiced until individual and unit proficiency are attained.

You may raise the question why we need such a program. I believe I have just covered the major reason—the potential threat posed to the United States and her Allies. We must have a program to deter enemy use of chemical weapons by being able to retaliate in kind. To place this statement in proper perspective, let us review some history. There are three major occasions when chemicals were used—World War I, first used by the Germans; in the 1930's when the Italians used chemicals in Ethiopia; and more recently in 1967 when the Egyptians used chemicals in Yemen. We should note that the Italians and Egyptians had been signatories to the Geneva Protocol of 1925 and yet subsequently initiated the use of these weapons.

On these occasions, the other side did not have a deterrent capability and did not have a chemical weapon to use. Neither did they have a defensive or protective capability.

However, during World War II with many nations having a capability, chemicals were not used. Many experts believe that the U.S. policy that it would not use chemical weapons unless another nation used them first, and having backed this up with a retaliatory capability, was the major deterrent to the use of chemicals during World War II.

Some might say we do not need these weapons today as deterrents when we have nuclear weapons in our stockpile. Personally, I do not want to have to rely on nuclear weapons as a deterrent in this area because it may engage the United States in a much larger exchange. Further, if a nation were to use chemical weapons or biological weapons against the United States or its Allies, and the United States had no chemical or biological capability, it would force us to respond with nuclear weapons or accept the alternative of possible defeat.

Thus, the United States has maintained a limited chemical and biological offensive and defensive capability primarily as a deterrent and because we cannot permit ourselves to be technologically and militarily surprised by the advances other nations are bound to make. We cannot by legislation or wishful thinking stop the progress of science. Any action which we take to deprive our Nation of this capability without insuring effective and well policed international arms control constitutes unilateral disarmament, and I for one do not believe this to be prudent.

As we all know, the United States is committed to exploring any proposals or ideas that could contribute to effective arms control.

For example we recently participated in a United Nations study of chemical and biological warfare to be used by the 18 Nation Disarmament Committee to explore means of getting an effective disarmament agreement on chemical and biological weapons. However, until we achieve effective agreements with the required controls to eliminate all stockpiles of these weapons, we should maintain a chemical and biological program strong enough to be credible and strong enough to deter any aggressor from using these weapons.

Mr. President, how much time do I have remaining?

The PRESIDING OFFICER. The Senator has 9½ minutes remaining.

Mr. DIRKSEN. I yield 3 minutes to the Senator from Utah.

Mr. MOSS. Mr. President, because of the widely publicized sheep incident last year in Utah and more recently, because of my successful fight to keep the Army from shipping obsolete nerve gas weapons from the Denver Rocky Mountain Arsenal to Utah, I am very familiar with the CBW controversy.

The amendment being proposed today is basically in accord with my own position on CBW. I do, however, have several questions about the specific language of the amendment and then some observations on the CBW problem generally.

I ask the Senator from Wisconsin, first, whether the language in section (b) which forbids the procurement of delivery systems specifically designed to

disseminate lethal chemical and biological agents include devices that are being used in the present testing of CBW, such as the artillery shells that are now being used?

Mr. NELSON. Mr. President, I suggest that the Senator direct that question to the subcommittee chairman.

Mr. McINTYRE. Mr. President, it does go to prohibit any dissemination or distribution weapons that are specifically designed for this purpose. Of course, it would not include the 155 mm. howitzer. That is a weapon we could use to disperse the material, if the time ever comes, God forbid, but it is not specifically designed for that purpose. This section refers exclusively to disseminating systems specifically designed to disperse CBW agents.

We had to yield to the Defense Department on this point because the original language was so broad it could have been armor, weaponry, and things we purchase as part of our equipment to deliver normal military high explosives.

Mr. MOSS. Mr. President, I think that the suggestion is still much too restrictive. However, that is something that we would have to deal with later.

Second, I might suggest that the language in section d(1) and (2) which restricts the transportation of lethal chemical and biological agents be tightened to avoid a possible loophole. Instead of applying these restrictions just to shipments to or from military installations, I would broaden the language to include any shipments anywhere within the United States, its territories, or possessions. This could be done by simply dropping the words "to or from any military installations" in sections d(1) and (2).

Mr. McINTYRE. Mr. President, the group working on the proposal felt that if it was too restrictive, we might become involved in the interplay between the military.

What we did do was to try to restrict it to moving and disposal.

Mr. MOSS. Mr. President, this would merely say to or from military installations. If it was not going to or from military installations, it would be included. I think this ought to be tightened up at this time.

Mr. McINTYRE. The Senator might have a point.

Mr. MOSS. A final point, Mr. President. Too much of the public discussion about CBW has become emotional and speculative primarily because of the Army's obsession with secrecy. Rightly or wrongly, and I think rightly, the Government's credibility concerning CBW is highly suspect. Even after the Dugway incident it was some time before the Army would admit that they were testing nerve gas agents let alone responsible for the death of the sheep.

To give the American people good reason to believe what the Government tells them and to provide the public with much-needed information, I suggest that the Surgeon General appoint a committee of three State public health officials and three nonmilitary experts to assist him in making the determination as to whether CBW testing is a hazard to public health. This determination should be

made in a public report and should include as much information as possible. In my opinion much of the information now classified need not be and would help in creating a better public understanding of CBW.

Mr. DIRKSEN. Mr. President, I yield 3 minutes to the Senator from South Carolina.

The PRESIDING OFFICER. The Senator from South Carolina is recognized for 3 minutes.

Mr. THURMOND. Mr. President, the management and control of our chemical and biological warfare research programs has become an emotional issue in recent months, due to an unfortunate incident in Utah.

Certainly, this is an area in which the greater care must be taken as these chemical agents and disease producing biological micro-organisms and biological toxins are deadly. Tighter controls may well be in order, judging from the accident in Utah.

While some restrictions would be useful, the McIntyre amendment is broad in its coverage, especially in that it prohibits funds to procure delivery systems or any components of delivery systems for chemical and biological agents.

Such a restriction may be harmless at this point, as the military does not desire any funds in the current bill for offensive delivery systems. However, if this restriction is passed, it becomes law. It would, therefore, tie the hands of those charged with our defense if, in the future, more sophisticated means of delivery for these agents are needed to maintain our defense posture.

Presently, we use standard shells and bombs to deliver these agents but this requirement could change and valuable time could be lost in removing this restriction to allow the Defense Department to meet the needs of an emergency.

Mr. President, the history of the use of these agents shows they have only been used a few times in modern history and in each instance their use was made when the user knew his opponent did not have the means to retaliate.

Mr. President, I ask unanimous consent that Secretary Laird's statement be printed in the RECORD at this point.

There being no objection, the statement was ordered to be printed in the RECORD, as follows:

MEMORANDUM FOR CORRESPONDENTS,
AUGUST 9, 1969

(Secretary of Defense Melvin R. Laird today issued the following statement in response to queries about the DOD position on the pending McIntyre amendment.)

On assuming the office of Secretary of Defense in January, I became concerned with the management and control of our chemical warfare and biological research programs. I felt that improvements were needed in the management and control of these programs. That is why in April I requested and the President ordered a National Security Council study of these matters. This study is in progress.

Pending the completion of the NSC study, I believe it is prudent that we act jointly with Congress and take actions, wherever possible, to improve the management and control of chemical warfare and biological research programs.

Members of my staff, principally Dr. John S. Foster, Jr., Director of Research and Engi-

neering, have been working in recent days with Senator Thomas J. McIntyre of New Hampshire, and with other members of the Senate Armed Services Committee, on a revised amendment to the pending Defense Authorization Bill.

I am in agreement with the goals of the new amendment, which the Senate is scheduled to consider on Monday.

I believe this revised amendment will allow us to maintain our chemical warfare deterrent and our biological research program both of which are essential to national security.

The history of the use of lethal chemical warfare agents has demonstrated on three notable occasions in this century that the only time military forces have used these weapons is when the opposing forces had no immediate capability to deter or to retaliate. This was true early in World War I, later in Ethiopia and more recently in Yemen. Clearly, failure to maintain an effective chemical warfare deterrent would endanger national security.

Because it would not always be possible to determine the origin of attack by biological agents, the deterrent aspects of biological research are not as sharply defined. A continued biological research program, however, is vital on two other major counts.

First, we must strengthen our protective capabilities in such areas as vaccines and therapy.

Second, we must minimize the dangers of technological surprise.

It is important that the American people be informed of why we must continue to maintain our chemical deterrent, conduct biological research, and how we propose to improve the management and control of these programs.

Mr. THURMOND. Mr. President, in view of this, I support this amendment but with some reservation, and mainly in the trust that the military will act promptly and the Congress will respond realistically if they see any indication a change in this policy is required.

Mr. DIRKSEN. Mr. President, I yield 1 minute to the Senator from New York.

The PRESIDING OFFICER (Mr. GOODELL in the chair). The Senator from New York is recognized for 1 minute.

Mr. GOODELL. Mr. President, the high degree of amiability and unanimity on this omnibus amendment at this point belies the difficulty that many have had in pushing this matter forward so that we could have reasonable regulation of chemical and biological weapons.

The amendment does not meet head on the critical issue involved that I hope the McIntyre subcommittee will face in the year ahead. That is whether our country should continue to produce and stockpile chemical and biological weapons and the means of delivering them as a deterrent, and whether we must have a better deterrent in every area of every kind of weapon if we are to preserve our national security.

I trust that the Senator from New Hampshire will explore this question in depth so that we may have a decision on the matter in the year ahead.

Mr. YOUNG of Ohio. Mr. President, approximately \$350 million of taxpayers' money has been spent annually for chemical and biological warfare agents. For many years the Department of Defense has purchased and stockpiled enormous amounts of toxic and infectious chemical and biological agents.

In fact, we are in the process of trying to get rid of 27,000 tons of such chemical weapons now obsolete, yet too dangerous to remain stockpiled. During the past 16 years nearly 1,500,000 nerve gas bombs containing a total of 4 million pounds of such gas have been produced. Another 1,350,000 pounds of the same deadly gas is contained in our M55 rockets. Our chemical and biological warfare arsenal now includes numerous and varied agents for the spread of wholesale disease, starvation, choking or suffocating of entire populations, and other such deadly effects.

For the first time in many years, possibly since the days of World War I, Americans are becoming uneasy and concerned about the most grisly weapons in contemporary arsenals—the weapons of chemical and biological warfare. It is a subject that cries out for sober discussion.

The production of these weapons has been shrouded in secrecy. Even we in the Congress know very little about what is occurring in experimentation, development, stockpiling, and disposal of these weapons. Most Senators and Representatives were shocked at the recent disclosure that 28 persons were injured in a nerve gas accident in Okinawa, and of the fact that the Pentagon has stored nerve gases and other chemical-biological warfare weapons in bases throughout the world. That time we were lucky that a more serious catastrophe did not occur that could have taken the lives of millions of men, women and children. The extent to which the Congress has been uninformed on this vital issue was best emphasized by a recent statement of the distinguished senior Senator from Louisiana (Mr. ELLENDER), the ranking majority member of the Committee on Appropriations, who said:

As far as the Continental U.S. is concerned, evidence has recently been brought out that tremendous stockpiles of various deadly compounds are on hand at centers throughout the country. Most of this work has been done without the knowledge of the Congress. During my twenty years service on the subcommittee of the Appropriations Committee for Defense, I never have come across any line item for the production of nerve gas.

This, despite the fact that almost \$1 million a day is being spent by the Pentagon on chemical-biological warfare weapons.

Since 1964 it has not even been possible to determine how much money the Government is spending on these weapons. Estimates vary from \$350 million to \$500 million per year. In the arsenal of the Pentagon and of those in at least 13 other nations are chemical poisons so toxic that one-fiftieth of a drop can be lethal in minutes. Senators will recall the death in 1968 of 6,400 sheep from nerve gas in the Dugway Proving Ground in Utah.

It is horrible to contemplate, but it is a fact that today the Soviet Union and United States possess enough of these chemicals and biological agents to destroy every man, woman, and child on earth.

It is clear that the time has come for a full-scale congressional investigation of our chemical and biological warfare

potential. The fact that we have nerve gases in bases around the world raises grave moral and public policy questions.

At least some of the secrecy ought to be ripped away. No one reasonably would ask that Pentagon officials make full disclosure of every last detail of research, development, production, and storage of its chemical and biological warfare agents. At the same time, a thorough ventilation of the nature of these frightful weapons might well lead to stronger treaties against their production and use.

Congress must act now to fulfill its responsibility in a program that has escaped careful congressional scrutiny for too many years.

Unfortunately, some of these weapons are presently being used in Vietnam. The use of chemical defoliants in Vietnam has been increasingly questioned by those concerned over the longrun environmental dangers. Also, there is evidence that the so-called riot control gases used in Vietnam can be fatal to the weak, sick, and undernourished civilians exposed to them.

On July 2, 1969, U.N. Secretary-General U Thant released an excellent report on chemical and biological warfare in which he strongly urged that all nations ratify the Geneva Protocol of 1925 banning first use of chemical and biological warfare. He also called for all nations to reach agreement to halt the development, production, and stockpiling of all chemical and biological warfare agents and to eliminate them from the arsenal of weapons.

U Thant's report makes it clear that the testing and use of biological warfare agents pose health hazards to everyone—that the deadly diseases that have been stockpiled for use as weapons are just as dangerous to the producer and potential user as they are to the recipient. The report emphasizes the need to promptly reach agreement on a ban on the production, stockpiling, and use of biological weapons. A proposal that would accomplish this is now before the 25-Nation Disarmament Conference which is meeting in Geneva. I am hopeful that the administration will do all it can to see that this resolution is adopted.

Mr. President, today a comparatively few nations possess these lethal weapons. However, any nation, large or small, can develop contagious bacteria and viruses. If and when they do, the danger of an accident or purposeful use becomes greater. The very survival of man is at stake. The development and stockpiling of these horrible chemicals and germs is a pursuit after armaments far in excess of those needed for our national security and national defense.

I am utterly opposed to any further development and stockpiling of such devices. I urge the adoption of the pending amendment to establish effective guidelines and controls over the storage, transportation, disposal, and maintenance of chemical and biological agents. Also, to ban future open-air testing of lethal chemical agents, disease producing biological micro-organisms or poisons except on determination of the Secretary of Defense that such tests are necessary for the national security and only then after the Surgeon General has determined

that the proposed tests will not present hazards to public health. The provisions of the pending amendment form an important first step toward stemming and controlling the proliferation of these deadly weapons.

Mr. PELL. Mr. President, I was delighted to read in the newspapers this weekend that the Secretary of Defense, Hon. Melvin Laird, approves of the amendments that we have before us to control the chemical and biological weapons program.

I interpret Secretary Laird's approval of my amendment regarding international law to mean that the Secretary of Defense recognizes a responsibility of the Department of State for interpreting our international obligations, and I assume that the Secretary of Defense will provide for proper consultation with the Department of State regarding the international legal implications of the movement of chemical and biological materials outside of the United States in the future.

Although I am happy that the chairman of the Armed Services Committee and the Department of Defense has approved the amendments which we have before us, I hope this does not mean there will not be further debate on the foreign policy questions involved in the chemical and biological warfare question. I believe that the Senate should discuss the role that the Department of Defense expects CBW to play in the world arms race, and I would hope that we would discuss the implications of Secretary Laird's recent statement implying the chemical and biological weapons are strategic weapons which might be used in a second strike capacity.

Mr. TOWER. Mr. President, I would like to express my understanding of the intent and effect of this amendment. This amendment is not intended to prevent the Department of Defense from undertaking biological and chemical research programs. Those programs have been presented and justified to the Congress as required in the interest of national defense. The amendment recognizes, however, that the public and members of the Congress are concerned that the program be undertaken under conditions of maximum safety and that the Congress be fully aware of the actions that are taken. For this reason, the amendment, while not restricting the types of activities that the Department of Defense may undertake in pursuing the program it has presented and justified to us, imposes certain reporting and coordinating requirements. Some of these requirements may prove burdensome and time-consuming. Perhaps with experience we will later decide to remove some of them. However, despite the burdens the amendment imposes, the Department of Defense has recognized the concern of the public and members of the Congress in matters concerning chemical warfare and biological research programs, and has therefore indicated it will not oppose enactment of the amendment.

As I understand this amendment, it in no way represents a criticism of the CBW program or of the military officials who have administered it. It simply expresses the desire of the Senate to have

Congress better informed on the program and indicates the Senate's rightful concern that testing, transportation, disposal and storage of chemical and biological warfare elements be done as safely as possible. With this understanding, I support the amendment.

Mr. MUSKIE. Mr. President, for more than 50 years poison gas has been an instrument of warfare, and for all that time Americans have been repulsed by the thought of poison gas being used to kill and maim people.

As a nation, America traditionally has viewed the case of poisonous gases as inhumane. We have sought to make gas an illegal weapon of war, and in two world wars we declined to use it to kill our enemies.

Despite our public stance, American military contracts have continued to be let and military personnel have been assigned to the task of researching, developing, manufacturing, and storing poison gas and biological agents.

Until a year ago, gas and germ warfare seemed a subject for science fiction. Members of Congress were vaguely aware of the research and development programs, but regarded them as contingency operations, first, to deter other nations from using such weapons first; and second, to aid in research on countermeasures. The first major rumbling of complaint came with the use of tear gas, defoliants, and napalm in Vietnam. More vigorous complaints erupted with news of dangers from testing and disposal of chemical and biological materials and weapons in the United States.

The first major incident came last year when more than 6,000 sheep died in Utah, near the Dugway Proving Ground, where chemical and biological warfare materials were tested. The sheep fall victims to a nerve gas released by a plane. For a long time military secrecy cloaked the cause of the deaths. Now, thanks in large part to the work of Representative RICHARD D. MCCARTHY, Democrat, of New York, the facts about that incident and other threats from our chemical and biological warfare program are being given to the Congress and to the public.

The second major incident—or near incident—was the Army's plan to transport 27,000 tons of poison gas containers by rail from Colorado to the east coast where it would be loaded on barges and dumped in the ocean. That plan has been shelved, temporarily, but additional opposition to the chemical and biological warfare program has been stirred up by the fact that the Army was prepared to ship such dangerous materials across the country through large cities without major precautions against accidental discharge of the gases and without serious attention to the environmental hazards posed by ocean disposal.

In retrospect, the Dugway Proving Ground accident and the ocean dumping proposal may have been blessings in disguise. They have alerted the country to a clear and present danger from chemical and biological warfare operations, in peace and in war.

Materials containing anthrax, tularemia and Q fever germs, nerve gas, and other toxic materials are not minor weapons, and secrecy about their devel-

opment and use does not guarantee safety.

Americans have a right to expect their Government to use great caution in approaching such an awesome set of weapons. They have a right to expect their Government to use more than ordinary care in handling such weapons. They have a right to expect their Government to develop considerable energy to eliminating the danger of such weapons being used in time of war.

The packet of amendments we are considering now will enable us to meet their responsibility.

The PRESIDING OFFICER. All time having expired, the question is on agreeing to the modified amendment (No. 131) of the Senator from New Hampshire. On this question, the yeas and nays have been ordered, and the clerk will call the roll.

The assistant legislative clerk called the roll.

Mr. KENNEDY. I announce that the Senator from Tennessee (Mr. GORE) is absent on official business.

I also announce that the Senator from Indiana (Mr. BAYH), the Senator from Nevada (Mr. BIBLE), the Senator from Connecticut (Mr. DODD), the Senator from New Mexico (Mr. MONTOYA), the Senator from Georgia (Mr. RUSSELL), and the Senator from Texas (Mr. YARBOROUGH) are necessarily absent.

I further announce that, if present and voting, the Senator from Indiana (Mr. BAYH), the Senator from Tennessee (Mr. GORE), the Senator from New Mexico (Mr. MONTOYA), the Senator from Texas (Mr. YARBOROUGH), and the Senator from Connecticut (Mr. DODD) would each vote "yea."

Mr. SCOTT. I announce that the Senator from Michigan (Mr. GRIFFIN) is detained on official business, and, if present and voting, would vote "yea."

The Senator from Ohio (Mr. SAXBE) is necessarily absent; and if present and voting, would vote "yea."

The result was announced—yeas 91, nays 0, as follows:

[No. 74 Leg.]

YEAS—91

Alken	Goodell	Mundt
Allen	Gravel	Murphy
Allott	Gurney	Muskie
Anderson	Hansen	Nelson
Baker	Harris	Packwood
Bellmon	Hart	Pastore
Bennett	Hartke	Pearson
Boggs	Hatfield	Pell
Brooke	Holland	Percy
Burdick	Hollings	Prouty
Byrd, Va.	Hruska	Proxmire
Byrd, W. Va.	Hughes	Randolph
Cannon	Inouye	Ribicoff
Case	Jackson	Schweiker
Church	Javits	Scott
Cook	Jordan, N.C.	Smith
Cooper	Jordan, Idaho	Sparkman
Cotton	Kennedy	Spong
Cranston	Long	Stennis
Curtis	Magnuson	Stevens
Dirksen	Mansfield	Symington
Dole	Mathias	Talmadge
Domnick	McCarthy	Thurmond
Eagleton	McClellan	Tower
Eastland	McGee	Tydings
Ellender	McGovern	Williams, N.J.
Ervin	McIntyre	Williams, Del.
Fannin	Metcalf	Young, N. Dak.
Fong	Miller	Young, Ohio
Fulbright	Mondale	
Goldwater	Moss	

NOT VOTING—9

Bayh	Gore	Russell
Bible	Griffin	Saxbe
Dodd	Montoya	Yarborough

August 11, 1969

So Mr. McINTYRE's amendment (No. 131), as modified, was agreed to.

Mr. McINTYRE. Mr. President, I move to reconsider the vote by which the amendment was agreed to.

Mr. NELSON. I move to lay that motion on the table.

The motion to lay on the table was agreed to.

Mr. STENNIS addressed the Chair.

The PRESIDING OFFICER. The Senator from Mississippi is recognized.

Mr. STENNIS. Mr. President, I wish to make a very brief overall statement about the bill and consideration of additional amendments thereto.

Mr. SYMINGTON. Mr. President, may we have order?

The PRESIDING OFFICER. The Senate will be in order.

Mr. STENNIS. Mr. President, what I will say is nothing new, but I am saying it in an effort to promote our debate in such a way that the issues will be understood by Members of the Senate.

As an illustration, last Friday we had about 3½ hours of debate on an amendment by the device of continuous yielding by the author. This is a practice we have fallen into. I do not blame anyone; no one was out of order; and I do not make these remarks critically. However, the committee had no chance in all that time to present our views and the situations as we saw it with reference to that amendment. That is only an illustration.

I hope we can work out something to avoid such a situation in the future. The committee chairman has no control, except as he may confer and reach understandings with Senators with respect to which amendment is called up and when it shall come up.

The main point I wish to talk about now is that this bill represents a balanced program.

Mr. President, will the Chair enforce the rule so that we may have order?

The PRESIDING OFFICER. The Senate will be in order.

Mr. STENNIS. We have offensive nuclear weapons, and we have provided for a defensive system against the offensive nuclear weapons arrayed against us. We know that we are not going to make a first strike. There is nothing like that in the minds of the people, Congress, or the President. We know that we are not going to start a nuclear war. I do not know, but with the high development of these weapons I doubt that Russia would intentionally start a nuclear war. Perhaps the time when that was probable is behind us. However, no one really knows. So we must be prepared in that field. I do not believe we should say that we will not start one under any circumstances. I said that years ago. I mention these matters to get down to the real issue; namely, the need for conventional forces.

At one time, we were getting away from that. We went into the nuclear field and neglected modernization of the Army. We neglected a great many other things because we put most of our money into nuclear weapons.

Certainly we are not about to reach a millennium, when everyone will be at

peace, and the lion and the lamb will lie down together, when there will be no more boundary disputes and no more aggression against one nation by another. We do not believe that that millennium has arrived. We know that we must have sufficient military strength to protect our people, and I am talking about 200 million citizens here at home. We know that we must protect them with sufficient conventional weapons. We know that it must be our policy to protect those 200 million Americans. We have assumed many commitments around the world and may be forced to go beyond our boundaries and protect the perimeter.

We may want to reduce these commitments, but no one is offering a resolution to do so. No Senator has proposed a plan to change the situation. No committee of Congress is hearing any testimony on the subject. There is no report or statement of opinion of a committee that is weighted in favor of any change.

We have not had any requests from a President to that effect—from President Nixon or any prior President.

Thus, our policy still is that we can best protect ourselves by providing some defense of the outer perimeter. That is what a great deal of the hardware in the bill is for.

Some Senators may think the bills should be changed right here on the floor of the Senate, piece by piece, so as to take out the tanks, take out the carriers, take out this, or take out that. I do not believe that is the way to proceed. When the will of the majority is felt, we will find out for sure.

I favored paring some items in the bill, as I said in my opening talk, but we had better know what we are doing and have a committee consider the matter from all angles and submit a report on a bill. This is what the Armed Services Committee did.

At the same time, I should also like to know what the President thinks about it.

This policy should be enunciated clearly; then we can implement it. Let us not place the cart before the horse.

We all remember that following World War II we decided that Japan should have no weapons, except to a very limited degree. We said to Japan, "We will take care of you."

I think we overdid it. We should modify that.

But can we do that? Can we take pieces out of the military bill on the floor of the Senate, until the President, the committees and others have spoken or enunciated some kind of policy?

Look at our obligations around the world. Take Korea. We must not tear down everything we have built up there. We guaranteed Korea's integrity when no other nation joined with us. It was just the United States of America and Korea. We guaranteed Korea's protection. That requires credible military forces and military deterrence. It does not take a wise man to see that.

We all remember Formosa. We all remember Vietnam, where we are now. The Lord only knows how or when we can get out of there. We are members of SEATO and NATO. All these obligations prove

conclusively that we need balanced conventional forces, and that we must have them. I want to have them with the smallest number of dollars.

Let me mention something else. One can go to a military service and sometimes get a large listing of the defects in the weapons of a rival military service. That is a part of the picture in the Pentagon. The Navy which believes in its weapons, and the Air Force also believes in its weapons—and I am glad they do. But sometimes, on the side, they are quick to point out defects, real or imaginary, in the weapons of the other service.

Let me give an illustration. I was once inside the matter of the Nike-Hercules ground-to-air defense missile.

I thought we were going too fast and too far, and before it had been perfected enough. The bill provided hundreds of millions of dollars.

I was handling the military construction bill. A general spoke on "Face the Nation" that Sunday afternoon. He was a very fine general. The question was put to him: If a city were properly defended with enough Nike-Hercules, and a hundred enemy bomber planes came in, how many could they knock out? He said, "A hundred out of a hundred."

The next morning I talked with an outstanding admiral of that day, one of the foremost we had. I said, "If a city had the required number of Nike-Hercules and a hundred enemy bombers were coming in to bomb the city, how many Nike-Hercules could they knock down out of that hundred?"

He said, "Not a darned one."

I think both of those gentlemen were wrong. But that general remark of the admiral, coming down the corridor of the building, having no appointment, led us to go further into the matter.

Mr. McNamara told me later that it would save some money. But my point is that we do not know enough about missiles. My point is that there is interservice rivalry, and that is seldom brought up in debate. I am not saying this critically of anyone. I know there is rivalry. Sometimes it is within a service.

All of us remember the old cavalry. The cavalry has gone. But weapons rivalry still exists within the services.

So we had better examine carefully some of the information we are getting—and getting in good faith—about these matters. My point is that the bill provides a balanced program, something that the Joint Chiefs have agreed to.

The Chairman of the Joint Chiefs is no ordinary man. Do not discount General Wheeler, unless you want to condemn all military men. If you do, let General Wheeler go on down the drain with the rest of them. But if you want impartiality, do not discount General Wheeler.

That is not all. We are looking for a balanced program in weaponry. This program is largely one like that approved by former Secretary McNamara. Whatever one may think about him, he had plenty of sense. I think he was one of the most effective Secretaries of Defense we have ever had. I do not think he was right on all things, but he worked, and he knew a lot about defense.

Former Secretary Clifford approved this program, although there were some differences in details.

We squeezed a great deal of water out. But Mr. Clifford is a man of high intelligence and considers things seriously.

Secretary Laird approved this budget just as recently as early March. Senators who do not know Secretary Laird have missed a gem. We who serve on the Committee on Appropriations have been confronting his fine mind and ability for years. I do not know of any Member of Congress who rendered finer service in this field than Representative Melvin Laird. He was usually a jump ahead of most of the rest of us. So the program provided by the bill is his best judgment. He believes the Nation needs this bill as a balanced program. I do not mean that every "i" must be dotted and every "t" crossed, of course, but as an overall proposition.

That is not all. President Nixon approved virtually all of this budget. Mr. Nixon is not a newcomer. He is not one who had been president of General Motors or president of a university or some other institution.

That man learned the hard way. I am not complimenting him. We all know his background and experience. I tell the Senate that when he came back here in 8 years I was amazed, from the word "go," at the fine knowledge he had of the present situation and the present need, here and there and everywhere, of the military program. I know, because I have talked with him over and over. He did not have anything to offer me. I did not have anything that I could give him, except just loyalty to the country. I am not espousing the Nixon program, or anything like that. I am talking about national defense now. But he grasped this problem. He had it in his mind. He was as well versed as anyone outside the military itself. Melvin Laird was there, and so were others. They made hard decisions. They may be planning more.

That is the case here. We are not living in a millennium—oh, not by a long shot. We are not out of Vietnam—not by a long shot. We will have to have the hardware, the weapons, the manpower, the know-how, the skills, and the judgment, if we are to continue as a leader of the free world.

I am no internationalist. I am no big spender, either. I am no big spender—my records shows it—for the military department.

When we talk about such terms as "military-industrial complex," and all that, that does not mean anything to me, and I do not think it means anything to anyone in the show down. I think it is a slander and a libel on a great military profession and the membership of the Senate for those things to be fed out and fed out on the Senate floor, through committee hearings, through television, through radio, everywhere, all the time, to create—and it does create—a prejudice. Whether that is the purpose or not—I will let every man's motives be decided by him or someone else, and not by me—but it is leading this country into what I consider a dangerous state of mind—mistrust, distrust, down-

grading the military, and downgrading the Senators who have responsibility for our defense and who are falsely charged with being "dominated by the military."

Mr. ERVIN. Mr. President, will the Senator yield?

Mr. STENNIS. Please let me finish with just a few more words.

I give everyone credit for good faith, and I think everyone wants to do what he thinks then is best for the country. But I warn you, we can slip back mighty fast just because we are displeased with a few things. I am displeased with many things. We all wish we could stop the war in Vietnam, for one thing. I am displeased with some contracts for military supplies and material that have been entered into. Incidentally, those contracts came directly out of the brains of the civilian authorities in the Pentagon. We will get into that later.

But I told the military, "You do have some responsibility in the field of spending." When General Ryan, now the Chief of the Air Force, was before us for confirmation, I said, "General it is not your primary responsibility, but in the nature of things, you do have responsibilities for the expenditures of this money. In part you are responsible in the military area, and I think you ought to train more and more men in the field of management and related fields, so that as you bring them through the categories of promotion, you will have more responsible men. I know you have some who are outstanding, but not enough." He agreed with me heartily. I am going to write the other Chiefs and make the same point. I think it is part of our duty. But if we scuttle this whole thing, if we cut the bone and the muscle here by making too many unwise reductions, acting in the dark, we will rue the day.

I favor reducing military manpower as soon as the shooting stops at least to the level it was before the war started. I am not settling on that as the final figure. But, by a quick calculation, in that category alone there is a minimum of \$10 billion a year in savings. There are other savings we can make.

I want the military and the civilian part of the department to do a better job in getting a dollar's worth for every single dollar they spend. But I tell you, we will never do that by settling for second rate weapons. We will never do that by giving the doughboy we send to the front an old tank. We will never do that by sending our aviators, whether they be in the Navy, Air Force, or other service, in a plane not as good as the one he is up against. And so on down the line.

I speak with all deference to everyone, but I tell you, right now we are getting off into the wrong attitude. We are getting off into an attitude of knock down, drag out, regardless of consequences, that can leave this Nation—not immediately, but within a few years—unprepared to defend its own people.

Let us get a balanced program of weapons together. Let us reexamine our foreign policy, and if we want to change it, let competent Senators come in here with a definite recommendation on their resolution, on their report, on their testimony, and on the recommendation of the

President of the United States. I will be found somewhere, perhaps not up front but somewhere up near the front, plugging in a proper way for some reasonable modification.

But there are points beside honor involved, in turning our backs upon our commitments. There is involved, for example, the safety and perhaps the survival of the American people.

So, Mr. President, while I welcome debate on any phase of this bill to any reasonable extent, I will approach it in the way that I have outlined; and frankly, I was talking more to the people of the United States than to anyone else in these last few minutes.

Several Senators addressed the Chair.

Mr. STENNIS. I believe the Senator from North Carolina had risen first, if he wishes me to yield.

Mr. ERVIN. Mr. President, I ask the Senator from Mississippi if he does not think that it is a fitting time for us to meditate seriously upon this little verse:

God and the soldier we adore
On the brink of ruin, not before;
When danger's past, and all things righted,
God is forgotten and the soldier slighted.

Mr. STENNIS. I thank the Senator.

Mr. FULBRIGHT. Mr. President, will the Senator yield?

Mr. STENNIS. I am happy to yield to the Senator from Arkansas.

Mr. FULBRIGHT. I certainly have great sympathy with the position of the Senator from Mississippi. He is, I think, one of the most conscientious and dedicated Members of this body, and not just in his position as chairman of the Committee on Armed Services. He has served with equal distinction as chairman of other committees, and has performed some very difficult functions.

I do not quarrel at all, certainly, with his motives or what he is saying. But I should like to comment in this sense: He says he is interested primarily in a balanced program. I take it he meant balanced within the Military Establishment. I think I, and those of my colleagues who share some of my views, are interested in a balanced program also, but we feel that the balance should be between the military program and the other programs of this Government.

Mr. STENNIS. If the Senator will excuse me a moment, I have an urgent matter.

Very well.

Mr. FULBRIGHT. As a result of a series of crises and wars, for which the Senator from Mississippi, of course, is not to blame, there has developed an imbalance, not within the military so much, but between the military and other programs of our Government. This entire debate is about how to correct that imbalance.

To ask the Senate to accept the proposals of the Pentagon without thorough debate and examination, it seems to me, to have the Senate simply to abdicate its real function. On many of these matters there have been hearings, as the Senator mentioned. There have been some extremely interesting hearings in the Committee on Foreign Relations, also, and in the Joint Economic Committee headed by the Senator from Wisconsin (Mr. PROXMIRE).

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Some of the witnesses before that committee, such as Mr. Fitzgerald and others, are certainly qualified, and as good as we have in this Government. They are right out of the Pentagon itself. Some have suffered personally because of their daring to do their duty, in my opinion, as citizens.

The difference in view on this problem arises because I think that, as Senators, we should balance the military with other governmental programs. I submit that when you calculate the amount of money devoted to the military establishment since World War II—well over a \$1,000 billion—against other activities important to the country, such as education and the development of our natural resources, I think our system of priorities is out of balance. That, as I said, is really what this debate is about.

The Senator has mentioned rivalry among the services. That is not news. We know about that, and I do not complain about it. But it is our duty to correct some of the results of such rivalry.

We have been told, and I think there is a degree of truth in it, that when we give, we will say, a big program, to the Army and the Air Force. About all that can be done to balance things out is give the Navy more aircraft carriers. That way they will receive about as much as the Air Force and the Army; and therefore, to retain a kind of balance. So we continue to build aircraft carriers when they are obsolete. No other country in the world builds them.

That in itself raises a serious question: Why, if aircraft carriers are really useful and not obsolete, is not Russia, or China, or Germany, or somebody, out trying to build aircraft carriers? It is rather odd that we should be the only ones to put so much faith in this kind of machine. Carriers are extraordinarily costly. The Senator from Missouri (Mr. SYMINGTON) is a better spokesman than I on this subject, but I recognize that, as a member of the Committee on Armed Services, he is a little bit embarrassed to take issue with his colleagues. I would be, too. I am always a little bit embarrassed to take issue with my colleagues on a committee, with whom I have shared many hearings; but the Senator from Missouri has said much about this subject on many occasions.

It is, I submit, the balance of all over national programs that should concern us. I do not for a moment suggest that the Senator from Mississippi is a spendthrift. We are not saying that he is extravagant at all.

Mr. STENNIS. Mr. President, if the Senator will yield to me, I do not have to wait until he or anyone else accuses me of something. I simply call attention to my record. I do not have to wait for the Senator or anyone else.

Mr. FULBRIGHT. Of course, I think there are some members of congressional committees who, in the past, have shown a disposition—and it is not the Senator from Mississippi to whom I refer—to urge upon the Pentagon increased appropriations, even over what was requested.

Coming to the question of the military-industrial complex, the Senator says it is a slander that anyone should mention it.

I have mentioned it, but I certainly, in most of my formal speeches on the subject, have made it very clear that the people in the Pentagon, by and large, do not deserve that kind of criticism, nor that it should be regarded as a slander. I regard the criticism, if warranted anywhere, as warranted against Congress; and I should share in it, in that, for 25 years, I have never before seriously engaged in an effort to cut or change, in any substantial way, the budget requests of the military establishment; nor has anyone else to speak of.

This is simply the first effort to restore balance to the system. It is not a slander upon the military. Nobody is slandering the military. If there is any criticism at all, I think it is primarily due to Congress failure for too long to expose to debate and serious examination these programs.

I do not believe the Senator from Mississippi could say that we have really seriously examined these programs in the past. Not even the Bureau of the Budget has done so. I ask Mr. Schultze, who was then Director of the Budget, in open hearing, about the research programs in the Pentagon. He said frankly that they did not go into them; they just accepted the Pentagon's views.

We have on record a statement of Mr. McNamara that he made, I think before the Committee on Armed Services, that in not one instance while he was Secretary of Defense, where there was a difference of view between the Bureau of the Budget and the Pentagon, was the Pentagon ever overruled. He always prevailed.

This, again, is most unusual, and at least partly the fault of Congress, because nobody bothered to challenge it.

Therefore, I do not believe the Senator has a legitimate complaint about the way in which he or the Military Establishment has been treated. After all, they have \$80 billion available in round figures. An to say that our Military Establishment is obsolete and that our servicemen do not have good rifles and good airplanes, is, it seems to me, a gross reflection upon the efficiency of American industry. The money has certainly been spent in large amounts for that purpose.

The Senator is saying that we have given the money but that we do not know how to produce a good airplane. It has not been for the lack of money that we do not have a good plane. If we do not have one. I have been under the impression that we do have good planes and good rifles. I have been under the impression that we do have good ships and other equipment. Never once have I shared the idea or said that our people are not properly equipped.

We have spent and are spending, as the Senator knows, from the best estimates of our intelligence community, substantially more than the Russians have spent. And they are the ones we seem to be so concerned about.

When the Senator says that we are cutting in the dark and slashing and cutting without knowing what we are doing, he is making a statement that I do not subscribe to.

I think we know a good deal about the normal programs. Many good hearings

have been held. We have heard from knowledgeable people.

In addition, on occasions when we have requested information from the Defense Establishment, we have been met with the statement that it was classified or too sensitive. They would not furnish it.

So, to the degree that we are operating in the dark, I submit that it is not the fault of the Senate committees. It is the fault of the establishment itself in refusing to make available what I believe to be appropriate and relevant documents and information.

I do not really believe the Senator has a legitimate quarrel about the debate and about the proposals to try to bring about what I would call a better balance between the Military Establishment and the rest of the Government of the United States.

Mr. PROXMIER. Mr. President, will the Senator yield briefly?

Mr. STENNIS. I will yield later. I believe the Senator from California had requested that I yield to him. I yield to the Senator from California.

The PRESIDING OFFICER. The Senator from California is recognized.

Mr. MURPHY. Mr. President, relative to the Armed Services Committee, I must say that my experience this year has been a great revelation. I suggest that the matter of balance of expenditures certainly must have been because of the necessity created by world conditions.

If we did not have some of the world problems that exist today, we would not have the problem of making high expenditures in order to achieve the balance that the distinguished chairman of the Armed Services Committee has spoken of.

I think probably that, looking at the past and finding where the fault lies, certainly when we have called on the military, wherever they have been permitted to do so, they have done their job very well insofar as I recall history back beginning with World War I.

However, very often where we have looked at the action of the Political Establishment in international affairs and their record, in my humble opinion, has not been quite as good.

Therefore, I point out that the problems which have been created have caused this difficulty in achieving the balance about which the distinguished chairman talks.

Referring to the remarks of the distinguished Senator from Arkansas concerning the statement that we do not have good planes, my experience is that we do not now have them. We have been very neglectful in certain categories. Our planes are good but old. We have not kept up with our potential aggressors and enemies.

We do have a good rifle. However, strangely enough, for some reason, we have only one manufacturer. We have heard about the deficiencies of the South Vietnamese. However, we find that when they had a good rifle, they are pretty good soldiers. They are brave. They are eager to defend their country.

So, I think that the distinguished chairman of the Armed Services Committee makes an excellent point. While there are many other areas that need our

attention in this country, they have not been neglected.

I have had the great privilege of serving on the Labor and Public Welfare Committee and on the Education Subcommittee. There has not been any great neglect. However, we could do more.

I join with the distinguished Senator from Arkansas in hoping for the day when this sort of balance has been achieved and we can proceed on all matters in progress, peace, and prosperity not only in our country but also around the world.

At the present time, I am afraid that we must be realistic.

I am afraid that we cannot achieve all of the theory on these programs. We have to accept the situation as it exists today. We have many plans for research and development. We have very little hardware.

We have to rebuild and reestablish our military in order to carry out our commitments and, hopefully, as the result of the strategic arms limitation meetings that are about to take place, we can look for a day when we can deescalate the expenditures on the military side and increase them on the other side.

My colleagues know that I come from a State where a great deal of these procurement funds will be spent. I have had no pressure, no calls, and no suggestions from the so-called highly publicized military-industrial complex which used to be called the military-industrial-scientific complex. There has been no pressure on me.

My decisions in the committee have been based on the information brought out in the hearings and as a result of the questioning of experts, both military and nonmilitary and the studying and reading I have done over years past in order hopefully to equip myself properly for my present position.

I associate myself with the remarks of the distinguished chairman of the committee, the Senator from Mississippi, and say that he hopes, as we all do, that this balance will be much easier to establish once we get world conditions in balance the way they should be.

Mr. STENNIS. Mr. President, I thank the Senator for his remarks.

I point out to the Senator from Arkansas that my remarks and my plea is for this balance in conventional forces within the military. However, if he will bring in some more balance on our commitments in a bill or a resolution, with a report and other usual documents behind the measure, things that ordinarily go with it, he and I will be found to be closer together. My point is that, until we do that, we cannot simply turn our backs on the commitments we have made.

Mr. FULBRIGHT. Mr. President, we are in the process of trying to do that right now in reexamining our commitments. We have a staff working on it and we think we are making some progress.

I hope the Senator does not think we are not doing our best to do exactly that. In the meantime, other matters come up and require our attention.

I am not being critical of the Senator from Mississippi. He is doing his job as

is the military, I think. I think in all honesty that I and the other Members of the Senate have failed to do what we should have been doing for 10 or 15 years in being a little more attentive to this kind of program. We have allowed our priorities to get out of balance.

Does the Senator from Mississippi agree that we have inferior planes and that our planes are not as good as the aircraft of other countries?

Mr. STENNIS. I do not agree. I hope the very opposite is true. However, if we do not build new planes, new types of planes—and we have to make the decision 4 or 5 years in advance—we could find ourselves second rate. We may have already slept too long with reference to other weapons.

Mr. FULBRIGHT. We heard the statement of a Senator from a State in which more planes are built than in any other State, to the effect that we have inferior planes.

I never believed that to be true. I had not heard that at all.

We have some that are inferior in some fields. However, our best planes are as good as the best planes of any other country today.

Mr. STENNIS. I do not know that that is true right now. However, we have provision for some contained in the bill. They are moving along and will be the best.

I have referred to our many commitments to other countries—commitments which require us to defend them.

I mentioned Japan. There is a hard one. Take that one on and get it modified, if the Senator believes it should be modified, and bring us something definite on that problem if the Senator wants to. I believe that we can consider some other matters here in that immediate field.

Mr. FULBRIGHT. I think there is a great deal of merit in what the Senator is saying, and that is what we are trying to do. We recently had the case of the Spanish bases, and we tried to modify it. We did get it modified—not as much as I would like, but we modified it substantially.

Mr. STENNIS. I thank the Senator.

Mr. PROXMIRE. Mr. President, will the Senator yield?

Mr. STENNIS. I yield to the Senator from Wisconsin. I do not mean to try to retain the floor.

Mr. PROXMIRE. I will be brief.

I say to the distinguished Senator from Mississippi that so far as cutting in the dark is concerned, I think that this year, for the first time in many years—certainly, in the years I have been in the Senate—we are acting with far more information and understanding than ever before, for a number of reasons.

First, the Senator from Mississippi has done an excellent job in his committee and in his hearings. I have had a chance to go over the hearings, and I think he and his committee not only have asked the right questions but also have organized unusually well. As I understand it, the Senator has delegated to some of the members of the committee a great deal of authority, and they have investigated thoroughly and have come up with some extremely useful information.

In addition—and I think this is most unusual—this year a number of Senators—I am not one of them—organized a group called Peace Through Law, and they secured outside professional advice on a number of weapons systems.

If the Senator from Mississippi has had a chance to review the report—I think the Senator from Oregon (Mr. HATFIELD) is one of the principal movers in this area—I believe he will be impressed not only by the professionalism involved but also by the moderation of their recommendations. They did not propose to cut deeply, but they did propose to make some moderate, thoughtful cuts that were well documented.

I understand that the Senator from Oregon will speak on this matter a little later. I hope he speaks soon, because the Senate should be aware of the very comprehensive, painstaking, and thorough examination which has been made of this budget.

Also, the Joint Economic Committee held hearings last November, January, and June, in which we examined in considerable detail, on the public record, the military budget. We had some experts on these weapons appear before us. We have developed some substantial information.

So I think this debate will not be cutting in the dark and it will not be irresponsible from the standpoint of those who are offering amendments to reduce the military budget. I agree with the Senator from Mississippi that we must have a strong military force—strong Army, Navy, and Air Force—and we must be secure. I think our amendments are going to be in the area of trying to achieve this. If there is a difference of opinion, it is simply a difference of judgment as to precisely what is needed from a technical standpoint, not a difference in terms of value in judgment. We must have a secure armed force, for our military people certainly are serving this country very well.

Mr. STENNIS. I thank the Senator very much for his remarks. I think he has done some excellent work.

Mr. MILLER. Mr. President, will the Senator yield?

Mr. STENNIS. I yield.

Mr. MILLER. Mr. President, I am pleased that the Senator from Wisconsin is present, because he has a great amount of knowledge about the economic aspects of this matter.

The statement has been made by the Senator from Arkansas that we should have a balance in the broader sense of the term rather than a balance with respect to conventional and strategic forces. I think both points of view are proper. We should have a perspective in both senses.

But I think the danger is that by talking about a balance in the broad sense, much has been said about the military being out of balance. I believe the Senator from Arkansas implied, when he pointed out all the other commitments, that we have in our own domestic responsibilities.

I have been trying to make the point to my colleagues—and this is the third time—that one way of looking at balance is to look at our gross national product.

I believe that economists generally take a look at a nation's gross national product as an indication of its capabilities to meet various commitments. While I recognize that a \$78 billion national defense budget sounds like a great amount of money, I think it should be put in the perspective of what our gross national product is.

I have pointed out that for fiscal year 1970, the \$78 billion defense budget will comprise approximately 8.1 percent of our gross national product, and that is no larger than it was for fiscal 1969. I thought we should go back in 5-year periods for 15 years to see how it looks. If one goes back to fiscal 1964, fiscal 1959, and fiscal 1954, he will find that the proposed defense budget for fiscal 1970 is less in percentage of our gross national product than 3 of those periods and equal in one.

So I find myself a little unenthusiastic about all this talk about balance when I take a look at our ability, which is reflected in the gross national product.

One other thought on this matter is that if you take from the \$78 billion national defense budget \$28 billion for the cost of the war in Vietnam, you get down to \$50 billion, which we might say represents what could be a normal national defense commitment. The war is an abnormal situation. That would put us down to 5 percent of our gross national product.

I invite the attention of Senators to this fact: Even though the 8.1 percent of our gross national product is what our national defense will come to for fiscal 1970, that includes \$28 billion for the war. When you go back to 1964, there is practically nothing for the war; there was nothing for a war in 1959; and there was nothing for a war in 1954. Yet, the percentage of the gross national product devoted to military was greater than the percentage we are going to have for fiscal 1970.

My point is simply this: Before we start talking too much and too enthusiastically about a balance, let us put things in perspective. If we put things in perspective, then I think we might be able to do a better job.

I thank the Senator for yielding.

Mr. STENNIS. I thank the Senator.

Mr. ELLENDER. Mr. President, will the Senator yield?

Mr. STENNIS. I yield.

Mr. ELLENDER. Mr. President, there is no one in the Senate for whom I have higher respect than the distinguished Senator from Mississippi. I know that he is doing a good job as chairman of the Committee on Armed Services. He is very conscientious.

Mr. STENNIS. I wish I could be as good a Senator and as effective a Senator as the Senator from Louisiana.

Mr. ELLENDER. I have been trying for the past 12 years to get most of our troops removed from Western Europe. We have had between four and one-half and six divisions there for 20 years. The main reason why they were sent there, as I understand it, was to help contain the Soviet Union, and to reassure our NATO allies that they would be protected by U.S. forces.

We built huge airfields in Japan, Okinawa, the Philippines, and all over Africa to isolate Russia, and in the process we actually have been sustaining all of Western Europe militarily. We have also constructed many harbors and other military installations. But, somehow, we seem to be unable to get the countries of Western Europe to assist us in our efforts. They do not seem to sense the danger as our military advisers see it, and that should give us something to think about.

The Senator stated that we are in South Korea. We have been there virtually alone for many, many years. And this is supposedly a United Nations undertaking.

It is not totally a U.S. action, as the Senator knows but we have been carrying most of the burden. It seems that the executive department is unable to obtain help or any kind of assistance from the other members of the United Nations. We have been carrying that load alone, as I have stated, at a very substantial cost to our taxpayers.

Now as to Western Europe, it seems to me that it is up to the Chief Executive and perhaps Congress to try to get assistance from our erstwhile allies or withdraw most of our manpower from that area. We have been in Western Europe now for 20 years, as I said. It has been costing the taxpayers of this Nation over \$2 billion a year to sustain the five and one-half divisions stationed there. Together with their families that are and have been in that area for the past 15 years, the total of roughly 600,000 Americans.

I cannot understand why we should not obtain assistance. The Senator is on the Subcommittee on Appropriations for the Armed Services. He knows that I have tried every time a new Secretary of Defense was named—beginning with Mr. McElroy and then Mr. Wilson, and their successors—to get help from Western Europe. All I could obtain was, "We will try." Try—that is all they have done and with no results.

From the start the countries of Western Europe were not carrying their just load as they promised to do. On a visit there in 1960, between the Republican and Democratic National Conventions, I found that our so-called allies had no divisions that were ready for action. In Germany, Belgium, and other countries, there were more or less paper divisions. If the Russians had struck in 1960, there would have been only five and a half divisions from our country ready to go, and one brigade from Canada. As I have stated, the rest of them were paper divisions and it would have required months to bring them to our standards.

Why that situation was permitted to continue I cannot say, but somebody was not on the job. When I visited SHAEF in 1960, even our military people there stated to me that our allies were well prepared and ready to go, but after an investigation I found that they were mere paper divisions, particularly in Germany.

Now, to come to our local situation, I have voted every dollar requested by the

Defense Department to maintain our defenses. Five or six years ago it was my feeling that since we were living in a missile age, we should spend much of our time and money in developing more and better missiles. It was obvious to me that if a war were to occur between us and Russia, it would be a war in which nuclear missiles would be used, and not conventional weapons.

I stated at the time that it was my feeling and my belief that our country could not afford to carry on both a missile-age program and a conventional war program. It would be simply impossible; it would be too costly. But my advice was not heeded, and we are making efforts now to carry on preparation for both a missile-age war and a conventional warfare program. I see no reason why we should do that if the people from Western Europe, who are now able to assist us, do not join in helping us. It is my belief that as long as the U.S. Government permits the French, Germans, Belgians, Danes, and the British to lay their heads on Uncle Sam's shoulder and to carry them along, they will not do anything to help us out.

Mr. President, it strikes me that every effort should be made by the present administration to obtain assistance, real assistance, from the governments of Western Europe; and, if they do not agree, we should get out of Western Europe. That is what I advocate and that is what I have been proposing for at least 10 years, with little or no success. They seem not to see any danger and our military people take the position that Europe should be protected. I cannot agree.

I am not going to try to debate now the many mistakes made by our policy planners or by the managers of the Pentagon's research and development program. However, as the Senator from Mississippi knows, it has been my belief for a long time that we have been providing too large a reservoir of research money for the Pentagon, and the planners have fallen over themselves to find ways to spend the available funds. I think this year the Defense was allowed over \$8 billion by the Bureau of the Budget. Is that correct?

Mr. STENNIS. The exact figure was \$8.2 billion.

Mr. ELLENDER. And it was cut back by how much?

Mr. STENNIS. About \$1 billion in all.

Mr. ELLENDER. As I figure it, there is over \$7 billion in the bill before us.

Mr. STENNIS. It is \$7.179 billion.

Mr. ELLENDER. As long as we have that much money for the Pentagon to do research, ways will be found to spend it. I am very hopeful that during this session we will be able to cut back on some of these research funds. Today we are budgeting almost \$17 billion for research funds in all departments of Government. I cannot help but feel there is much waste. Such a huge sum cannot be frugally administered.

My good friend from Arkansas (Mr. McCLELLAN) is familiar with all the billions of dollars that we have spent for the F-111, but we still have funds in the pending bill for further research and

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building more prototypes and some plans for our Air Force.

Mr. McCLELLAN. Will the Senator yield at that point?

Mr. ELLENDER. I shall yield in a moment. Also, we were presented with a large sum to continue the MOL—the Manned Orbital Laboratory. It was only after a good deal of coaxing that research for the MOL was discontinued. The Air Force is not spending any more money in that direction. Over \$1 billion was spent through the Air Force before the project was halted.

In a related area, I am chairman of the subcommittee which goes over the funds requested by the Atomic Energy Commission. For years, we have been working on a small atomic engine for the space program. We have already spent \$1,200,000,000 on this engine and up to now we have not satisfactorily constructed a prototype. I asked how long it would take to complete the engine, and I was told 7 more years would be needed and that the cost would be about \$1,100,000,000 more. So we will be spending well over \$2 billion in order to perfect this machine. Yet at the same time, I am proposing a small amount in that very same bill to continue our public works programs, to fight air pollution and water pollution and, somehow, I have been unable to get amounts budgeted for those worthy projects.

I am for a balanced military program, for our own immediate protection, but not for one to protect the whole world. Most of the millions of dollars we have spent on the military assistance advisory groups and other missions throughout the world have not been well spent. They have brought us more grief and trouble than anything else, in my opinion. They have served to keep the pot boiling, and have helped create fear and suspicion among nations which should be good friends and neighbors. They have helped get us into arguments where we had no good reason to be, and no real American interest to protect.

So far as I am concerned, I should like to see every American soldier now in Europe come back, and let the Europeans do more to protect themselves. They are well able to take care of themselves by this time.

Mr. McCLELLAN. The Senator from Louisiana mentioned a while ago as one illustration the F-111 airplane. In all fairness, I am not absolving the military from all the blame in connection with that airplane, but I think the record should be kept straight that the military, from the very beginning, disapproved of that airplane, and from the beginning, the military people warned that the commonality of the concept would not work, that the two planes would not be able to perform the missions for which they were designed. Thus, I simply want to keep the record straight that the primary mistake and responsibility, and then the compounding of that mistake, lies primarily with the civilian head of the Department of Defense and not with the military who repeatedly tried to get that concept modified and the plane redesigned so as to make it work.

I am not absolving the military from all the blame but this is one instance where there was a great overrun of the costs, where the Secretary of Defense said he was taking the figures out of his head and overruled everyone else. Thus, we cannot blame the military and the experts in the military field when they try to counsel, and their counsel is overruled in that fashion. I want to keep the record straight. I am sure the military have made many blunders, but the Senator mentioned that one plane, and I have some knowledge about that.

Mr. ELLENDER. I have named no one.

Mr. McCLELLAN. I did. I named someone.

Mr. ELLENDER. I did not. I was talking about the Defense Department generally. I know that there was quite a difference of opinion between the Navy and the Air Force regarding the F-111 and that the Navy took the position that they should have their own plane.

Mr. McCLELLAN. The result was they did not get any plane. If they had gotten what was given to them, they would not have had a weapon.

Mr. ELLENDER. The point is that the Department of Defense, in that area, spent about \$2.5 billion. Is that not correct?

Mr. McCLELLAN. They spent nearly \$5 billion.

Mr. ELLENDER. Very well. That makes it worse; \$5 billion and they have no planes at present.

Mr. McCLELLAN. They will be getting 400 planes, instead of the 1700 originally ordered.

Mr. ELLENDER. As I said, I named no one. I was speaking of the Department of Defense generally. I am certain Mr. McNamara did not move alone.

Mr. McCLELLAN. He overruled all the military.

Mr. ELLENDER. Perhaps.

Mr. McCLELLAN. That is an undisputed fact.

Mr. ELLENDER. The point I was trying to emphasize most is that we have made many promises to assist everyone in the world. That has been the effect of the MAAG's I referred to earlier. That is some of the programs I have been trying to emphasize. That is why we have spent so many billions of dollars to help people who did not do enough to try and help themselves.

Mr. McCLELLAN. Let me say to the distinguished Senator from Louisiana that I wanted to keep the record straight with respect to the TFX airplane.

Now I want to say to the Senator that I am in complete agreement with him about Western Europe. We have supported them all these years, providing defense for them, and I think it is high time they began to provide their own. I agree completely with the Senator from Louisiana about that. When we talk about bringing our troops home, the Western European countries should take up some of the burden of defending the free world.

Mr. COOPER. Mr. President, will the Senator from Mississippi yield?

Mr. STENNIS. I yield.

Mr. COOPER. Mr. President, I have

listened with a good deal of interest to the statement of the Senator from Mississippi and the remarks which have been made in response. We appreciate his sincerity and the great amount of work he has performed on the bill before us. For myself, I do not find any fault in his concept of balance.

While the amendment which was offered by the Senator from Michigan (Mr. HART) and myself took a good deal of time, I do not think it has been wasted. It has directed the attention of the Senate, the Congress, and the people to the defense budget, and naturally the debate led into the larger questions of security and the means of attaining security.

I have not been one who has criticized the military. I have always recognized that our military leaders have a particular responsibility, a responsibility to plan and recommend those programs which they believe are necessary for the security of the country. The security of this country is not limited only by its physical protection but, in my view, it comprehends protecting its institutions and our free system of Government.

Anyone who has been in the military service, whether in a squad, platoon, company, or regiment, knows that every commander of a unit seeks all the materiel and arms he can to meet any contingency. I have no doubt that this responsibility enters into the thinking and concern of military leaders. But to secure balance, there are several things to be considered.

One consideration is the resources of our country and this demands the amount be allocated for effective and reasonable purposes. As the Senator from Louisiana pointed out a second consideration involves the use of our resources in assistance and defense of other countries, any inquiry as to the efforts they are willing to make. I remember when the Senator from Mississippi and I attended the NATO assembly meeting, after the invasion of Czechoslovakia.

Then, the representatives of other countries, were concerned, and the meeting reflected great interest in the defense of Europe. It was my duty to file a report, and on examination, and as a result of comments from military leaders, I at least, came to the conclusion that if there had been any balance between the NATO forces and the Soviet forces, the balance had been upset by the invasion of Czechoslovakia. Yet since that time, our NATO allies, no matter how much they are appealed to, have not increased their contributions necessary for the adequate defense of their own countries.

I had attempted to secure from the Department of Defense the cost of our total contribution to the security of Western Europe. I secured information from the Department of Defense, which I placed in my report. The total cost, not merely the cost of the troops in Europe, but the cost of the 6th fleet weapons, and backup costs, was \$12 billion annually. This fact demands help from the other countries.

As Senators have said, we must relate our defense needs to our foreign policy

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commitments. What a good many of us have tried to do is to insist that the Executive branch be very careful about commitments. We do not want it to be taken for granted that a commitment exists to send troops to another country, to engage in war, or to put our troops on foreign soil in a position where we could back into a war—which we have done in Vietnam—unless a joint authority is given by the Executive and by the Congress of the United States.

We ought to establish what our commitments are, and their relationship to the security of this country. Otherwise, we may be engaged in military spending, and wars in areas throughout the world.

We should try to find agreement with the Soviet Union upon the control of nuclear arms. We hope that progress can be made. Agreements could reduce materially the demand for spending, and even more important, reduce the chance of nuclear war.

Now I would like to make a suggestion.

Mr. STENNIS. I will consider a suggestion from the Senator from Kentucky at any time.

Mr. COOPER. We have a bill before us involving about \$20 billion. It involves expenditures for all of the branches of the armed services, and it includes many items with which those of us who do not serve on the Armed Services Committee are not familiar.

For a year I have found how difficult it is to learn about one issue—anti-ballistic-missile systems. I believe it would be very helpful if the Senator from Mississippi would go through the bill, explain the provisions of the bill, the need and relationship of the weapons systems, which are very difficult for all of us, and explain the reasons supporting the various provisions and their funding. Give us your views of the balance of the bill of which the Senator spoke so well.

Mr. STENNIS. I thank the Senator very much. I know there is a need in that field or the Senator would not have brought it up. I will do my best to fulfill that need, to some degree. I will have to arrange a time.

Mr. President, I do not want to hold the floor any longer. I yield the floor.

Mr. McCLELLAN obtained the floor.

Mr. GOLDWATER. Mr. President, will the Senator yield?

Mr. McCLELLAN. I yield to the Senator from Arizona, without losing my right to the floor.

Mr. GOLDWATER. I thank the Senator from Arkansas for yielding.

Mr. President, this morning, under controlled conditions, the senior Senator from Kansas (Mr. PEARSON) addressed himself to the military-industrial complex. Having forgotten that it was under controlled conditions, I tried to question the Senator at the finish of his speech, but the Chair, properly, silenced me. However, before I was seated, I stated I thought the Senator had made a good speech, but I did not agree with it. I should like to correct what I think may be a wrong impression.

I think the Senator made a fine speech, in which he recommended to the American people that they realize that we have a military-industrial complex, and

we should be proud and glad we have it, and he made some very interesting suggestions.

When I said I disagreed with it, it was only as to a point or two in his thinking.

His use of the famous quotation by General Eisenhower in his farewell speech on the military-industrial complex was put in the RECORD without what I think is an equally important part, in which President Eisenhower said:

We now stand 10 years past the midpoint of a century that has witnessed four major wars among great nations. Three of these involved our own country. Despite these holocausts America is today the strongest, the most influential and most productive nation in the world. Understandably proud of this preeminence, we yet realize that America's leadership and prestige depend, not merely upon our unmatched material progress, riches, and military strength, but on how we use our power in the interests of world peace and human betterment.

I merely wanted to get that point in the RECORD, together with one other that the Senator made. I have discussed this matter with him, and I recognize why he made it. If I did not serve on the Armed Services Committee, I would feel myself somewhat in agreement with him. He comments in one sentence:

But nowhere is this weakness more glaring than in defense matters.

I take personal offense at that, because I have served on committees of the Senate for many, many years, and I have never served on a committee that is so thorough and so constant in its investigations as is the Armed Services Committee, under the chairmanship of the Senator from Mississippi (Mr. STENNIS).

The Senator went further, and this is one other point I disagreed with, but it does not mean I disagree with the entire speech at all. He said:

I submit that under the present conditions it is a simple physical impossibility for the two armed services committees and the two military subcommittees of the appropriations committees to effectively review and evaluate the policy and budgetary requested of the Department of Defense.

I wanted to make a statement on my own behalf that this is not so; that I think the two committees and the two subcommittees involved do an excellent job.

I also wanted my verification on the record that the suggestion which he made to return to a Truman type of committee that we knew back in World War II is a good one, whether it means expansion of the present committees or setting up a new one.

I wanted merely to correct the record. I thank the Senator from Arkansas for yielding to me.

Mr. McCLELLAN. Mr. President, I yield to the Senator from Connecticut (Mr. RIBICOFF) without losing my right to the floor.

Mr. RIBICOFF. Mr. President, during the past several days, the Senate has been deeply concerned about waste in the defense budget. This concern has been demonstrated by the number of amendments introduced relating to the role of the General Accounting Office in auditing defense contracts.

Every Member of this body is dedicated to efficient and effective government. And so is the Committee on Government Operations.

The Committee on Government Operations is concerned about any waste, excess spending, or inefficient practices in the Federal Government, wherever they exist. In particular, it is especially concerned that the agency established and charged with monitoring Federal spending—GAO—be properly constituted and staffed for this critical task.

As was repeatedly noted during last week's debate, the Committee on Government Operations has legislative oversight over the operations and activities of the General Accounting Office. The following excerpts from Senate rule XXV makes this very clear:

(j) (1) Committee on Government Operations . . . to which shall be referred all proposed legislation, messages, petitions, memorials and other matters relating to the following subjects:

(A) Budget and accounting measures, other than appropriations.

(B) Reorganizations in the executive branch of the Government.

(2) Such committee shall have the duty of—

(A) receiving and examining reports of the Comptroller General of the United States and of submitting such recommendations to the Senate as it deems necessary or desirable in connection with the subject matter of such reports;

(B) studying the operation of Government activities at all levels with a view to determining its economy and efficiency.

Commenting on proposals to expand the concept and functions of the General Accounting Office, the able and distinguished chairman of the Senate Armed Services Committee, Senator JOHN STENNIS, placed in the RECORD of August 7, 1969, a letter he had received from Elmer B. Staats, the Comptroller General, which stated in part:

Before legislation of this type is enacted, it would be our recommendation that the most careful consideration be given to it by the Congress. The type of reviews made by this office and the needs of the interested committees of the Congress need further development and exploration.

This assessment should begin with the committee that has statutory responsibility for the activities of the General Accounting Office.

I have been authorized by the chairman of the Committee on Government Operations, Senator JOHN McCLELLAN, to say that the committee plans to hold hearings on the General Accounting Office to determine its capacity to meet its current—and proposed—obligations and responsibilities.

The hearings would be a general assessment of the GAO, its statutory authority, budget and staff. We would also seek to determine in what additional ways the GAO could better fulfill its obligations to the legislative branch. I would also like to note that these proposed hearings have the full endorsement and support of Senator KARL MUNDT, ranking minority member of the committee. The committee hopes to hear testimony from the Comptroller General, from interested Senators, from the Department of Defense, and others. We

would welcome any bills that would assist the GAO in carrying out its responsibilities in auditing the activities of the Federal Government.

It would be my hope that the committee could then report out legislation that would be responsive to the pressing problem of monitoring, assessing and controlling—to the fullest possible extent—the massive expenditures of the Department of Defense, as well as all Federal agencies.

I thank the distinguished Senator for yielding me the opportunity to make this statement.

YOUNG PEOPLE, ORGANIZED CRIME, AND CRIMINAL JUSTICE

Mr. McCLELLAN, Mr. President, too often those of us who are concerned about the administration of criminal justice tend to analyze the problems that face us in terms of categories without seeing inner relationships. We express our concern about street crime and attempt to respond to the rape, robbery, and murder that occur in our streets. We express our concern about organized crime and attempt to respond to the depredations of criminal syndicates. It was in this context, therefore, that I found the testimony of Prof. Donald R. Cressey, of the University of California at Santa Barbara, before the House Select Committee on Crime, on August 5, all that much more enlightening. A student of Sutherland, whose "White Collar Crime" did so much to destroy the myth that poverty is a cause of crime, Professor Cressey is a nationally recognized authority in criminology, whose most recent studies have been conducted in the area of organized crime. Professor Cressey's testimony shows clearly the relationship between our Nation's failure to respond to the challenge of organized crime and the increasing violence of our inner city youth. In showing this connection, he demonstrates how essential an attack on organized crime is in any concerted effort to respond to crime in the streets.

Mr. President, I submit that a society that cannot bring to book the overlords of La Cosa Nostra is a society which cannot hold the allegiance of the young to the traditional standards of moral responsibility. I commend Professor Cressey's statement to each of my colleagues, and I ask unanimous consent that it be printed in the RECORD following my remarks.

There being no objection, the statement was ordered to be printed in the RECORD, as follows:

ORGANIZED CRIME AND INNER-CITY YOUTH
(Testimony by Prof. Donald R. Cressey before the Select Committee on Crime, House of Representatives, Congress of the United States, August 5, 1969)

American criminals have managed to put together an organization which is at once a nationwide illicit cartel and a nationwide confederation. This organization is dedicated to amassing millions of dollars by means of extortion, and from usury, the illicit sale of lottery tickets, chances on the outcome of horse races and athletic events, narcotics, and untaxed liquor. Its presence in our society is morally reprehensible because any citizen purchasing illicit goods and services from

organized criminals contributes to a culture of fraud, corruption, violence, and murder. But the real danger of organized crime arises because the tremendous profits obtained from the sale of illicit goods and services are being invested in legitimate businesses and in the political process. The game is monopoly, both the economic sphere and the political sphere.

Although organized crime touches every American, the direct victims are the citizens living in the deteriorated areas of our large cities. The economic base of organized crime's multi-billion investments in legitimate business and in politics is the precious money of the urban poor. The war on poverty has not been a smashing success at least in part because Government money poured into ghettos goes immediately from the pockets of the poor to the pockets of organized criminals. From there, the money goes to nullification of the very economic and political processes which make the war on poverty possible in the first place.

Numbers lotteries and bookmaking businesses thrive on the dollars of unskilled Negroes and other inner-city residents, not on bets placed by the rich, the educated, the well-housed, the well-employed. Similarly, the American drug addict is likely to be poorly educated and unskilled, a resident of a central-city area, and a member of a disadvantaged ethnic minority group. And it is the factory worker, the marginal businessman, and the urban welfare recipient, not the suburbanite, who frequently is so desperate for a loan that he seeks out a loan shark.

A membership group variously known as "Cosa Nostra," "The Mafia," and "The Syndicate" is the core of the organized crime group that is feeding on the urban poor. The structure and operations of this organization need not be described here. They were sketched out by the McClellan Committee in 1963¹ and by the President's Commission on Law Enforcement and Administration of Justice in 1967.² Three recent books, including my own, fill in some of the details.³

Cosa Nostra is a membership organization. About 5,000 men who have been admitted to membership now view themselves as members and take special cognizance of other members. But not all the persons making a living from organized crime are members of Cosa Nostra. For example, very few of the public officials corrupted by Cosa Nostra are members. Each of the twenty-four Cosa Nostra "families" in the United States has at least one position for a "corrupter," a man whose job it is to secure immunity of "family" members from the law-enforcement process. For each "corrupter" position of this kind, there is at least one "corruptee"—the person receiving the bribe, the payoff, the contribution, or the "favor" the corrupter has to offer. While the corruptee usually is not a Cosa Nostra member, the services he performs are essential to the continuing operations of Cosa Nostra. Accordingly, he is part of organized crime even if he is excluded from membership in the core organization.

Similarly, the persons occupying the lowest levels of the division of labor constituting organized crime ordinarily are not Cosa Nostra members. These are the "street men" involved in the retailing of Cosa Nostra's illicit goods and services, such as narcotics and bet-taking. They also fill the organization's needs for personnel to provide low-level services such as driving trucks and cars, delivering messages, running errands, picking up illegal betting slips, and answering the thousands of telephones utilized by bookmakers. In the ghetto areas of large cities, much of the street work is done by Negroes. These street-level workers are employed by Cosa Nostra in much the way corruptees are employed by Cosa Nostra. That is, they may be part-time employees paid on a piece-work

Footnotes at end of article.

basis, or full-time salaried employees, or commission agents.

Commission agents are the most affluent street-level organized criminals. Some of them solicit bets for centrally located bookmakers who have title to a neighborhood. Others sell illegal lottery tickets. Still others are considered the "owners" or "bankers" of illegal numbers lotteries. These last men are likely to be called "independents" because they are not members of Cosa Nostra. But they are not independent. Each of them must give a percentage of his gross to a Cosa Nostra member for the privilege of doing business in his territory.

The street-level commission agents working in black ghettos ordinarily are black men. All of them—and especially the "independent" numbers bankers have high status in their neighborhoods. They are the "hustlers" with the ready bank roll, the Cadillac, the Omega watch, the \$65 alligator shoes, and other symbols of affluence. Despite the fact that discriminatory practices prevent black commission agents from moving up into the echelons of Cosa Nostra, when the real money is, these organized criminals are the idols of young ghetto residents. They are men who have made it.

The National Advisory Commission on Civil Disorders noted that poverty, violence, and organized crime activities combine to produce great cynicism about the idea that success is to be achieved by legitimate means. The Commission succinctly stated what many other persons and agencies have observed:

"With the father absent and the mother working, many ghetto children spend the bulk of their time on the streets—the streets of a crime-ridden, violence-prone and poverty-stricken world. The image of success in this world is not that of the "solid citizen," the responsible husband and father, but rather that of the "hustler" who takes care of himself by exploiting others. The dope sellers and the numbers runners are the "successful" men because their earnings far outstrip those men who try to climb the economic ladder in honest ways.

"Young people in the ghetto are acutely conscious of a system which appears to offer rewards to those who illegally exploit others, and failure to those who struggle under traditional responsibilities. Under these circumstances, many adopt exploitation and the 'hustle' as a way of life, disclaiming both work and marriage in favor of casual and temporary liaisons. This pattern reinforces itself from one generation to the next, creating a 'culture of poverty' and an ingrained cynicism about society and its institutions."⁴

So far as urban ghettos are concerned, Cosa Nostra is comparable to an invading army. Its troops have conquered territory and now these troops, with the assistance of the local Quislings who serve them, have made a certain peace with the residents, including law-enforcement agents. The alliances of organized criminals operating in inner-city areas contribute to more general crime and delinquency rates in three inter-related ways. *First*, by their opulence the persons engaged in organized crime demonstrates to the people, and especially to the young, that crime does pay. *Second*, by their very presence, organized criminals demonstrate the existence of a rich vein of corruption in political and law-enforcement organizations, making it difficult for parents and others to convince children that people get ahead in the world by good, hard, honest labor in service of family, country, man, and God. *Third*, the presence of organized crime in a neighborhood lowers the status of the people in the district, just as do conditions of squalor, with the result that anti-criminal admonitions lose their effectiveness—the people have less to lose if convicted of crime.

Attraction. If an organization is to survive,

it must have an institutional process for recruiting new members and inculcating them with organizational values and ways of behaving. But the most successful recruitment processes are those which do not appear to be recruiting techniques at all. These are the process by which membership becomes highly desirable because of the rewards and benefits prospective members believe it confers on them. These, also, are the processes which enable inner-city youth to find niches in the world of crime.

Some boys grow up knowing that it is a "good thing" to be a banker, to belong to a certain club, to attend a certain university. They know these are "good things" because men they emulate have done them. Other boys—those in the central areas of our large cities—grow up knowing that it is a "good thing" to be a street-level organized criminal, to have the respect of established organized criminals, and to be given the opportunity to learn the skills and attitudes necessary to bookmaking or numbers selling. Still other skum boys grow up knowing that if they have the right qualifications and connections they might be admitted to membership in Cosa Nostra itself, thus becoming eligible for a share of the billions of dollars Cosa Nostra makes annually from the illegal bets placed with the street-level workers who are employed by Cosa Nostra.

Most slum boys grew up in social situations in which the desire for participation in organized crime comes naturally and painlessly. Raymond V. Martin, formerly Assistant Chief of Brooklyn South Detectives, has reported that in some Brooklyn neighborhoods, boys grew up under two "flags."⁵ One is the flag of the United States, symbolizing middle-class institutions, tradition, and culture. The other is the flag of organized crime, symbolizing criminal society. Stated in more general terms, the principle is this: Persons growing up in some geographic and social areas have a better chance than do others to come into contact with norms and values which support legitimate activities, in contrast to criminal activities, while in other areas the reverse is true. In many areas, alternative educational processes are in operation, so that a child may be educated in either conventional or criminal means of achieving success. In inner city areas, organized criminals efficiently and effectively provide youngsters with criminalistic norms, values, and ways of behaving.

Boys growing up in areas where the "syndicate flag" is flying learn that success comes to "real men," to "stand-up guys" who violate the law with impunity. Accordingly, they train themselves in skills and attitudes which they believe will be as valuable to their success as they have been in the careers of the men they admire. A recent study by Irving Spergel suggests that these include, especially, personal values about silence, honor, and loyalty—values which make the boys controllable by the adult criminals about whom they are silent, to whom they behave honorably, and to whom they are loyal.⁶

Spergel studied juvenile delinquents in three different neighborhoods of Chicago. One of them was given the fictitious name "Racketville" because organized-crime activities flourish there. In this neighborhood, like many other American slum neighborhoods, organized criminal activities such as lotteries, bookmaking, and usury employ a sizable proportion of the population. Some delinquents were observed participating in lottery operations, primarily through family connections. For example, one boy drove his uncle's Cadillac to pick up the receipts from a numbers writer. Another boy was elated when a man he said was "big" in the numbers asked him to perform a minor errand. He said this might be a "break" for him, that this "big shot" might give him a job paying "a couple hundred dollars a week for hardly doing nothing," that he would be able to

get up late in the morning, have girls, and go to night clubs.

The boys viewed minor organized-crime work assignment as opportunities to do small favors for the racketeers, thus demonstrating willingness and trustworthiness. Usurers were viewed as respectable businessmen by the boys, who emulated them. The boys themselves participated in money-lending, and during the course of the study two boys were arrested for systematic loansharking while still attending school.

Spergel concluded, however, that it is more important for an organized-crime aspirant to display evidence that he is a "stand-up guy" than to learn specific criminal skills. A "stand-up guy" shows courage and "heart." He does not whine or complain in the face of adversity, including arrest, interrogation and punishment. He has learned to rate criminals higher than noncriminals.

Racketeers placed a premium on smooth and unobtrusive operation of their employees. The undisciplined, trouble-making young "punk" was not acceptable. The primary condition for admission to the racket organization was not necessarily involvement in delinquent acts but training in attitudes and beliefs which would facilitate the smooth operation of the criminal organization. Prior development of specific skills and experiences seemed less necessary than the learning of an underlying illegitimate orientation or point of view conducive to the development of organized crime.⁷

The following transcript of a bugged conversation between a New York Cosa Nostra soldier and his captain indicates that this "underlying illegitimate orientation" is sought in neighborhoods other than Racketville. The speaker is praising the qualities of his captain's regime by telling him his members have the desired criminalistic attitudes. They are "stand-up kids." The conversation refers to an FBI investigation:

"They are telling them everything. Who's Cosa Nostra. What's the picture here. Who the bosses are. Who's the bosses? These are kids that don't know nothing. They are schooling them. They are telling them up and down the line what everything is here. They are actually exposing the whole . . . thing to innocent kids. (Inaudible.) Innocent kids. Exposing the whole thing. 'He's a captain.' (Inaudible.) And so forth, I said. Good. Your kids, now, you know, are stand-up kids. . . . They are going to tell them not a word."⁸

Spergel asked the delinquents in his study, "What is the occupation of the adult in your neighborhood whom you most want to be like ten years from now?" Racketville boys did not name bankers, or policemen, or Congressmen, or teachers, or businessmen, or skilled workers. Eight out of ten responded to the question by naming some aspect of organized crime. Similarly, Racketville delinquents believed that the most important quality in "getting ahead" is "connections," not ability, or good luck, or education.

There is an important lesson here for administrators of programs designed to encourage inner-city youth to remain in school and "get a good education" so they can contribute to their own welfare and the welfare of the nation. This message is not getting across. It does not fit the reality of daily street experiences in ghettos. By watching the part of organized crime available for them to see—the street operations—inner-city boys learn that men who take the illegitimate route to success fare better than those taking the legitimate route. The same experiences also convince them that it is who you know, not what you know, that counts. Seven out of ten of Spergel's delinquents chose education as the least important factor in achieving success, perhaps indicating a belief that "education" and "connections" are antithetical.

Slum boys who think this way we are factually incorrect, even with reference to organized crime. The orientation sought by

inner-city boys—the attitudes of the "stand-up guy" helps prepare them for street crime like burglary and robbery, and for street-level involvement in organized crime. But positions of leadership in organized crime, like positions of leadership everywhere in this day and age, increasingly require skills learned in colleges and universities, not on the streets. Moreover, being a "stand-up guy" might get a boy a position as a book-maker or a numbers seller if he has good connections, but to become a Cosa Nostra member he must have better connections than this. And if he is to advance in Cosa Nostra he now must have the skills of a purchasing agent, an accountant, a lawyer, an executive. Spergel found, in fact, that significant upper-echelon opportunities in organized crime were not open even to the youth of Racketville. Some delinquents, he says, eventually became racketeers "without necessarily starting at the bottom."⁹

Occasionally, even honest government officials inadvertently contribute to the glory of organized criminals and, thus, to a more general illegitimate orientation among slum youth. For example, in the summer of 1966 the director of New York City's Youth Board asked two Cosa Nostra soldiers, Albert and Lawrence Gallo, to help halt racial violence in the East New York section of Brooklyn. The implication, probably correct, was that Cosa Nostra men could keep order where the police and social workers could not. But another implication, also correct, was that boys who want to be neighborhood leaders should go into organized crime. John J. Cassese, President of the New York Patrolmen's Benevolent Association, commented that the use of the two organized criminals by city officials both sapped the morale of the police force and made "tin gods" of the organized criminals involved:

"I can just see what will happen. It's this way. When a police officer goes up to some juveniles who have been misbehaving and tells them to quiet down and move along, what will they say to him? 'You're not the boss around here, Mr. Gallo is.' When you single people like that out, you make them tin gods in the neighborhood—people known for their habitual lawlessness."¹⁰

Corruption. The problem of organized crime is clearly a problem of political corruption. The American Bar Association's report on organized crime concluded, "The largest single factor in the breakdown of law enforcement dealing with organized crime is the corruption and connivance of many public officials."¹¹ Similarly, at a 1967 conference of law-enforcement officials, the then Chief Justice of the United States, Earl Warren, stated that it could be taken as a "rule of thumb" that corruption is the basis of organized crime.¹² And the President's Commission on Law Enforcement and Administration of Justice made the same observation: "All available data indicate that organized crime flourishes only where it has corrupted local officials."¹³

The political objective of Cosa Nostra is not competition with established agencies of legitimate government. Unlike the Communist party, organized crime is not interested in political and economic reform. Its political objective is a negative one: nullification of government.

Nullification is sought on two different levels. At the lower level are the agencies for law enforcement and the administration of justice. When an organized criminal bribes a policeman, a police chief, a prosecutor, a judge, or a license administrator, he does so in an attempt to nullify the law-enforcement process. At the upper level are legislative agencies, including federal and state legislatures as well as city councils and county boards of supervisors. When an organized criminal supports a candidate for political office, he does so in an attempt to deprive honest citizens of their democratic voice, thus nullifying the democratic process.

Footnotes at end of article.

funds in a manner not contemplated by the Congress. If, as stated in the Plan, discrimination in referral is prohibited by the National Labor Relations Act and Title VII of the Civil Rights Act of 1964, it is our opinion that the remedies provided by the Congress in those acts should be followed. See also in this connection section 207 of Executive Order 11246.

While, as indicated in the foregoing opinions and in your Solicitor's memorandum, the President is sworn to "preserve, protect and defend the Constitution of the United States," we question whether the executive departments are required, in the absence of a definitive and controlling opinion by the Supreme Court of the United States, to assess the relative merits of conflicting opinions of the lower courts, and embark upon a course of affirmative action, based upon the results of such assessment, which appears to be in conflict with the expressed intent of the Congress in duly enacted legislation on the same subject.

In this connection, it should be noted that, while the phrase "affirmative action" was included in the Executive order (10925) which was in effect at the time Congress was debating the bills which were subsequently enacted as the Civil Rights Act of 1964, no specific affirmative action requirements of the kind here involved had been imposed upon contractors under authority of that Executive order at that time, and we therefore do not think it can be successfully contended that Congress, in recognizing the existence of the Executive order and in failing to specifically legislate against it, was approving or ratifying the type or methods of affirmative action which your Department now proposes to impose upon contractors.

We recognize that both your Department and the Department of Justice have found the Plan to be legal and we have given most serious consideration to their positions. However, until the authority for any agency to impose or require conditions in invitations for bids on Federal or federally assisted construction which obligate bidders, contractors, or subcontractors, to consider the race or national origin of their employees or prospective employees for such construction, is clearly and firmly established by the weight of judicial precedent, or by additional statutes, we must conclude that conditions of the type proposed by the revised Philadelphia Plan are in conflict with the Civil Rights Act of 1964, and we will necessarily have to so construe and apply the act in passing upon the legality of matters involving expenditures of appropriated funds for Federal or federally assisted construction projects.

In this connection it is observed that by section 705(d) of the act, Congress charges the Equal Employment Opportunity Commission with the specific responsibility of making reports to the Congress and to the President on the cause of and means of eliminating discrimination and making such recommendations for further legislation as may appear desirable. That provision, we believe, not only prescribes the procedure for correcting any deficiencies in the Civil Rights Act, but also shows the intent of Congress to reserve for its own judgment the establishment of any additional unlawful employment practice categories or nondiscrimination requirements, or the imposition upon employers of any additional requirements for assuring equal employment opportunities.

We realize that our conclusions as set out above may disrupt the programs and objectives of your Department, and may cause concern among members of minority groups who may believe that racial balance or equal representation on Federal and federally assisted construction projects is required under the 1964 act, the Executive order, or the Constitution. Desirable as these objectives may be, we cannot agree to their attainment by the imposition of requirements on contrac-

tors, in their performance of Federal or federally-assisted contracts, which the Congress has specifically indicated would be improper or prohibited in carrying out the objectives and purposes of the 1964 act.

Sincerely yours,

ELMER B. STAATS.

ABM

AUTHORIZATION OF APPROPRIATIONS FOR FISCAL YEAR 1970 FOR MILITARY PROCUREMENT, RESEARCH AND DEVELOPMENT, AND FOR THE CONSTRUCTION OF MISSILE TEST FACILITIES AT KWAJALEIN MISSILE RANGE AND RESERVE COMPONENT STRENGTH

The Senate resumed the consideration of the bill (S. 2546) to authorize appropriations during the fiscal year 1970 for procurement of aircraft, missiles, naval vessels, and tracked combat vehicles, and to authorize the construction of test facilities at Kwajalein Missile Range, and to prescribe the authorized personnel strength of the Selected Reserve of each reserve component of the Armed Forces, and for other purposes.

Mr. TYDINGS. Mr. President, what is the pending business?

The PRESIDING OFFICER. The pending business is the amendment of the Senator from Maryland.

Mr. TYDINGS. Mr. President, I ask for the yeas and nays on my amendment.

The yeas and nays were ordered.

Mr. BROOKE. Mr. President, I have long made clear that I am committed to firm oversight of our defense expenditures. At the same time, however, I feel an obligation to speak out when it appears that proposed economies may be false ones. With this in mind, I feel I should offer some comment on the proposal by the Senator from Maryland to reduce the Department of Defense's emergency funds by one-half. I am well aware that in recommending an emergency fund of \$100-million, the committee exceeded the previous amount authorized for this purposes. But I also believe that a 50 percent reduction in this amount is too great a cut.

My reasons for holding this position may be stated quite simply. The Subcommittee on Research and Development, on which I was honored to serve, recommended, and the full committee has endorsed, major reductions in the proposed Department of Defense budget for Research and Development. Those reductions amount to over \$1 billion, the most substantial cut in any sector of the budget and one which will affect many programs which the Department of Defense considered vital. Having exercised such a stringent review of this element of the budget already, it is my belief that the Department should have somewhat greater latitude in regard to the emergency fund. These funds will permit the Department to manage more sensibly the effective reduction of effort which this legislation will provide.

I consider a reasonable degree of flexibility very desirable, and in view of the magnitude of the cuts already contemplated, I believe the emergency fund is a prudent device for improved management of the Department of Research and

Development programs in a period of substantial reorientation.

For example the committee report indicates the considerable uncertainties which afflict the whole question of air defense. Both with respect to the defense of the continental United States and with respect to forward defense of our men in the field, should they be engaged against an enemy with significant tactical air capability, there are quite fundamental questions about the size and nature of air defenses which should be provided.

The committee directed a deferral of work on the airborne warning and control system—AWACS—largely because of the doubts about the likely bomber threat to the United States.

Similarly, in the relatively brief time we had to consider the matter in the subcommittee and in the full body, the necessity for the promising SAM-D system remained unclear. So far as defense of the field army and the continental United States is concerned, it seems clear that this system would provide both more potent and less costly defense than the present capabilities, namely, the Nike-Hercules and Hawk missile forces. The present weapons are extremely expensive to maintain. If we are going to provide extensive air defense in the future, we may later wish to proceed with the SAM-D technology.

Thus, the deletion of funds for SAM-D was accomplished with some trepidation on the part of many of us in the committee and was written in primarily because of the compulsion we felt to reduce the overall budget.

At the same time, however, the committee has directed the Secretary of Defense to review the bomber defense requirement in detail and to submit findings and recommendations in connection with the fiscal 1971 budget. Since the Department has argued that SAM-D is one of the most critical programs bearing on future air defense efforts, it may well choose to use a portion of the flexible funding authority under section 202 to sustain a minimum level of effort on SAM-D pending this full re-examination of the need for a more advanced air defense capability.

This is but one example of how such authority might be put to constructive use. There are many occasions in a large and fast moving technological effort, of which the Department's total R. & D. program is the principal example, when the capacity to feed money into a critical area can prove invaluable. Particularly since the Department's R.D.T. & E. budget has a large and pressing backlog of projects competing for funds, I do not consider this emergency authority excessive.

Indeed my view is similar to that voiced in the Senate the other day by the distinguished junior Senator from Maryland (Mr. MARSHAS). I tend to believe that our defense effort should emphasize the technological advantages we have accrued, and that we should seek to control our total defense expenditure principally by strict limits on premature commitments to procurement of expensive systems and by reducing our conven-

tional forces with their costly manpower levels to the extent feasible.

The other side of the coin is that, if we are to stress technological advantages in maintaining a strong national security posture, we cannot skimp on our R. & D. effort. Considering the 12.7-percent cut already imposed on the total R.D.T. & E. authorization, I believe that ample emergency funding is both important and desirable. Accordingly, while I could not support the \$50-million recommended in the original amendment, I believe the compromise which has been worked out does allow for a sufficient degree of flexibility in the program. The revised amendment will therefore have my support.

The PRESIDING OFFICER. The question is on agreeing to the amendment of the Senator from Maryland. On this question, the yeas and nays have been ordered, and the clerk will call the roll.

The assistant legislative clerk proceeded to call the roll.

Mr. KENNEDY. I announce that the Senator from Tennessee (Mr. GORE) is absent on official business.

I also announce that the Senator from Indiana (Mr. BAYH), the Senator from Nevada (Mr. BIBBLE), the Senator from Connecticut (Mr. DODD), and the Senator from Texas (Mr. YARBOROUGH) are necessarily absent.

I further announce that, if present and voting, the Senator from Tennessee (Mr. GORE), the Senator from Indiana (Mr. BAYH), the Senator from Connecticut (Mr. DODD), and the Senator from Texas (Mr. YARBOROUGH) would each vote "yea."

Mr. SCOTT. I announce that the Senator from Ohio (Mr. SAXBE) is necessarily absent and, if present and voting, would vote "yea."

The result was announced—yeas 94, nays 0, as follows:

[No. 75 Leg.]
YEAS—94

- | | | |
|--------------|---------------|----------------|
| Alken | Gravel | Mundt |
| Allen | Griffin | Murphy |
| Allott | Gurney | Muskie |
| Anderson | Hansen | Nelson |
| Baker | Harris | Packwood |
| Bellmon | Hart | Pastore |
| Bennett | Hartke | Pearson |
| Boggs | Hatfield | Pell |
| Brooke | Holland | Percy |
| Burdick | Hollings | Prouty |
| Byrd, Va. | Hruska | Proxmire |
| Byrd, W. Va. | Hughes | Randolph |
| Cannon | Inouye | Ribicoff |
| Case | Jackson | Russell |
| Church | Javits | Schweiker |
| Cook | Jordan, N.C. | Scott |
| Cooper | Jordan, Idaho | Smith |
| Cotton | Kennedy | Sparkman |
| Cranston | Long | Spong |
| Curtis | Magnuson | Stennis |
| Dirksen | Mansfield | Stevens |
| Dole | Mathias | Symington |
| Dominick | McCarthy | Talmadge |
| Eagleton | McClellan | Thurmond |
| Eastland | McGee | Tower |
| Ellender | McGovern | Tydings |
| Ervin | McIntyre | Williams, N.J. |
| Fannin | Metcalf | Williams, Del. |
| Fong | Miller | Young, N. Dak. |
| Fulbright | Mondale | Young, Ohio |
| Goldwater | Montoya | |
| Goodell | Moss | |

NAYS—0
NOT VOTING—5

- | | | |
|-------|------|------------|
| Bayh | Dodd | Saxbe |
| Bible | Gore | Yarborough |

So Mr. TYDINGS' amendment, as modified, was agreed to.

Mr. FULBRIGHT. Mr. President, I move to reconsider the vote by which the amendment was agreed to.

Mr. BYRD of West Virginia. I move to lay that motion on the table.

The motion to lay on the table was agreed to.

Mr. FULBRIGHT obtained the floor. Mr. DIRKSEN. Mr. President, will the Senator yield?

Mr. FULBRIGHT. I yield to the Senator from Illinois, with the understanding that I will not lose my right to the floor.

NOMINATION OF ASSOCIATE JUSTICE OF THE SUPREME COURT

Mr. DIRKSEN. Mr. President, I ask unanimous consent that the name of the new Associate Justice of the Supreme Court may be filed during the adjournment or recess of the Senate. I ask this because it cannot be filed until Thursday, and until it is filed, the chairman of the Committee on the Judiciary cannot set the time for a hearing.

Mr. FULBRIGHT. Mr. President, reserving the right to object, I did not hear his name.

Mr. DIRKSEN. I did not give his name. [Laughter.]

Mr. President, I also request that the name be referred to the Committee on the Judiciary.

The PRESIDING OFFICER. Is there objection? The Chair hears none, and it is so Ordered.

AUTHORIZATION OF APPROPRIATIONS FOR FISCAL YEAR 1970 FOR MILITARY PROCUREMENT, RESEARCH AND DEVELOPMENT, AND FOR THE CONSTRUCTION OF MISSILE TEST FACILITIES AT KWAJALEIN MISSILE RANGE, AND RESERVE COMPONENT STRENGTH

The Senate resumed the consideration of the bill (S. 2546) to authorize appropriations during the fiscal year 1970 for procurement of aircraft, missiles, naval vessels, and tracked combat vehicles, and research, development, test, and evaluation for the Armed Forces, and to authorize the construction of test facilities at Kwajalein Missile Range, and to prescribe the authorized personnel strength of the Selected Reserve of each reserve component of the Armed Forces, and for other purposes.

Mr. FULBRIGHT. Mr. President, I call up my amendment No. 110.

The PRESIDING OFFICER. The amendment will be stated.

The legislative clerk proceeded to read the amendment.

Mr. FULBRIGHT. Mr. President, I ask unanimous consent that further reading of the amendment be dispensed with.

The PRESIDING OFFICER. Without objection, it is so ordered; and, without objection, the amendment will be printed in the Record.

The amendment is as follows:

On page 2, line 26, strike out "\$1,638,600,000" and insert in lieu thereof "\$1,626,707,000".

On page 3, line 2, strike out "\$1,921,500,000" and insert in lieu thereof "\$1,911,343,000".

On page 3, line 3, strike out "\$3,051,200,000" and insert in lieu thereof "\$3,041,211,000".

On page 3, line 4, strike out "\$468,200,000" and insert in lieu thereof "\$454,625,000".

Mr. MANSFIELD. Mr. President, will the Senator yield?

Mr. FULBRIGHT. I yield to the majority leader.

AUTHORIZATION FOR THE COMMITTEE ON FINANCE TO MEET ON SEPTEMBER 4 OR 5

Mr. MANSFIELD. Mr. President, I ask unanimous consent that, on September 4 or 5, the Committee on Finance may be allowed to meet during the session of the Senate for the purpose of beginning hearings and listening to witnesses on tax reform legislation.

The PRESIDING OFFICER. Is there objection? The Chair hears none, and it is so ordered.

Mr. MANSFIELD. It is hoped that, after that, we will be able to get authorization for the Committee on Finance to meet during the session of the Senate on a week-by-week basis. But we will cross that bridge when we come to it.

AUTHORIZATION OF APPROPRIATIONS FOR FISCAL YEAR 1970 FOR MILITARY PROCUREMENT, RESEARCH AND DEVELOPMENT, AND FOR THE CONSTRUCTION OF MISSILE TEST FACILITIES AT KWAJALEIN MISSILE RANGE, AND RESERVE COMPONENT STRENGTH

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Mr. STENNIS. Mr. President, will the Senator yield for a question?

Mr. FULBRIGHT. I yield for a question.

Mr. STENNIS. I know that the Senator has an amendment of some importance and that he wishes to discuss it. I am wondering if there could be an agreement for controlled time at this point.

Mr. FULBRIGHT. I say to the Senator that I have agreed to yield to the Senator from Illinois (Mr. PERCY). He has a statement on a nongermane matter. My speech will take a little time, and I had agreed to accommodate him, to yield to him. I am unable to determine how long my speech will take, due to the interruptions. The Senator knows how it goes. Sometimes it goes quickly and sometimes not quickly. I would hesitate to make an agreement at this time. Later on I might do so, after I am through with my speech. Perhaps the Senator will renew his request after I have completed my remarks.

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We have it in our power to raise the standard of living and the realizable hopes of millions of our fellow citizens. By providing an equal chance at the starting line, we can reinforce the traditional American spirit of self-reliance and self-respect.

RICHARD NIXON.
THE WHITE HOUSE, August 11, 1969.

EXECUTIVE MESSAGES REFERRED

As in executive session, the Presiding Officer laid before the Senate messages from the President of the United States submitting sundry nominations, and withdrawing the nomination of John G. Hurd, of Texas, to be Ambassador Extraordinary and Plenipotentiary to Venezuela, which nominating messages were referred to the appropriate committees. (For nominations this day received, see the end of Senate proceedings.)

AUTHORIZATION OF APPROPRIATIONS FOR FISCAL YEAR 1970 FOR MILITARY PROCUREMENT, RESEARCH AND DEVELOPMENT, AND FOR THE CONSTRUCTION OF MISSILE TEST FACILITIES AT KWAJALEIN MISSILE RANGE, AND RESERVE COMPONENT STRENGTH

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AMENDMENT NO. 113

The PRESIDING OFFICER (Mr. BYRD of Virginia in the chair). The Chair recognizes the Senator from Maryland.

Mr. TYDINGS. Mr. President, I call up my amendment No. 113 and ask that it be read.

The PRESIDING OFFICER. The amendment will be stated.

The legislative clerk read as follows: On page 3, line 9, strike out "\$100,000,000" and insert in lieu thereof "\$50,000,000".

ORDER OF BUSINESS

Mr. TYDINGS. Mr. President, I ask unanimous consent that I may yield 7 minutes to the Senator from Massachusetts (Mr. BROOKE), without losing my right to the floor.

The PRESIDING OFFICER. Is there objection? The Chair hears no objection, and it is so ordered.

The Senator from Massachusetts is recognized.

Mr. BROOKE. I thank the Senator from Maryland.

The PRESIDING OFFICER. The Senator is recognized for 7 minutes.

ABM
MIRV
Mr. BROOKE. Mr. President, now that the ABM decision has been taken, it be-

hooves the Senate and the President to concentrate on the most urgent strategic question now facing the Nation; namely the looming prospect of new offensive deployments. There has now been considerable discussion of the so-called multiple independently targetable reentry vehicles and more than a quarter of the members of Congress, including almost one-half the Senate, have cosponsored resolutions calling for immediate efforts to obtain a joint Soviet-American moratorium on testing of MIRV systems. Such a moratorium, which enjoys much wider support in the informed technical and strategic community than the controversial ABM plan, would be a highly desirable means of buying time to explore the MIRV problem in the forthcoming strategic arms negotiations.

I wish to call the attention of the Senate to an important editorial in this morning's Wall Street Journal. This editorial makes clear the contradictory arguments which have been advanced by certain persons who are reluctant to endorse a MIRV test moratorium, and also sets forth the cogent reasons for pursuing this critical matter on an urgent basis.

The editorial alludes to one point in particular which should not become confused. It is quite misleading to suggest that U.S. MIRV systems would be stabilizing and healthy, because of their smaller size and relative accuracies, while the kind of Soviet tests which have been observed point toward systems which are dangerous.

While initial versions of U.S. MIRV's would not be accurate enough to threaten the Soviet missile force, continued testing and guidance modifications of those weapons could eventually improve their capability against hard targets. Accuracies have improved by a factor of 10 in recent years; a further improvement by a factor of only 2 would be sufficient to produce this result. And the Soviets would have to base their long-range planning on this expectation, not on dubious American assurances that our MIRV is safe and good.

Furthermore, while the Soviet Union's tests of the SS-9 multiple warheads appear to involve an intermediate technology somewhere between a simple cluster weapon and the sophisticated and flexible MIRV on which we are working, it is not clear that the system could serve exclusively a first-strike purpose. The tests do seem incompatible with a retaliatory role only; that is, they do not appear well suited to attacking cities. As the President has publicly implied, the footprints of the Soviet tests seem to match the distribution and layout of portions of the U.S. Minuteman force and they may be designed for that purpose. But in addition to a capacity for assured retaliation, we ourselves have long stressed the importance of a second-strike damage-limiting capability—it is one of the rationales the DOD applies in seeking unnecessarily accurate guidance for Poseidon and Minuteman III.

Thus, especially if the Soviet SS-9 force remains too small for an effective first-strike against the Minuteman fields, what we have seen may well turn out to be an effort to acquire a damage-limiting capability, that is, a weapon sys-

tem which, in the event of war, would give the Soviet Union a capability to reduce damage to itself by striking U.S. missiles.

This is intricate and ambiguous analysis, and no one can be sure of the Soviet Union's exact attitude on MIRV. But it should be abundantly clear to both sides, first, that neither side needs a MIRV system unless the other deploys a thick city defense that is years away and, second, that perfection and deployment of MIRV by either side will stimulate the other to take countermeasures. If this process is not arrested soon, and I doubt that it can be arrested unless MIRV is forestalled, the arms race is virtually certain to soar upward to a higher and more dangerous plateau.

The Journal's editorial stresses that the United States could safely undertake a MIRV test moratorium because:

American MIRV development is intended to assure penetration of a large-scale Soviet ABM, of which there is no firm evidence so far. Dr. Foster has testified that if the Soviets do build such a system, its initial operational capability is five years off. MIRV evidently could be deployed in a far shorter time. Donald Brennan, a Hudson Institute strategic specialist who agrees with the Administration on most issues, put it well in seeing no need for immediate MIRV deployment "on the basis of any philosophy whatever."

And the Journal concludes:

Even if there were no other considerations, we can see little justification for deploying a weapon the nation does not yet need. In this case, with arms limitations talks impending, such deployment seems doubly questionable. A delay would give both the Soviets and arms-control advocates at home assurance that the Administration is deeply serious about the talks. We would be opposed to such gestures if they endanger U.S. security, but all public indications suggest a MIRV delay would not.

The Administration is far freer to respond to all of these considerations now that it has won the ABM fight. . . . In MIRV it now has the opportunity to demonstrate even more conclusively it has a firm hand on the strategic tiller, by proving it can also hold back on arms development that seems the advisable course.

The central challenge to strategic stability comes from the current efforts to perfect MIRV systems. Now that action on the ABM question has been taken, the focus of the debate on national security should shift to the MIRV problem.

I ask unanimous consent that the complete text of the Journal's editorial be printed in the RECORD.

There being no objection, the editorial was ordered to be printed in the RECORD, as follows:

BEYOND THE ABM VICTORY

Score one for the Administration in the anti-ballistic missile fight, and perhaps more importantly, also in the underlying fight over who should control the nation's strategic posture. Now that it has won the big fight, perhaps the Administration can even find new confidence to seriously consider a delay in plans to deploy multiple warheads, a strategic development far more questionable than the ABM ever was.

The ABM decision was on its merits a problematical one, and there is something to be said for resolving the close ones in favor of the President. He is the one in charge of negotiating any arms control agreement with the Soviets, and his negotiating position would not be exactly solidified if the other side began to think a more acquiescent Sen-

ate would actually have more to say than the President about future strategic decisions.

As long as the ABM test loomed, further, we could sympathize with the Administration's hesitancy about a MIRV slowdown. Before the vote, this would have looked like an important concession to the dovish Senators, and thus would have left the President's influence and decision-making powers looking more nebulous than they have turned out to be. Also, if the ABM were defeated, the Administration would have wanted to proceed with MIRV to insure that something was done to counteract the very rapid recent advances in Soviet strategic strength.

None of these factors any longer applies, and the Administration can now consider MIRV far more on its own merits. Where the ABM is a defensive weapon, MIRV is an offensive one. MIRV is also far more destabilizing in the strategic balance, being intimately related with the possibility of one side launching a first strike to wipe out the other's deterrent. It is not clear that a U.S.-Soviet agreement to limit MIRV would be feasible, but it does seem pretty clear that MIRV deployment can be delayed safely a year or two to explore that possibility.

Pentagon research chief John Foster probably was correct in testifying recently that the U.S. version of MIRV is not a first-strike weapon, unlike the Soviet version with far larger warheads ideal for use against hardened missile sites. But even this is not entirely clear. Secretary of Defense Melvin Laird has referred to the use of American submarine-based MIRVs against "hard targets."

For that matter, Dr. Foster himself * * * rent land-based missiles and the projected multiple-warhead version are "adequate with respect to warhead yield and guidance accuracy" when used for "a damage-limiting mission." Unless we have fallen behind in our Pentagonese, a damage-limiting mission would be a strike against missile sites. Perhaps the Pentagon's apparently contradictory statements can somehow be resolved, but if not, even the U.S.-type MIRV seems highly destabilizing.

Perhaps, of course, a U.S. MIRV may prove necessary even so. The Soviets are developing their own, and inspection difficulties both in the test stage and after deployment may make any kind of agreement impractical. But at least some competent witnesses believe a limitation could be enforced so long as the weapons are not deployed. Most importantly, holding back U.S. deployment long enough to explore both the inspection difficulties and the Soviet attitude would apparently not involve much risk.

American MIRV development is intended to assure penetration of a large-scale Soviet ABM, of which there is no firm evidence so far. Dr. Foster has testified that if the Soviets do build such a system, its initial operational capability is five years off. MIRV evidently could be deployed in a far shorter time. Donald Brennan, a Hudson Institute strategic specialist who agrees with the Administration on most issues, put it well in seeing no need for immediate MIRV deployment "on the basis of any philosophy whatever."

Even if there were no other considerations, we can see little justification for deploying a weapon the nation does not yet need. In this case, with arms limitations talks impending, such deployment seems doubly questionable. A delay would give both the Soviets and arms-control advocates at home assurance that the Administration is deeply serious about the talks. We would be opposed to such gestures if they endanger U.S. security, but all public indications suggest a MIRV delay would not.

The Administration is far freer to respond to all of these considerations now that it has won the ABM fight. It proved it can overcome opposition and proceed with arms ad-

vances when it considers them necessary. In MIRV it now has the opportunity to demonstrate even more conclusively it has a firm hand on the strategic tiller, by proving it can also hold back on arms development that seems the advisable course.

MESSAGE FROM THE HOUSE

A message from the House of Representatives, by Mr. Hackney, one of its reading clerks, announced that the House had agreed to a concurrent resolution (H. Con. Res. 315) providing for an adjournment of Congress from Wednesday, August 13, 1969, until 12 o'clock noon on Wednesday, September 3, 1969, in which it requested the concurrence of the Senate.

ENROLLED BILLS AND JOINT RESOLUTION SIGNED

The message also announced that the Speaker had affixed his signature to the following enrolled bills, and they were signed by the Acting President pro-tempore:

S. 912. An act to provide for the establishment of the Florissant Fossil Beds National Monument in the State of Colorado;

S. 1611. An act to amend Public Law 85-905 to provide for a National Center on Educational Media and Materials for the Handicapped, and for other purposes; and

H.J. Res. 864. Joint resolution to provide for a temporary extension of the authority conferred by the Export Control Act of 1949.

AUTHORIZATION OF APPROPRIATIONS FOR FISCAL YEAR 1970 FOR MILITARY PROCUREMENT, RESEARCH AND DEVELOPMENT, AND FOR THE CONSTRUCTION OF MISSILE TEST FACILITIES AT KWAJALEIN MISSILE RANGE, AND RESERVE COMPONENT STRENGTH

The Senate resumed the consideration of the bill (S. 2546) to authorize appropriations during the fiscal year 1970 for procurement of aircraft, missiles, naval vessels, and tracked combat vehicles, and to authorize the construction of test facilities at Kwajalein Missile Range, and to prescribe the authorized personnel strength of the Selected Reserve of each Reserve component of the Armed Forces, and for other purposes.

AMENDMENT NO. 113

Mr. TYDINGS. Mr. President, I call up my amendment No. 113 which is proposed by myself and Mr. EAGLETON, Mr. FULBRIGHT, Mr. HARRIS, Mr. HART, Mr. HATFIELD, Mr. JAVITS, Mr. MONDALE, Mr. MOSS, Mr. PACKWOOD, and Mr. PROXMIRE.

I ask unanimous consent that the name of the Senator from Texas (Mr. YARBOROUGH) also be added as a cosponsor of this amendment.

The PRESIDING OFFICER. Without objection, it is so ordered.

The amendment will be stated.

The BILL CLERK. On page 3, line 9, strike out "\$100,000,000" and insert in lieu thereof "\$50,000,000".

Mr. TYDINGS. Mr. President, the Department of Defense has requested that its emergency fund for research and development be doubled from last year's \$50 million appropriation to \$100 million

for fiscal year 1970. As I shall seek to document in my remarks that follow, there is no compelling case for doubling this fund. To the contrary, the facts dictate maintaining the emergency fund at last year's \$50 million level or reducing it. No national security issues are involved. This is strictly an economy matter in an inflationary setting that has made superfluous government spending intolerable. Therefore, along with Senators EAGLETON, FULBRIGHT, HARRIS, HART, HATFIELD, JAVITS, MONDALE, MOSS, PACKWOOD, PROXMIRE, and YARBOROUGH, I have introduced an amendment to S. 2546 to reduce the emergency fund authorization from \$100 million to the \$50 million appropriation figure of last year.

The emergency fund is one of the devices available to the Department of Defense to provide the flexibility needed to respond to unanticipated military problems and to pursue unexpected technological breakthroughs. The fund may be used at the discretion of the Secretary of Defense, with the concurrence of the Bureau of the Budget and upon notification to the Congress, "for research, development, test and evaluation, or procurement or production related thereto."

As I stated earlier, the amount appropriated for the emergency fund last year, in fiscal year 1969, was \$50 million. This is the same amount that was originally requested in January by the Department of Defense for fiscal year 1970. However, 2 months later, DOD revised its request by asking for \$100 million, the amount contained in the authorization bill currently before us.

The argument offered by DOD in support of this request for an additional \$50 million is that the extra money is needed for sufficient flexibility in the management of the Department's research and development program. This argument implies either that insufficient flexibility existed last year with respect to the Department's research and development efforts or that R. & D. demands relative to R. & D. resources are expected to increase in fiscal year 1970. As the facts will show, neither of these is the case.

Let us begin with an examination of the adequacy of last year's \$50 million emergency fund. In fiscal year 1969, almost 82 percent of the emergency fund was allocated for research and development related to our operations in Southeast Asia—SEA. Therefore, the fund is most meaningfully viewed as a part of PROVOST—the Department of Defense code name under which are lumped all of our Southeast Asia-related research and development programs. So the question we are really asking is: Was there sufficient flexibility in the Defense Department budget last year to meet all of our PROVOST needs—both the expected and the unforeseen?

Mr. President, according to Dr. Foster's testimony before the Armed Services Committee in May of this year, and I refer at this time to page 1802 of the hearings, part II, and also to page 1854, where according to Dr. Foster's testimony—and this was the testimony in May of a fiscal year that was going to end on June 30, a month and a half later, fiscal year 1969—\$522 million was initially programed for

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PROVOST research and development, exclusive of the emergency fund. This \$522 million was the amount initially programed, before any utilization of funds.

On that same day, in May of 1969, Dr. Foster predicted that by the end of fiscal 1969, PROVOST activities would require \$353 million in addition to the \$522 million programed. In reality, his estimate was \$53 million too high, but I will not make a point of that. Nevertheless, that was approximately \$100 million less than the additional \$406 million which was added to the PROVOST funds in fiscal year 1968.

Mr. President, let me try to explain what this means. In 1968, the Department initially programed, for PROVOST, \$450 million. However, the final amount spent was \$856 million. So how did they make up the difference? They made up the difference by reprogramming \$222 million from a total research and development program of some \$7.093 billion—and they are permitted to reprogram however much they want, which I will show they have done each year and will do next year. They had a supplemental appropriation of \$96 million for which they came to the Congress, and they used \$88 million from the emergency fund. That was in fiscal year 1968.

Last fiscal year—the fiscal year just ended in June 1969—they had an original budgeted program for PROVOST of \$522 million. They reprogramed \$263 million from a total research and development budget of \$7.155 billion—

Mr. STENNIS. Mr. President, will the Senator yield right there on these figures?

Mr. TYDINGS. I yield.

Mr. STENNIS. For what year is the Senator talking about the PROVOST funds?

Mr. TYDINGS. Fiscal 1969, the year we have just completed.

Mr. STENNIS. The regular amount?

Mr. TYDINGS. The initial amount budgeted was \$522 million.

Mr. STENNIS. I thank the Senator.

Mr. TYDINGS. However, they needed an additional \$304 million added to their program for fiscal 1969, which ended June 30 past. So they took only \$41 million from the \$50 million emergency fund which had been authorized and appropriated last year. They also took \$263 million through reprogramming within the total research and development budget, and they came up with the \$826 million that they needed. Now, Mr. President, they did not touch the \$150 million discretionary power which the Secretary of Defense has to transfer funds from one appropriation of the Department of Defense to another. They did not touch that. Nor did they touch for this purpose, the special \$10 million contingency fund which the Secretary of Defense has at his discretion. In other words, PROVOST was able to raise the full \$826 million required to meet the demands placed upon it without exhausting all of the funding flexibility within the Defense Department.

Let me read from the report of the Armed Services Committee of the House,

last year, dated July 5, 1968, on page 10, entitled "Emergency Fund."

Before I read what the report states, let me say the House struck out the emergency fund in its entirety last year. The Senate had arrived at a figure of \$121 million. The House and Senate went to conference, and out of the conference came the figure of \$50 million. I merely ask to return to the \$50 million figure which was agreed to in the conference between the House and the Senate. But last year the Armed Services Committee of the House knocked out all the authorization.

I read from page 10 of the report of the Armed Services Committee of the House:

Under the Department of Defense Appropriation Act of 1968, the Secretary of Defense was given authority to transfer funds, not to exceed \$350 million, from other appropriations to the emergency fund.

Last year—fiscal year 1969—they had \$150 million of that transfer authority, but only used \$78 million of it.

In view of the transfer authority previously granted to the Secretary of Defense and requested for inclusion in the fiscal year 1969 Appropriation Act, the committee believes that the amount requested for the emergency fund can be deleted in its entirety.

That was the position of the Armed Services Committee last year when there was a conference with the Senate.

Mr. PROXMIRE. Mr. President, will the Senator yield on that point?

Mr. TYDINGS. I am delighted to yield.

Mr. PROXMIRE. Did the Senator say the House Armed Services Committee knocked out the entire amount on the ground that it was possible to transfer funds from one part of the total appropriation to another?

Mr. TYDINGS. Exactly. That is the exact language found on page 10 of the report of the House Committee on Armed Services, July 5, 1968.

Mr. PROXMIRE. If that is the case, it seems to me there is no real argument for flexibility at all. Is there? There is simply an argument that we increase the overall funds by \$100 million. That is really what is being proposed this year; is it not?

Mr. TYDINGS. Exactly. The flexibility which is presently available for the Secretary of Defense is, I think without question, without precedent in the executive branch. He has the authority to transfer funds from program to program within each appropriation without limit. Thus, this reprogramming authority allows them to defer, for instance, non-SEA R. & D. programs undertaken by the Army and transfer the funds to a new Army SEA R. & D. project. There is no limit to the amount of money that can be programed within any one appropriation. Of course, since we are talking about the research and development program, assuming the committee's authorization is accepted, there would be for this year some \$7.1 billion from which to reprogram if PROVOST falls short.

Last year, in fiscal 1969, with a \$7.055 billion research and development program, the Secretary of Defense reprogramed into PROVOST from other parts of research and development budget \$263 million. In 1968 he reprogramed \$222

million. This is in addition to the \$150 million authority which he has to transfer funds from one appropriation in the Defense Department, say, for aircraft carriers, submarines, or something like that, to another appropriation in the Defense Department such as research and development.

Mr. PROXMIRE. He has that flexibility within the research and development area; does he not?

Mr. TYDINGS. Yes.

Mr. PROXMIRE. And he can transfer from one to the other?

Mr. TYDINGS. That is correct. In addition, as I just explained, he has another \$150 million worth of flexibility through the transfer authority. This is similar to the reprogramming authority, in that it permits money to be transferred from one budgetary slot to another. The difference is that when the slots between which money is transferred are appropriations—that is, specific dollar amounts that appear in the appropriations bill—the term used is not "reprogramming" but "transfer authority."

There is a \$150 million limitation on transfer authority.

Also, DOD has another \$10 million contingency fund.

Mr. PROXMIRE. How large is the research and development budget?

Mr. TYDINGS. The research and development budget reported by the Senate Committee on Armed Services is \$7.18 billion. For the fiscal year 1969, it was \$7.551 billion. For fiscal year 1968, it was \$7.093 billion.

Mr. PROXMIRE. In view of the size of that budget, and the flexibility within it, would it not be more logical to call this a surplus fund instead of an emergency contingency fund? That is all it is. Any contingency can be met by tapping the \$7 billion available in the research and development budget plus the additional resources available from the entire \$75 billion or \$80 billion defense budget.

Mr. TYDINGS. Exactly. One other thing that concerns me is that the Committee on Armed Services did an extremely thorough job on research and development programs requested by the Department of Defense this year. The committee reduced the request by some 12 percent. They scrutinized the research items of the various projects point by point.

What this \$100 million really allows the Secretary of Defense to do is to make an end run around the Committee on Armed Services to avoid the congressional right of scrutiny and to pick programs, because congressional control of emergency fund utilization is quite limited.

Mr. MURPHY. Will the Senator yield?

Mr. TYDINGS. I am delighted to yield.

Mr. MURPHY. Is it not the understanding that the request for research and development was based on specific items, of which there are a great number in the bill: rifles; radar; research and development in the use of laser beams; and the rest? So when we speak in round numbers, we are thinking of the spread over a great many items, and we would assume that those who made the

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requests had some knowledge of what their needs would be.

As a member of the committee, this is my understanding; and that after careful scrutiny, we decided that we could cut back the overall round figure by some 12 percent.

Coming down to the question of the emergency or justification for the new fund, this is to cover a case where it might well happen that unexpectedly, some scientist comes up with an entirely new concept that might be of great value, and might in fact replace three or four other weapons, and the Secretary might want to permit him to proceed immediately. This fund has been created to be used only at the discretion of the Secretary of Defense, in order to provide for such a new situation or advance that had not been conceived or thought of previously.

At least that was my understanding of its purpose. It was not really just to give the Secretary of Defense or the research and development group another bundle of money to go ahead and use inadvertently, but for careful use within the judgment of the Secretary of Defense.

After the argument made by those witnesses from the Department, it was the feeling of the committee that this was a particularly important and needed sum of money, if for no other reason strictly in the light of the fact that we had cut back the overall figure that was mentioned by some 12 percent.

Although these figures, added up, are tremendously large, when you divide them up into the many areas in which they have to be used—and I have to assume that the experts know what they are asking for; I have to assume that they are not asking for more than they actually hope to receive or expect to need—is it not fair to assume that there might just be the possibility that great progress might be restrained, just for the lack of having this extra or emergency fund to be used at the disposal of the Secretary of Defense?

Mr. TYDINGS. Let me say, with the exception of the last sentence of the statement of the Senator from California, the Senator's understanding is the same as mine.

My point is, however, that with a total research and development budget of \$7.18 billion for the coming year, there would be sufficient flexibility, because of the complete latitude in reprogramming permitted the Secretary of Defense, to do the same type of reprogramming in fiscal year 1970 that he did in fiscal year 1968, when he had a smaller total for research and development of \$7.093 billion, and he reprogrammed \$222 million for PROVOST. He was able to do the same thing in 1969, when he reprogrammed \$263 million out of a total research and development budget of only \$7.551 billion. On neither occasion did he even have to touch, for PROVOST purposes, the additional right to transfer \$150 million from one appropriation of the defense budget to another.

So the question is, really, do we wish to give him an extra \$100 million on top of what the research and development budget already is?

Mr. MURPHY. Is it not true that when he reprograms, he has to take from one in order to accommodate the other?

Mr. TYDINGS. Certainly.

Mr. MURPHY. Is it not true that in the light of the cut which the committee has already made, one might simply call this added fund simply "comfortable money"?

Mr. TYDINGS. I would call it luxury money.

Mr. MURPHY. I would hope there would not be any luxuries. As the Senator knows, I have had some experience in private industry with research and development. I am very conscious of the fact that they can go on indefinitely, and they sometimes spend much more than was anticipated. But I happen to have great confidence in the Secretary of Defense, and particularly in his assistant, Mr. Packard, who made not just a national but an international reputation not only a man of great talent, a great scientist, physicist, and electronic engineer, but also a man with complete knowledge and wisdom with regard to the use of funds. That is how he started in a garage with \$300, I think it was, or \$600, in the public competition and wound up with an astronomical fortune. I am told he would be hired quickly and eagerly by any industry in the country, or in the world, because of his expertise in these matters.

These are the kinds of fellows that we are asked to have confidence in, and I, for one, feel that after the cut the committee made, this would not be an extravagance. I would hope that unless it were necessary, these funds would not be used, but it would be nice to have them in the event that, due to some unforeseen happening, the availability of the funds might make a tremendous difference to the safety of the Nation, or enable us to cut costs elsewhere by making unnecessary other weapons that are now burgeoning.

Mr. TYDINGS. I thank the distinguished Senator from California. A little farther on, I shall quote directly from a statement given to me by Leonard Sullivan, Jr., the Deputy Director for Southeast Asia Matters of the Office of Defense Research and Engineering, where he points out that if the Senate should adopt the same figure we did last year, \$50 million, there would be no PROVOST research and development programs neglected; it would merely mean that the Department of Defense would have to do a little dickering with the various services to get the additional moneys to meet certain priorities within the existing budget. I intend to put that statement in the RECORD in its entirety, and read specific lines, a little farther on in my remarks.

Suffice it to say that in the last fiscal year, 1969, there was \$304 million additionally needed, which was not initially programed for Southeast Asia. This \$304 million was obtained, as indicated, in two ways: \$41 million was taken from the \$50 million emergency fund; and \$263 million was reprogrammed into PROVOST from lower priority R. & D. programs. "Reprogramming" is an authority given the Defense Department by Congress to reallocate funds without

limit within a given appropriation. Since appropriations are generally for large and unspecified purposes, such as "Army aircraft" or "Navy R.D.T. & E.," the reprogramming authority enables the Defense Department to move around a great deal of money. The purpose of reprogramming, to quote this year's Senate Armed Services Committee report on the bill before us, is to provide DOD "considerable flexibility should events require changes in program emphasis or resource allocation."

The \$263 million reprogrammed into PROVOST for fiscal year 1969 represented only 3½ percent of the total Department of Defense R. & D. budget for fiscal year 1969 of \$7.55 billion.

Now, according to Leonard Sullivan, the director of PROVOST and the emergency fund in the Pentagon, the total PROVOST budget for fiscal year 1969 enabled him to handle every important R. & D. request from Vietnam.

I hope the Senator from California is listening. This was a reduction from the \$121 million which the Senate Armed Services Committee requested; the House of Representatives refused to agree with the request, and the \$50 million was the eventual compromise. But, according to Mr. Sullivan, he has never been forced by lack of funds to turn down any request from General Abrams, our field commander in Vietnam. Furthermore, Mr. Sullivan contends that no R. & D. program suggested in fiscal year 1969 to aid our efforts in Vietnam which his office deemed meritorious was not undertaken.

In short, according to its Director, PROVOST did everything it wanted in fiscal year 1969 and did it with great success and did it with the \$50 million which was appropriated last year.

At this time I ask unanimous consent to have printed in the RECORD at the conclusion of my remarks the statement to me from Mr. Leonard Sullivan, Jr., in its entirety, together with certain exhibits and attachments which he submitted to me.

There being no objection, the material was ordered to be printed in the RECORD, as follows:

EMERGENCY FUND, DEFENSE

Congress first important grant of financing flexibility to the Defense Department was made early in the Korean War in the First Supplemental Appropriations Act, 1951, approved on September 27, 1950. This Act established for the first time an Emergency Fund of \$190,000,000 which would be available for transfer by the Secretary of Defense, with the approval of the Bureau of the Budget, to "any appropriation for military functions of the Department of Defense available for research and development or industrial mobilization to provide additional flexibility to the Secretary of Defense." In recommending this Emergency Fund, the House Appropriations Committee Report (No. 2987, 81st Cong., 2nd Sess.) stated:

"The committee is well aware that emergencies may arise where it would be most desirable to have readily available funds with which to expedite basic research on a certain problem or to accelerate development on some item that research had disclosed as practicable and desirable, or to accelerate and intensify preparedness in the industrial field."

The Second Supplemental Act of 1951, approved January 6, 1951, added \$50,000,000 to this Emergency Fund, and the Congress continued in subsequent years to make ap-

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proportions in varying amounts for this purpose. From FY 1952 onwards, the purposes of the Fund were limited to research and development and production related thereto.

The rationale for the Emergency Fund has not changed over the years since the need for such flexibility was first recognized during the Korean War. Indeed, the need is far more urgent now, by virtue of the conflict in Southeast Asia, than it was in the late 1950's and early 1960's when the Congress regularly appropriated \$150 million per year. An examination of the use of the Fund during the past two or three years and its direct relationship to the conduct of the Vietnam conflict attests convincingly to the importance of having this financing flexibility during FY 1970.

A summary of the amounts appropriated from FY 1951 on and the amounts transferred and used from FY 1960 on is shown on the attached table.

STATEMENT OF LEONARD SULLIVAN, JR., DEPUTY DIRECTOR, SOUTHEAST ASIAN MATTERS, AUGUST 8, 1969

The Emergency Fund provides a special source of dollars at OSD level which can be applied at the discretion of the Secretary of Defense (with concurrence of the Bureau of the Budget and upon notification to the Congress). It is used to:

Exploit sudden unexpected breakthroughs in technology which could have a significant impact on our defense posture;

Provide rapid and timely response to urgent requirements from operational forces engaged in important cold or hot war situations.

The history of the Emergency Fund is provided at Tab A.

As a source of special dollars—not promised to the Services for established programs at the beginning of the fiscal year—it is an extremely valuable management asset to provide responsive development for critical items not foreseen during the normal one year budget development cycle preceding the fiscal year. Besides its use for the current Vietnam war, it is primarily used for highly classified developments for our strategic forces—in intelligence gathering, command and control problems, and weapon system component improvements. I cannot provide a list of these items because of their high classification.

At the \$100M level, the Emergency Fund represents only 1.25% of the total RDT&E budget. In recent years, the DOD budget submissions to the Congress have been about 20% below that requested by the Services. Hence the budget is extremely tight; there is no "loose money" around; and reprogramming is a long arduous problem of debate, cajolery, etc.

With the onset of the large scale U.S. participation in the war in Vietnam, the Emergency Fund has been largely devoted to expediting new capabilities for our forces in Southeast Asia, in response to requirements stated by the operational forces.

It is generally accepted that the U.S. force committed in SEA were not ideally equipped for this new kind of war—hence our costs have probably been somewhat higher in dollars and lives, the duration longer, and the "deterrent" offered against "future Vietnams" somewhat less than if we had been fully equipped and "optimized" for this type of low intensity, jungle, counterinsurgency, counterinfiltration warfare. Moreover, we have been ill-prepared to train and equip our Asian Allies to take on more of the fighting burden themselves.

We in R&D have been trying to re-equip and tailor our committed forces to increase our effectiveness in this kind of war by learning the combat lessons fast enough to provide specially tailored equipment to our forces within the time span of the war—usually within 18-36 months. There are some

instances where we have been quite successful—from individual soldier equipment and malaria preventatives to new anti-radar missiles and equipment for seeing at night. We have *not*, however, found any one magic solution: we are therefore attempting as broad-scale an attack on the problems as possible.

I should like to note that many new developments have been fielded in useful quantities and more are on the way—some are already being transferred to the Vietnamese. However, almost *all* of these new equipments have operational utility beyond Southeast Asia and will become part of our post-war standard equipment. Hence our efforts contribute not only to our combat capabilities in SEA, but to the combat potential of our future tactical forces, which have for many years received lesser priority than our strategic forces.

All our Southeast Asia-related RDT&E programs are lumped under an all-inclusive program code name of PROVOST—which is an OSD management device to ensure adequate attention during budget time (since there are hundreds of individual small projects), special procurement priorities, etc. Our current PROVOST efforts account for almost 10% of the RDT&E budget. The size and distribution of funding by year is shown at Tab B (not printed in Record). It should be noted that the cumulative RDT&E expenditures for the past six years are approximately equal to the total costs of fighting the war for six weeks. An unclassified article on PROVOST is at Tab C.

Tab B also shows the funding by source, and I would like to explain this. Most of our developments are small in dollars (\$5 to 50M), and short in development time (12-24 months). To be responsive, they cannot wait 12-18 months for initial funding. Hence they do not match well with the orderly, well-planned, long-debated, peacetime budget cycle. Yet the budget is too tight to allow much "contingency funding", although this is the obvious management tool to use to accommodate the urgent but unexpected. So we have adopted the following procedure:

1. We estimate our requirements in the Fall for the budget submission—which is why our PROVOST testimony tends to be general rather than specific.

2. Before the new fiscal year begins the next Summer, we update our needs at Apportionment time—increasing the PROVOST portion at the expense of non-war programs, even though they often are not as glamorous as ICBMs, ABMs, ASW, MBTs, AAFSS, etc., and even though the approved RDT&E budget is always smaller than we requested and had fully programmed. This becomes the "P" portion of the Tab B bar charts (not reproduced).

3. As new requirements unfold during the year and can be quantified in terms of dollars needed, we ask the Services to reprogram from lower priority programs, or from programs which have not progressed as planned. This is relatively easy at the beginning of the Fiscal Year but increasingly difficult as the year progresses and funds become committed—and we must compete with other high priority non-SEA programs whose additional needs are also unanticipated in the current budget process. This is the "B" portion of the Chart at Tab B (not reproduced).

4. Next, when an item is urgent, represents a "new start", or responds to an important known problem area, we tap the Emergency Fund for the required dollars, generally providing less than half the amounts requested by the Service. This is the "E" portion of the Tab E charts. We readily admit that some of these dollars have been put on "high risk" items—where the "pay-off", though not certain, would be quite significant if our goals could be achieved.

At Tab D is a Summary Table of dollars provided from the Emergency Fund, SEA and

non-SEA oriented, showing the increasing, peaking, and falling percentage for the war-oriented projects. We would anticipate that 80% of this year's Emergency Fund would go to the PROVOST items. Charts showing the breakout by Service and Defense agencies, both requested and provided, are at Tab E. That the Emergency Fund is mainly spent about halfway through the fiscal year—when reprogramming has become far more difficult—is shown at Tab F (not included).

5. Finally, in former years, when the war was still escalating and our RDT&E efforts still expanding, it became obvious that the reprogramming and Emergency Funds together would be inadequate. In these years ('66, '61, & '68) we asked the Congress for, and received, Supplemental RDT&E appropriations—indicated by the "S" portion of the Tab B charts.

6. Several other sources of possible funding have been considered at times but have not been available for SEA needs. For instance, SecDef transfer authority would make it possible to "convert" production monies to RDT&E up to a \$150M annual limit. But as you know in recent years, production budgets have also been inadequate to support the war (hence the Supplemental requests in '66, '67, '68 and '69). Therefore the transfer authority could not be fully used to support RDT&E problems. Actually, about 40% of the available transfer authority has been used over the past four years—but on direct transfers from production to RDT&E within the same non-SEA programs such as F-111, Minuteman II, etc. This device has thus been used to compensate for the Emergency Fund redirection to our wartime problems. A table of transfer authority utilization is at Tab G.

At Tab H, we have also attempted to rate the success of our Emergency Fund projects, by dividing all fund increments into one of three categories: "success", "failure", or "still in development". A success is one that has been accepted for operational use and is already in—or planned for—production. Failures are ideas which simply did not pan out either in development, test, or operational evaluation. Many items—particularly in the last two years, are of course still in development with their ultimate contribution still indeterminate. However, we are quite satisfied that for '65, '66, and '67, our success rate is over 75%, based on dollars spent, not on individual projects. We expect the same for '68 and '69.

A detailed classified listing of projects funded from Emergency Funds is included in a separate Tab I (not included).

A long classified discussion of the RDT&E "Lessons Learned" in Southeast Asia—and what we have done about them—is in a separate Tab J (not included): an article wrote recently for the Journal of Defense Research.

Last year, the Congress authorized an Emergency Fund of only \$50M. Although a few million remained until near the end of the year, the preponderance of it was spent, as usual, near the middle of the fiscal year. The \$50M was clearly inadequate and was recognized to be so from the beginning of the year. To compensate for the Congressional action, we therefore deferred an additional \$90M (approx) of funds already assigned to the Services and "earmarked" it for augmentation of the Emergency Fund by reprogramming if and when necessary. Hence we knew from the beginning of the year that we had an "equivalent Emergency Fund" of about \$140M (approx)—and used almost all of it.

If the Congress insists on restricting the Emergency Fund for FY 70, we will again be forced to use some equivalent device to assume adequate funds to cover our unforeseen requirements. However, it would appear to be a needless, time-consuming, and direct

approach to an otherwise straightforward management tool. Additionally, if as now appears possible, the overall RDT&E budget is cut by 12%—making it 5% lower than last year's—the problem in establishing the deferrals for reprogramming will be substantially more difficult, may run counter to the preferences of the Congress, and will cause additional sources of irritation and delay between the Services and OSD.

In either case—reprogramming or Emergency Funds dispersal—the Congress is notified of all appropriation transfers and reprogramming actions above the established \$2M threshold, and is asked to give prior approval in instances of known Congressional interest. In fact, two of our important '69 Emergency Fund items have been delayed for four months this year by such Congressional concern. Hence Congressional control of our activities is essentially the same for reprogramming and Emergency Fund usage, but the reprogramming represents the less attractive alternative for internal Defense Management.

We know we are "over-the-hump" in our RDT&E expenditures for this war. We have learned to predict our funding requirements somewhat better. We no longer foresee the need for Supplemental Funding. However, we still have many problems without adequate solutions—solutions that will be needed as long as we are in Vietnam—even in reduced numbers. Solutions that could be provided to the Vietnamese to make their tasks easier after we go. Solutions that should be incorporated into our post-war General Purpose Forces as soon as we can perfect them—to reduce the chances of our military might being belittled again.

During the current "lull" for instance—which is an annual affair—our casualties (deaths) are very high from enemy mines and boobytraps, and from rockets and mortars (exact figures are classified). We still have no adequate, practical, means for deterring either. We still frequently cannot "find the enemy" in the jungles before he finds us. We still cannot adequately monitor and "track" infiltration across the borders from Cambodia and Laos. We frequently expend massive amounts of ordnance to kill a small target because we cannot find it accurately, or hit it the first time from an aircraft even when we can see it.

Thousands of scientists and engineers in the Defense laboratories and industries are working on these and other pressing problems which directly reflect on our losses, on our overall costs, and on our apparent "impotence" in discouraging continued North Vietnamese intervention. I think it is a matter of national urgency to continue to work on these problems with the same vigor as we have in the past four years.

The Emergency Fund provides flexibility, responsiveness, and emphasis. It is the important one percent of the RDT&E budget which provides an essential management tool for expediting our contribution to ending (or at least reducing our participation in) that unfortunate war. It is essential to our efforts, and provides the cleanest possible approach to the requisite "contingency funding".

TAB A
EMERGENCY FUND, DEFENSE SUMMARY TOTAL EXPENDITURES APPROVED—Continued
[In million dollars]

Fiscal year	Requested	Appropriated	Amounts transferred and used
1955		25	
1956		35	
1957		85	
1958		85	
1959	85	150	
1960	150	150	145
1961	150	150	146
1962	150	150	150
1963	150	150	145
1964	150	150	148
1965	150	125	113
1966	150	125	125
1967	125	125	125
1968	125	100	100
1969	125	50	50
1970	250	100	

¹ Nixon amendment.
² Includes \$70,000,000 for industrial mobilization measures.

TAB A
Final summary of fiscal year 1969 emergency fund items approved

Initial fund..... \$50,000,000
Total of items approved..... 50,000,000

Army:
Southeast Asia requirements (one time group)..... 36,790,000
Acoustic recording system development..... 750,000
Evaluation of aircraft weapons fire control..... 669,000
Clearing of helicopter landing zones with fuel air explosives (FAE)..... 179,000
Self-destructive device for artillery ammunition..... 200,000
Classified project..... 995,000
Total Army..... 39,583,000

Navy:
Sensor systems development (non-SEA)..... 5,217,000
Tactical electronic warfare deception system..... 700,000
Total Navy..... 5,917,000

Air Force: Southeast Asia related item..... 500,000

Advanced Research Projects Agency (ARPA):
Classified project..... 3,000,000
Southeast Asia related item..... 1,000,000
Total ARPA..... 4,000,000

Final summary of fiscal year 1968 emergency fund items approved

Initial fund..... \$100,000,000
Total of items approved..... 100,000,000

Army:
Reduction of fire hazard to aircraft..... 1,500,000
Southeast Asia related items..... 36,963,000
Mortar locating system development..... 1,200,000
Southeast Asia related item..... 3,330,000
Border security/anti-infiltration..... 8,961,000
Total Army..... 51,954,000

Navy:
Advanced marine biological systems..... 1,050,000
Southeast Asia related items..... 10,677,000
Classified project..... 6,000,000

Final summary of fiscal year 1968 emergency fund item approved—Continued

Navy—Continued
Radar ground position location and identification devices for A-6A aircraft..... \$712,000
Southeast Asia related item..... 683,000
Total Navy..... 19,122,000

Air Force:
Southeast Asia related items..... 15,943,000
Airborne Warning and Control System (AWACS)..... 2,000,000
Southeast Asia related item..... 1,596,000
Southeast Asia related item..... 750,000
Total Air Force..... 20,289,000

Advanced Research Projects Agency (ARPA):
Airborne radar..... 830,000
Modification of AN/FPS-16 radar..... 1,225,000
Classified project..... 1,580,000
Total ARPA..... 3,625,000

Defense Atomic Support Agency (DASA):
Nuclear weapons effects research..... 2,000,000

Defense Communications Agency (DCA):
Southeast Asia related item..... 3,000,000

Final summary of fiscal year 1967 emergency fund items approved

Initial fund..... \$125,000,000
Total of items approved..... 124,997,270

Army:
Southeast Asia related items..... 16,998,000
Improved real time sensors for OV-1 aircraft..... 3,000,000
Southeast Asia related item..... 500,000
Southeast Asia related item..... 5,800,000
Southeast Asia related item..... 1,850,000
Classified Project..... 300,000
Classified Project..... 300,000
Total Army..... 28,748,000

Navy:
Radar site pinpointing improvements (EELS)..... 3,000,000
Southeast Asia related item..... 305,000
Radar site pinpointing improvements..... 2,000,000
Southeast Asia related item..... 776,270
Classified project..... 6,600,000
Classified project..... 3,800,000
Southeast Asia related item..... 905,000
River warfare boats..... 7,050,000
Advanced command data system..... 2,400,000
Southeast Asia related item..... 14,000,000
TALOS ARM missile development..... 4,500,000

Fleet ballistic missile (FBM) command and control communications..... 1,450,000
Southeast Asia related item..... 1,972,000
Standard ARM missile development..... 14,500,000
Classified project..... 3,120,000
Classified project..... 500,000
Total Navy..... 68,878,270

Air Force:
Southeast Asia related items..... 19,151,000
Combat aircraft records and data system (CARDS)..... 400,000
Total Air Force..... 19,551,000

Advanced Research Projects Agency (ARPA): Southeast Asia related items..... 2,630,000

TAB A
EMERGENCY FUND, DEFENSE SUMMARY TOTAL EXPENDITURES APPROVED
[In million dollars]

Fiscal year	Requested	Appropriated	Amounts transferred and used
1951		1240	
1952		90	
1953		35	
1954		60	

Footnotes at end of table.

Final summary of fiscal year 1967 emergency fund items approved—Continued

Defense Communications Agency (DCA): Southeast Asia related items-----	\$2,190,000
Defense Atomic Support Agency (DASA): Nuclear weapons tests-----	5,000,000

TAB C

RESEARCH AND DEVELOPMENT FOR VIETNAM

IN BRIEF.—The author heads the office in the Pentagon whose specific purpose is to expedite those R&D activities which hold some promise of increasing the effectiveness of our forces in Southeast Asia. From that special position, he tells of the important role of R&D in the war. Currently, the Department of Defense is investing some \$800 million per year in this effort. Given the long time required to bring ideas through the R&D process and convert them to hardware, is it reasonable to expect that today's ideas can be developed in time to have an effect on the battlefield? The Pentagon clearly believes so, citing the more than one hundred new types of equipment that are added to our operational inventory each year. Currently, more than one thousand specific R&D projects are going on in support of the war.—(D.A.)

Some people wonder whether research and development have a place in a war while that war is going on. I believe strongly that there is a place for such endeavors—just as there was in previous wars. Indeed, my office exists under the Director of Defense Research and Engineering for the specific purpose of expediting those research and development activities which hold some promise of increasing the effectiveness of our military forces in Southeast Asia.

Most wars we fight will be different from the ones we are anticipating. Every war will have its own peculiarities and innovations. Every war will introduce new tactics, new equipment, and new objectives. So there will always be a problem of remaking our military forces, or reoptimizing them for the particular type of war that comes along.

We know now that the war in Vietnam is considerably different from any war we have ever fought before. We entered this war fully and beautifully equipped to fight either an all-out nuclear conflict or World War II over again. But then we found that Vietnam is a new war—for many reasons. As I describe these reasons, I believe you will see the importance of a strong R&D activity linked to our engagement in Southeast Asia.

MORE THAN ONE WAR

At the time we undertook to help the South Vietnamese, I do not think we fully realized how difficult it would be to fight an enemy so closely interwoven with our allies. It is a war without front lines, a war where you can seldom distinguish friend from foe—except by the actions of the foe. Thus, we have had to learn a great deal about how to find small bands of enemy guerrillas dispersed over the countryside. In addition to the insurgency, however, several other wars have been superimposed, each with its own characteristics. I will discuss each briefly.

The most advanced war, technologically, is the bombing of the North; it uses many of our latest tactical aircraft in a strategic role; we are up against enemy surface-to-air missiles for the first time; we are in combat against supersonic Soviet-designed aircraft, firing air-to-air missiles—and we are doing the same. The electronic warfare is quite sophisticated on both sides. Less sophisticated, but more important, we have had to learn how to survive intense antiaircraft fire.

One frustrating aspect of this war is the difficulty we find in really discouraging the enemy, or killing his interest in fighting, by bombing alone. We are also learning—or re-

learning—that when you run an air campaign without ground follow-up, you frequently cannot keep the targets destroyed. It is one thing to bomb a bridge to slow someone's retreat on the ground, or to bomb a convoy that is resupplying front line troops. But it is quite another thing to try to stop a country from going about its essential business—like driving trucks, burying supplies in the ground, or unloading ships—when one has an intention of following up on the ground. These are things which make it a very expensive kind of war—and in many respects, the results are difficult to quantify.

The second war is in trying to stop infiltration into South Vietnam. This is a relatively new problem; we had some experience along the Korean demilitarized zone, but not during a hot war.

Vietnam has about one thousand miles of land boundary, and another thousand miles of water boundary. We are trying to stop the North Vietnamese from crossing these 2,000 miles of boundary and resupplying the guerrillas in the South. Actually, relative to the length of the border, the supplies and reinforcements coming into the South are very small. So the "flow rate" across any unit length of the total boundary is low. But the boundaries are difficult to patrol; most of the natural assets are on the side of the guerrilla. For example, two-thirds of the land boundary is covered by heavy jungle. Across these boundaries, the North Vietnamese either walk, carrying supplies on their backs, or push bicycles. They do not ride the bicycles; they use them as oriental wheelbarrows, carrying up to 500 pounds of supplies in "saddlebags." Lately, they have begun using trucks to cross. They have found that we cannot destroy their roads as fast as they can build them. They have had a very active road-building campaign and are now building roads into South Vietnam.

Within South Vietnam, a third war involves the dissipation of the main enemy units—now mostly North Vietnamese manned. These are the "search and destroy" actions in which the U.S. forces have been mainly employed in South Vietnam. In these actions, we go out into the countryside to try to find the enemy main force battalions and regiments that move as units. We attempt to locate and destroy them before they can reach friendly targets. This is where our firepower has come into play, along with the extreme mobility to fly our forces anywhere in the country. Without that firepower and mobility, we would need many more troops to do the job from relatively static defensive positions.

The fourth war is one we have paid less attention to than we might have. This is the war to control the guerrilla. As a civilian, I am in no position to determine where military priority should be—and hence I shall not try to put myself in a role of military strategist. But the facts in the guerrilla war are these: If all the smoke were cleared away, if we stopped the bombing of the North, if the North Vietnamese stopped infiltrating into the South, if we stopped fighting main unit actions in the jungles, we would still have the problem of controlling the guerrilla.

ADJUSTING A THRESHOLD

Who is the guerrilla? He is simply the local dissident or the local zealot. He is willing to commit acts of violence in order to make himself heard and in order to change his lot and that of future generations. The threshold of his violence is a fine balance between the strength of his discontent and his view of the consequences of his violence. We should be able to change an insurgent's threshold of violence by adjusting both sides of the balance. We can lower his level of discontent by peaceful action, and we can raise the apparent deterrent by suitable military or police presence—and technology can probably help on both sides. By "we" I mean the

U.S. as well as the South Vietnamese government.

It is mainly in this "fourth war" that social science research has been used to advantage. Before we can undertake to advise another country—much less help and train it—we must have a full understanding of the differences in its culture, background, aims, and motivations from those of our own society. We cannot realistically hope to assist in solving the problems of South Vietnam which have caused the dissatisfaction and lawlessness until we understand in considerable detail how and why those problems arose.

The fifth and newest war with which we have been confronted is the war of the cities—a form of "escalation" or modernization of the Maoist insurgency doctrine. The enemy knows that by rocketing and shelling from without and by sniping and arson from within, it is possible to cause considerable local and international consternation. Damage to property is extensive, the innocent population is caught in a cross fire they cannot easily avoid, and the credibility of the government is put to a severe test.

Although not solely a Vietnamese problem, there is much still to be learned in minimizing the trauma of "urban insurgency." The preparation of a city, its people, its government, its civic agencies, and its public utilities is not a simple matter. The conduct of the urban counterinsurgency, once engaged, demands special troops, special training, special weapons, special vehicles, and special tactics. And the reconstitution of the city in the aftermath also requires special planning and special techniques to minimize the duration and extent of the dislocation. All of these problems are on the front burner in South Vietnam today—and should be at least on the back burner in many other parts of the world.

WHAT VALUE R. & D.?

With this background we begin to see a dynamic range of things in this war for which our R. & D. activities are applicable. Indeed, the range is enormous compared to that of any war we have ever fought. It ranges all the way from police techniques to electronic warfare—and we are trying to modernize our forces throughout the whole spectrum.

There are many people both in Defense (including military and civilian) and in the U.S. at large (including Congress and private citizens) who believe that our efforts to make this a war of technology are wasted. There are others who would claim that we have already forced the escalation of this war to one that we could conveniently fight with our already highly sophisticated war machinery. I would dispute these points. Although I would agree that we will find no single device that will have the climactic importance that the tank had in World War I or the atom bomb had in World War II, there are many, many opportunities to develop better weapons and devices, skills and understanding by which to lower our losses, shorten the duration of the conflict, and enhance both our own and our allied military posture. In several discrete battles of this war, brand-new technology has had a very significant, if not decisive, effect on the outcome. In other instances, technology could have had a decisive effect if our experimental equipment had been available in production quantities, and if our military forces could have been trained over-night to embrace new equipment (and adjust their tactics accordingly).

Moreover, some of our more important contributions are only now reaching the theater in operational quantities. As individual "gadgets," they cannot win the war by themselves, but taken in the aggregate, the effort may become significant. We will "break even" financially if our total effort shortens the war by only one month—without assigning any value to the lives saved thereby. And if the sum total of these new capabilities can

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assist in deterring future conflicts of this type (by raising the threshold for violence elsewhere in the world) then I can only conclude that our efforts have been worthwhile.

In the main, the inventory of our general-purpose forces was outstanding when we went into Vietnam. The U.S. general-purpose forces are designed to fight any sort of limited nonnuclear war that might arise, anywhere in the world—whether on an ice cap, in a desert, in a jungle, in a marsh, anywhere. Because of the broad range of conflicts in which we might possibly become involved, a single general-purpose force cannot be really optimum for any specific war except possibly in Europe. Therefore, there is a very necessary tailoring job that must be done, having nothing to do with whether or not we spent enough money for defense during peacetime. We will always have to tailor our forces to a specific nonnuclear war once it comes along.

ORGANIZATION FOR OPTIMIZATION

One of the lessons I hope we will learn from the war in Vietnam is that we must always be prepared to optimize our forces after we get involved. This is why we have generated a special, highly responsive R&D team within the Department of Defense. How did we organize in the Department of Defense to do this? I should remind you that this war grew in an insidious fashion, from a very small war which had few people's attention, to a rather large war with ordnance delivery that matches Korea. The Pentagon chose to manage the various aspects of the war, as much as possible, within existing organizational management and budgeting procedures. R&D for the war is performed in accordance with this same principle: It is managed, essentially, by the same people who are also controlling the R&D that is done for other military devices which are not involved in this war. However, to add emphasis to the work that was specifically needed for Southeast Asia, Dr. John Foster, Jr., established my office about two and a half years ago as an expediting office within Defense Research and Engineering. It was charged only with creating and expediting R&D pertinent to the war; and it will disappear when the war is over.

Because we chose to manage the war through the normal organizations, the problems associated with streamlining our procedures have been really those of personal contact—of individuals within the organization getting together and agreeing to do things; we work either face to face or we hand-carry papers, rather than letting them go through the standard procedures. We have formed a series of ad hoc steering groups and committees; in essence, these groups tie together all the various agencies involved in the pursuit of the war.

We use one code name for this whole operation; PROVOST, for Priority Research Objectives Vietnam Operational Support.

It is at this level where you find the people who are full time on R&D for Vietnam. Here we have a regular Senior PROVOST Steering Group; this is the mechanism I use within the Pentagon to get practically everything done. It is comprised of a senior military man (a general or flag officer) who reports to his military chief for R&D in each of the Services.

We also have part-time representation in the group from other government agencies that have technical skills applicable to our specific problems. For instance, NASA has people who are available to us for solving problems for which they have unique talents. The Atomic Energy Commission is also represented—they have some of the finest engineers and "gadgeteers" in the business. Finally, of course, we work closely with the Advanced Research Projects Agency, a separate part of Dr. Foster's office.

We have over one thousand specific R&D projects going on now in support of the war;

as a rough average, we send about 100 new types of equipment to the theater every year for operational tests and evaluation, to find out whether they will in fact contribute to our fighting capabilities. Another 100-150 are also added to our operational inventory. These run the gamut, from a basically new type of helicopter, a new variety of jet aircraft, or a contraband detector, all the way down to a new type of tropical combat boot which will make it easier for a soldier to walk around, a modern transportable hospital, or better medicines against the types of disease that are prevalent in Southeast Asia.

The actual research and development programs have been carried out in all the usual R&D centers of competence—the military laboratories, private industry, and university research centers. I am frequently asked whether the widely divergent views within the U.S. about the merits of war have had a deleterious effect on our efforts. Naturally, any member of the U.S. Government is disappointed when he asks for help from a laboratory, a company, or a university and is told that they do not feel it appropriate for them to participate, that they have other more pressing work to do, or that there is insufficient profit in it for them. I also find it personally embarrassing to find this non-constructive attitude within the engineering and scientific community of which I consider myself a part. Nonetheless, for every temporary setback I receive, I can provide at least ten examples of service and dedication "beyond the call of duty": Laboratory scientists who work on their own, virtually without funding support, huge U.S. corporations who essentially "donate" the services of some of their best talent without hope of large profit return; tiny companies that work around the clock to prove that they can meet an almost impossible schedule; graduate students and professors who offer themselves without demanding recognition; people from all these groups who risk their lives in Vietnam to help. I do not believe that any important development has been delayed by the vocal nonparticipation of a few—though I personally believe that their method of self-expression is insulting and demoralizing to our men in Vietnam.

WEAPONS, MODIFIED AND NEW

Let me mention a few examples of the kinds of developments I have been talking about. We recently developed a new gunship-aircraft configuration that happens to be very good at killing trucks along the resupply routes and in providing close support to our ground troops. This plane was developed for the Air Force in a military laboratory at Wright Field within a period of about nine months. It involved new equipment in an existing airframe. Wherever possible, we borrowed and adapted existing components. The plane was tested in the U.S. and it worked adequately; then it was sent to Vietnam with its operational crew plus a number of test people who observed it over a period of time. The plane operated in combat and was judged to be sufficiently successful that the 7th Air Force submitted a formal request for a production quantity. Production is under way now.

The HUEY Cobra program is another example. Here the Army took the original Bell HU-1 helicopter and redid virtually the entire aircraft to make it a better weapon platform. It was introduced in the early part of this year and we believe it may make a significant difference in the war. It has proven particularly useful in the urban insurgency context.

We have introduced several weapons which are brand new. Some were already in development before we became engaged in this conflict, and hence it was simply a question each time of expediting or changing the weapon in some modest way to improve its effectiveness

for this war. There are new artillery rounds, for instance, and new kinds of bombs, including new kinds of delay bombs of various sorts—some to go after the truck traffic, some to go after the truck traffic, some to go after enemy soldiers hidden under jungle canopy. Most of our proudest accomplishments, however, will remain classified until the war is over, although some of our night-vision equipment and motion detection radars have now been declassified, since they have either been lost to the enemy or have no reasonable countermeasure.

In addition to our test agencies in Vietnam and our organization here in the Pentagon, we have scientific advisors with the major field commanders.

Only the military men themselves can establish what we call a "firm requirement" for a piece of equipment. But our people in the field are free to tell us of needs. When we are informed of these, we ask the scientific community to work on possible solutions. When solutions appear practical we present them to the people in the field. Often they then turn around and give us a "firm requirement." This may seem a somewhat unwieldy operational chain, but we are primarily research and development people trying to provide equipment for a military organization; ultimately, the operators must make the decision as to whether or not the solution is realistic.

In addition, each of the Services has set up a quick reaction capability whereby the Service can respond rapidly to special demands for improved equipments. Each Service maintains its own laboratory people in the field. In many instances these experienced engineers have found relatively simple, inexpensive things that have made tremendous differences. A typical example: Down in the Mekong Delta region, where the fighting takes place on the rivers, and canals, we have been using small landing craft of World War II vintage as patrol boats. Because they have flat bottoms, they are well suited for the shallow waters of the river and canals. The Navy wanted to be able to land helicopters aboard these boats, which are only 40 or 50 feet long, either for medical evacuation, resupply of equipment, or various command and control functions. One of Navy's laboratory personnel who was in the theater at the time designed a suitable landing deck. Within a few weeks, a prototype was built in Vietnam according to his design—with some help from his people back in the U.S. Today, many of these "minicarriers" operate successfully in the Delta. This development has measurably increased the flexibility and effectiveness of those forces, and for a very small sum of money. The Army maintains their Limited War Laboratory which does many of the same kinds of things, small jobs that are badly needed in a hurry. These labs are allowed to bypass some of the normal chains of approvals, when the money is small and quick reaction is urgently needed.

(In millions)

	Total defense, R.D.T. & E.	Southeast Asia, R.D.T. & E.
1964.....	\$7,635	\$100
1965.....	6,997	200
1966.....	7,553	370
1967.....	7,954	680
1968.....	8,002	780
1969.....	8,000?	800

I cite these examples to show that the Services have the technological capabilities and procedures available to respond to the demands for R&D in this war. My office in ODDR&E has not taken over this role; the military Services do it themselves; our job is to help them, to encourage them, and to assist in finding the funds needed for these requirements.

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GOOD GUYS AND BAD GUYS

The most difficult job in this war has been to find the enemy. This may sound platitudinous. After all, we have had to find the enemy in every war we've ever been in. But there are no front lines in this war. The enemy operates primarily in small units. You cannot tell the "good guys" from the "bad guys"—many aren't even wearing uniforms. The big problem is to find out where the enemy is at a particular time—and, in fact, to determine whether or not he is the enemy—and then to determine his intentions. He is very good at camouflaging himself, his installations, and his equipment; and he moves primarily at night. Over North Vietnam, the problem is of a similar kind: We try to knock out the bridges, vehicles, and supply dumps, but these too are hard to find, as are his radar installations and antiaircraft defenses. The North Vietnamese do not have a very advanced civilization, they don't have large target complexes, and they have learned that we have difficulty knocking out their targets if they keep them small enough, or if they hide them away during the day. For every visible bridge, there may be three or four alternate ways of crossing the same stream.

In guerrilla and urban warfare, we must find the man who is planting the mine along the road, find the Vietcong who may come into a village to cut the chief's throat during the night, and find the teenage sapper team bent on destroying a Saigon police station. In all these cases, our biggest inadequacy is being able to single out the target, or the individual that represents the enemy. Perhaps a fourth of our total RDT&E expenditures has been solely for the purpose of trying to detect indications of enemy presence.

We are using virtually every type of indication that a human or vehicular target provides in our attempts to develop better means to find the real targets. These detection systems must work in real time—it does no good to find that 100 men walked or drove down Trail X from Point A to Point B a week ago. So real-time, nighttime intelligence gathering has been one of our major problems. We are beginning to make significant inroads in this area. Starlight scopes, for instance, permit a soldier to see targets with nothing more than starlight as illumination. They are now widely used in the Southeast Asian conflict with very impressive results.

I might interject here that the enemy has shown extraordinary cleverness in countering some new things we have introduced. It is seldom more than a few months after we introduce something new before we capture some document that tells the enemy, in essence, how to counter the new device. This is one reason we have tried to be so very security conscious during this war.

Where is the enemy's brainpower? Clearly, some of it is in the field, and it is evident that the enemy's allies have a certain amount of scientific advisory talent working for them too. I suspect there is an office like my own somewhere in the enemy structure, and that my counterpart works with a smaller budget and different emphasis. It is not the American way to use a lot of manpower and just a few devices that add to their capability; to save lives, we tend to want to minimize the number of men we use and to replace their skills with more sophisticated technology.

EYE FOR EYE, TANK FOR MORTAR

There are those who have a deep concern that we may be compromising much of our latest technology for tactical warfare without benefiting from a similar disclosure of Soviet and Chicoms capability. To a certain extent, this is true; the Communists have committed North Vietnamese lives rather than Soviet technology wherever possible. The real questions, of course, are whether it is serious to have exposed our own capabili-

ties as a means of reducing our own dead and crippled, and whether it will be difficult to establish a new level of capability in those areas where surprise is advantageous. I have no doubts in either area; we have done the right thing. After all, new technology becomes available faster than we convert it into military hardware. And in many areas, we have had the priceless advantage of finding out just how well our newer equipment works. We are thus in a position to make the type of real-world improvements in our forces that can only be derived from practical experience. There is very little good that comes from any war—and we would be negligent, indeed, if we did not profit from the only real R&D "benefit" possible; a better understanding of our own capabilities and needs.

There is another thing that is coming out of this war loud and clear: There are dramatic asymmetries between what we do and what the enemy can do to counter us. In some wars, the participants reason: If the other fellow has a tank, we must have a tank with an extra inch of steel; if he has a Mach 2 airplane, we must have a Mach 2.1 airplane; if he has a 150-mm artillery piece, we must have a 175. But because occupation and seizure of territory are not elements of this war, such reasoning does not hold in Vietnam. The enemy can destroy a \$6 million airplane with a \$100 mortar shell. He can shoot down a half-million-dollar helicopter with a 25¢ bullet from a hand-held gun. He can stop a tank with a hand-held antitank weapon, because he just plain sneaks up to it, stays under a bush for two or three days, or submerges himself in a rice paddy and waits for the tank to come along.

Such asymmetries are hard to live with. Time and again, we are asked: Why do we need a \$2 million, two-seat twin-engine, after-burning jet to destroy little bamboo bridges? You could argue that we might be able to get along with a somewhat cheaper airplane, but the enemy has an air defense system above that bamboo bridge, which employs MIG 21's. Thus, we must have a weapon that can take on both the bridge and the MIG 21. The whole war has an enormous "dynamic" range, from one extreme to the other. But if we give up—if we say we cannot stop such resupply movements, by which the local insurgents are supported and bolstered—then we are saying that we cannot stop this conflict. If we cannot do this, we cannot stop wars of national liberation. If this is true, the whole world may become "liberated" piece by piece.

The mortar problem in Vietnam is another example of asymmetry. We have never before been in a war where our cities, bases, and depots have been exposed to mortar and rocket fire—often from 360° around the perimeter. A mortar shell can be carried in a man's pocket; it can be hidden in a crate of lettuce. The enemy is willing to take two weeks, or two months, to set up a 50-round attack. On the average, 50 rounds can destroy \$20 million worth of airplanes. A simple weapon such as a mortar or rocket can raise hell, and the counter system is quite complex.

The enemy's allies are doing a good job of providing the North Vietnamese and the South Vietnamese guerrillas with these weapons—and they are not simply old pieces of pipe with home-made explosives in them; they are all made somewhere in the Communist nations; they come in little canvas carrying bags; they break down into pieces that can easily be handled by a small man. This is not accidental. This weaponry is carefully tailored for their side of the job, just as we try to tailor ours to counter it. It is a fascinating game of technology against technology, but in one case with a minimum use of manpower, and, in the other, a rather extravagant use of manpower.

Between 1964 and today, much of the

equipment used by our forces has changed at least once. This covers the gamut from uniforms to aircraft and the weapons they drop; for instance, the helicopters we use for pilot rescue: We used one helicopter when the war began, then another helicopter for the next two years, and now we have begun to replace the second helicopter with an even more capable machine.

STRATEGY FOR A "POROUS" WAR

In the field of detection, I think the changes are occurring even more rapidly. You have probably read about the chemical sniffers, that smell the presence of human beings. This sounds rather sophisticated, but is little more than normal laboratory instrumentation packaged in an olive drab box. We put these boxes into helicopters and fly them over the jungle. Four or five years ago, I doubt that anybody would have given us a plug nickel for this idea, and yet, they are now being used in substantial quantity by regular operational forces. Similarly, we are learning to detect footsteps many yards away—with another spin-off from laboratory instrumentation equipment.

These developments open up some very exciting horizons as to what we can do five or ten years from now: When one realizes that we can detect anything that perspires, moves, carries metal, makes a noise, or is hotter or colder than its surroundings, one begins to see the potential. This is the beginning of instrumentation of the entire battlefield. Eventually, we will be able to tell when anybody shoots, what he is shooting at, and where he was shooting from. You begin to get a "Year 2000" vision of an electronic map with little lights that flash for different kinds of activity. This is what we require for this "porous" war, where the friendly and the enemy are all mixed together.

Much of the new sensor technology has application at the other end of the battle spectrum, in the security business. For example, we must learn how to protect the road from Saigon to the Mekong Delta, for this is the economic lifeline for the country. Some 40% of the people live in the Delta; these people are 95% agrarian, and their products must get to Saigon. Keeping this road free from ambush is a very serious problem.

One other problem in the Delta is that most of the people are not for either side; they want both sides to go away so they can grow some rice and sell it to somebody for a reasonable price. They give their allegiance to no one. And this is the frustration: They will tell you a week later that the Viet Cong came in and took 20% of their rice. But they will not tell you at the time it happens. They know we cannot protect them adequately against others who may sneak into the village again next week. So our progress is inhibited by not being able to provide an adequate level of security. Consequently, a small group of Viet Cong can keep the population silent and uncooperative.

Indeed, throughout the country one of the biggest problems stems from the fact that nobody has a telephone. There is often no way for a victimized community, or family, to call for help. We sorely need a simple, primitive substitute for our own phone system. I think it would help to raise the people's confidence if they could report to their officials in time for law enforcement to respond.

NEW CONCEPTS OF WAR

What are the lessons to be learned from this war? I believe the first is the fact that we cannot separate the insurgent from his background. Next, when we do find a target—be it a Viet Cong, a truck, or a bridge—often we cannot kill it, and always the enemy can replace it. All the important enemy targets are small, fleeting, hidden, moving, cheap, smart, and reproducible. He knows how to use his environment to advantage. The jungle, the

rice paddies, the shallow streams and canals, the firm clay earth itself, the long-suffering people and their generations of discontent—these are the environmental factors we must contend with. And let me add one more: We must learn to fight extensively at night. We must work within this environment to find the enemy and to either catch him in the act of being an enemy or somehow to deter him from being an enemy again.

Over the past four years, the United States has spent over \$2 billion in R&D on these other problems of the war. We are on the verge of some very important new military capabilities. We may not perfect them all in time for this war. Indeed, some may never even reach the field in test quantities. But these are the things that will keep this kind of war from breaking out again, and we must continue to develop them into weapons and equipment that can be readily adopted by the military, even after we reach a ceasefire in Vietnam.

From the work we have sponsored during this war, I can see three revolutionary concepts coming into focus—and our research and development programs have already begun to demonstrate that these concepts can be made practical:

One: We are getting closer to being able to provide complete realtime battlefield surveillance around the clock, through suitable instrumentation.

Two: Technology will soon permit the de-

velopment of practical weapons that will discreetly destroy the types of small, fleeting targets characteristic of this type of war.

Three: It now appears that we may reach the stage where there will be little difference between fighting at night or during the day. Clearly, this will be the toughest challenge; fighting at night will require a new systems approach, new training, new doctrine, and new ways of committing one's manpower.

In all three of these revolutionary concepts, we are hindered by two real-world problems. First, the technology is so new that it has not yet become an inherent part of our weapons system designs. Second, and equally important, the introduction of new concepts is extremely difficult during the conduct of the war. These are the problems that must be solved if we are to compress the learning and experience process so that the greatest

benefits of new technology can be felt in South Vietnam.

Finally, we must learn to share this new technology with our allies. It is not enough to equip only the U.S. forces with new capabilities that make our men more effective. We must become more aggressive in training and organizing the South Vietnamese to take on the "residual war" themselves. It is my own opinion, after nine visits throughout South Vietnam, that the South Vietnamese can handle more sophisticated equipment—even if we have to maintain it for some time into the future. It is only by transferring our new capabilities to our allies that we can hope to turn the counterinsurgency problem back where it belongs, with a concurrent reduction in U.S. costs and losses. When that happens, then my office can probably go out of operation.

EMERGENCY FUND ALLOCATION TO SOUTHEAST ASIA, FISCAL YEAR 1964 THROUGH FISCAL YEAR 1970

[Dollar amounts in millions]

R.D.T. & E.	1965	1966	1967	1968	1969	1970
Emergency fund amount	125	125	125	100	50	1100
Emergency fund to Southeast Asia	21	73	101	88	41	7
Percent to Southeast Asia	16.5	58.1	80.1	88.0	81.7	
Total Southeast Asia, R.D.T. & E.	200	370	680	856	826	593

¹ Requested—not included in fiscal year 1970 Southeast Asia total.
² Southeast Asia content at apportionment.

TABLE

R.D.T. & E. EMERGENCY FUND SUMMARY FISCAL YEAR 1965-69

SOUTHEAST ASIA PROJECTS ONLY

[Dollar amounts in millions]

	1965		1966		1967		1968		1969	
	Requested	Approved	Requested	Approved	Requested	Approved	Requested	Approved	Requested	Approved
Army	\$16.4	\$8.3	\$97.7	\$16.7	\$66.1	\$28.1	\$119.9	\$52.2	\$56.9	\$38.6
Navy	13.6	9.9	99.9	22.7	93.1	49.0	46.3	13.3	6.6	7
Air Force	1.3	1.3	95.8	31.4	92.2	19.2	44.1	17.6	43.2	.5
DCA (DCPG)	1.1	1.1			10.4	2.2	3.0	3.0		
ARPA			1.8	1.8	4.3	2.6	1.6	1.6	2.0	1.0
DASA										
DIA										
Total	32.4	20.6	295.2	72.6	265.1	101.1	214.9	88.0	108.7	40.8
Total emergency funds		125.0		125.0		125.0		100.0		50.0
SEA (percent)		16.5		58.1		80.1		88.0		81.7

ALL PROJECTS

Army	\$42.0	\$33.3	\$120.0	\$29.7	\$66.7	\$28.7	\$119.9	\$52.0	\$61.7	\$39.6
Navy	84.8	38.8	121.0	30.0	117.3	66.9	67.8	19.1	22.8	5.9
Air Force	26.4	26.4	153.7	61.5	118.5	19.6	66.4	20.3	17.5	.5
DCA (DCPG)	4.1	4.1			10.4	2.2	3.0	3.0		
ARPA	6.3	1.8	7.5	3.8	4.3	2.6	3.6	3.6	5.0	4.0
DASA	9.0	9.0			10.0	5.0	4.0	2.0		
DIA										
Total	172.6	113.9	402.1	125.0	327.2	125.0	264.9	100.0	107.0	50.0
Total emergency funds		125.0		125.0		125.0		100.0		50.0

NON-SOUTHEAST ASIA PROJECTS ONLY

Army	25.5	25.5	22.3	12.9	.6	.6			4.8	1.0
Navy	71.2	28.9	21.1	7.3	24.6	17.9	21.5	6.0	16.2	5.2
Air Force	25.1	25.1	57.8	33.1	27.3	.4	22.3	2.0	17.0	
DCA (DCPG)	3.0	3.0								
ARPA	6.3	1.8	5.7	2.0			2.1	2.1	3.0	3.0
DASA	9.0	9.0			10.0	5.0	4.0	2.0		
DIA							.2	0		
Total	133.8	83.3	106.9	55.3	62.5	23.9	50.1	12.1	41.0	9.2
Total emergency funds		125.0		125.0		125.0		100.0		50.0

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TAB G

SUMMARY OF TRANSFER AUTHORITY, FISCAL YEAR 1965-69

[Dollar amounts in millions]

Year	Service	Appropriated		Item	Amount	Date
		From	To			
Fiscal year 1965	Navy	R.D.T. & E. (A)	R.D.T. & E. (N)	Aircraft	\$2.0	October 1964.
		R.D.T. & E. (AF)	R.D.T. & E. (N)	do	2.0	
	Air Force	R.D.T. & E. (Def Ag)	R.D.T. & E. (N)	do	2.0	December 1964. Do.
		Other procurement (AF)	R.D.T. & E. (AF)	do	20.0	
		Missile procurement (AF)	R.D.T. & E. (AF)	do	14.8	
Total					40.8	
Fiscal year 1966	Navy	PAM (N)	R.D.T. & E. (N)	Aircraft	52.0	December 1965.
	Air Force	Missile procurement (AF)	R.D.T. & E. (AF)	Missile	24.2	January 1966.
Total					76.2	
Fiscal year 1967	Air Force	Aircraft Procurement (AF)	R.D.T. & E. (AF)	Aircraft	4.0	December 1966.
		PAM (N)	R.D.T. & E. (N)	do	12.0	
	Navy	PAM (N)	R.D.T. & E. (N)	do	46.0	January 1967.
		PAM (N)	R.D.T. & E. (N)	do	18.6	June 1967.
	Air Force	Military personnel (AF)	R.D.T. & E. (AF)	Missile		
Total					80.6	
Fiscal year 1968		Not used				
Fiscal year 1969	Air Force	Other Procurement (AF)	R.D.T. & E. (AF)	A/C System	28.0	October 1968.
		Other Procurement (AF)	R.D.T. & E. (AF)	Missile	41.6	
		Other Procurement (AF)	R.D.T. & E. (AF)	do	8.4	
Total					78.0	

EVALUATION OF SUCCESS OF EMERGENCY FUND EXPENDITURES

	Total funds	Successful ¹ (percent)	Still in development ² (percent)	Failures ³ (percent)
1965	20.6	91.5	8	0.5
1966	72.6	59.0	37	.4
1967	101.1	73.0	26	.1
1968	88.0	38.0	61	.1
1969	40.8	14.0	86	.0

¹ Accepted for production use or incorporated in already operational equipment or manuals.

² Still in development, or still undergoing tests with no decision yet on operational potential, or stopped by change in scope of war.

³ Not acceptable as a result of unsuccessful development, test, or operational evaluation.

Mr. TYDINGS. But did the need to use \$41 million of the emergency fund and \$263 million in reprogramming authority for PROVOST exhaust the flexibility of the Department of Defense's research and development program? Hardly.

In addition to reprogramming authority, the Secretary of Defense has \$150 million in transfer authority which allows funds to be transferred between Defense appropriations, provided that not more than 7 percent of any one appropriation is transferred. Last year, fiscal year 1969, only \$78 million of that \$150 million transfer authority was utilized, and none of it directly for PROVOST.

Finally, for use in "unforeseeable emergencies and extraordinary expenses of a confidential military nature," the Secretary of Defense has a \$10 million contingency fund. That is over and above all of the other items I have just cited. Though there has never been occasion in the past to use it for an emergency in the area of research and development, it could be used for such a purpose. Last year, the Secretary expended less than \$1.5 million of that \$10 million fund.

In other words, PROVOST—the category of research and development in

which 82 percent of the emergency fund was expended—was able to provide for all of its needs, expected and unanticipated, in fiscal year 1969 without exhausting all of the flexibility of the Department of Defense research and development program.

Mr. President, this leads us to a second question. Since the \$50 million emergency fund was adequate according to Mr. Sullivan, the representative of the Department of Defense in 1969—

Mr. MURPHY. Mr. President, will the Senator yield?

Mr. TYDINGS. I yield.

Mr. MURPHY. Mr. President, I understand that Mr. Sullivan was in charge of research and development for Southeast Asia. Am I correct?

Mr. TYDINGS. Mr. Sullivan is a Deputy Director of Southeast Asia Matters, Office of Department of Defense Research and Engineering.

Mr. MURPHY. In other words, his area of activity was, I would assume from his title, PROVOST.

Mr. TYDINGS. The Senator is correct. That is the department name and label for all research and development for Southeast Asia.

Mr. MURPHY. Southeast Asia.

Mr. TYDINGS. The Senator is correct. In addition, he heads up the emergency fund.

Mr. MURPHY. Mr. President, the use of the funds we are talking about, as I understand, is not to be limited to Southeast Asia or to the problems relating to Southeast Asia but are to be used for any new emergency or any use that in the consideration of the Secretary would warrant the use of the funds. Am I correct in my understanding?

Mr. TYDINGS. No. The Senator is incorrect in his understanding. The \$100 million emergency fund is for research and development, testing, and evaluation for procurement or production related thereto. It is not carte blanche over the so-called waterfront. It is specially "for

research and development, testing, evaluation, for procurement or production relating thereto."

And as a practical matter, in the fiscal year 1969, 82 percent of the emergency funds went to PROVOST. This is approximately the rate of emergency funds in recent years that come into PROVOST, research and development directly related to Southeast Asian matters.

Mr. MURPHY. But it is not restricted to that.

Mr. TYDINGS. No, it is not restricted to that, but it is restricted to research, development, testing, evaluation, and related production and procurement.

Mr. MURPHY. But it is not restricted to procurement relating to Southeast Asia.

Mr. TYDINGS. No.

Mr. MURPHY. Not restricted in procurement relating to Southeast Asia.

Mr. TYDINGS. No.

Mr. MURPHY. But refers to matters in Europe, NATO, SEATO, Okinawa, Kwajalein, or other of the other thousands of places that are unfortunately interested in this matter around the globe.

That was my point. I just wanted to establish Mr. Sullivan's area of operation, as I was a little confused for a moment.

Mr. TYDINGS. I thank the Senator.

Mr. STENNIS. Mr. President, will the Senator yield? Has the Senator finished his remarks?

Mr. TYDINGS. Not yet. If the Senator will bear with me for another 10 minutes, I will yield to him at that time.

Mr. STENNIS. Mr. President, I withhold that request.

Mr. CRANSTON. Mr. President, what were the main reasons advanced by the Department of Defense for doubling the emergency funds?

Mr. TYDINGS. Mr. President, I take this opportunity to respond to that question by reading a quotation from a statement of Mr. Leonard Sullivan, Jr., the Deputy Director of Research and Development, Southeast Asia Matters.

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CONGRESSIONAL RECORD — SENATE

August 11, 1969

I will read it first and then I will summarize it. The Senator may then summarize it for himself in case I unfairly categorize his answer.

Let me give the answer of the Department of Defense from page 7 of the statement submitted to me and my staff on the Emergency Fund.

It reads:

Last year, the Congress authorized an Emergency Fund of only \$50M. Although a few million remained until near the end of the year, the preponderance of it was spent, as usual, near the middle of the fiscal year. The \$50M was clearly inadequate and was recognized to be so from the beginning of the year. To compensate for the Congressional action—

That is, the reduction to \$50 million. I continue to read:

We therefore deferred an additional \$90M (approx) of funds already assigned to the Services and "earmarked" it for augmentation of the Emergency Fund by reprogramming it and when necessary. Hence we knew from the beginning of the year that we had an "equivalent Emergency Fund" of about \$140M (approx)—and used almost all of it.

Mr. President, I shall comment here and then will continue with the quotation.

This is exactly what they did in 1966, 1967, and 1968. It is what they can do in 1970. Because of the great flexibility within the Department of Defense, in other words, they can reprogram almost everything when necessary.

I continue to read from Mr. Sullivan's statement:

If the Congress insists on restricting the Emergency Fund for FY 70, we will again be forced to use some equivalent device to assume adequate funds to cover our unforeseen requirements. However, it would appear to be a needless, time-consuming, and indirect approach to an otherwise straightforward management tool. Additionally, if as now appears possible, the overall RDT&E budget is cut by 12%—making it 5% lower than last year's—the problem in establishing the deferrals for reprogramming will be substantially more difficult, may run counter to the preferences of the Congress, and will cause additional sources of irritation and delay between the Services and OSD.

I shall comment here again. In other words, Mr. Sullivan would much rather have an additional \$50 million or an additional \$100 million or an additional \$150 million than require the Secretary of Defense—the man who should know the most about it—to determine where the higher priorities are among the various services and have to reprogram because that might cause an additional source of irritation between the services and the Office of the Secretary of Defense.

I continue to read:

In either case—reprogramming or Emergency Funds dispersal—the Congress is notified of all appropriation transfers and reprogramming actions above the established \$2M threshold, and is asked to give prior approval in instances of known Congressional interest. In fact, two of our important '69 Emergency Fund items have been delayed for four months this year by such Congressional concern. Hence Congressional control of our activities is essentially the same for reprogramming and Emergency Fund usage, but the reprogramming represents the less attractive alternative for internal Defense Management.

Let me emphasize the last sentence I read:

But the reprogramming represents the less attractive alternative for internal defense management.

Of course, I would much rather be able to give my wife an additional \$100 a week than say, "You will have to make some choices from what you have."

Certainly it is less desirable, but the fact of the matter is, according to Mr. Sullivan, that not one single item needed for Vietnam or for provost research and development was delayed or cut because of lack of funds. They just reprogrammed it within the \$7.6 billion plus for research and development program and got what they needed.

Mr. MURPHY. Mr. President, will the Senator yield?

Mr. TYDINGS. I will yield in a moment.

Have I sufficiently responded to the question of the junior Senator from California?

Mr. CRANSTON. Yes. The response has covered my question thoroughly, and I am grateful to the Senator.

Mr. TYDINGS. I yield to the senior Senator from California.

Mr. MURPHY. I say to the Senator from Maryland that if I were to compare my wife to the Defense Department, I would be in trouble when I went home.

Mr. TYDINGS. Perhaps the Senator does not know where his Department of Defense is.

Mr. MURPHY. The distinguished Senator from Maryland used the words "least attractive," which I think is a nice—

Mr. TYDINGS. "Less attractive." If I said "least," I meant to say "less." I took that word for word from the language of Mr. Leonard Sullivan, Jr., on page 9 of his statement.

Mr. MURPHY. Then Mr. Sullivan used another term before that, when he said they would be forced. I do not know Mr. Sullivan. When he says they would be forced, I do not know whether this is what I would call a very bad disposition of circumstances or whether this would be forcing a manner of procedure that was unworkable or impractical.

Certainly, over the last years, there has been much in the Defense Department that I have considered impractical and much that I have considered unworkable.

I should like to make the point again that in the judgment of the committee, we thought that perhaps by cutting the request and trimming it back to what we thought was a proper figure, and realizing that there are times when specific extra funds are needed—and I have to assume that they use the research and development money properly and they cannot just automatically say, "Cut out that program"—if they can do that and the program is going to be cut in order to accommodate the funds for another program, it should not have been started in the first place. With the way I hope this committee will function in the future, we will not have as much of that as we have had in years past.

So I merely rise to make the point, first, that Mr. Sullivan is talking only

about his responsibility, which is Vietnam, which is limited. Second, he is not happy with the condition. We can assume that he is an extravagant fellow who just says, "I would like to have some extra money." Or we can assume he is a knowledgeable, reputable fellow, and I assume that; otherwise, I know that the distinguished Senator would not be quoting him. That would involve using only funds that are needed; therefore, when he transfers funds from one program to another, he may be doing some damage to the program from which the funds are being taken.

Mr. TYDINGS. I thank the Senator.

Let me discuss the second question raised by the position of the Department of Defense.

Since the \$50 million emergency fund was adequate in fiscal year 1969, is there any indication that research and development demands relative to research and development resources in fiscal year 1970 will increase sufficiently to warrant doubling the emergency fund to \$100 million?

Since more than 80 percent of the emergency fund is to be devoted to PROVOST again in fiscal year 1970, and since PROVOST represents the highest priority research and development to support our combat activities in Vietnam, let us begin by looking at PROVOST for the coming year.

In fiscal year 1970, initial programing for PROVOST is \$590 million, \$68 million more than was initially programed in fiscal year 1969. At the same time, in testimony before the Senate Armed Services Committee in May, Doctor Foster projected total PROVOST costs by the end of fiscal year 1970 at only \$15 million above his projected total PROVOST cost for fiscal year 1969. In other words, to cover an additional \$15 million in projected total costs, the Defense Department is increasing initial programed funds for PROVOST in fiscal year 1970 by \$68 million.

Furthermore, according to Mr. Sullivan:

We know we are "over the hump" in our RDT & E expenditures for this war. We have learned to predict our funding requirements somewhat better.

In addition, Mr. Sullivan stated that while we were not ideally equipped in the past few years to fight in a Vietnam-type war and thus encountered many unexpected problems, as a result of past PROVOST work "we are now much more current."

In short, due to past experience, there should be less unexpected research and development expenses in fiscal year 1970—less of the kind of expenses the emergency fund was designed to meet.

For the coming year, the Secretary of Defense will still possess his \$150 million transfer authority as well as his reprogramming authority. It is true the total DOD research and development budget was cut in committee this year. However, the cut amounts to only a 5 percent reduction in research and development as compared with last year's appropriation. Furthermore, 80 percent of the reduction recommended by the Armed Services Committee applies to specific programs

unrelated to the Vietnam war. Thus, the overall reprogramming ability within the research and development sector of the Department of Defense budget will not be significantly affected.

It is also important to note in considering Vietnam-related research and development in this year's budget that the end products of this research and development will not be available for use in Vietnam until 1971 or 1972. According to Mr. Sullivan, it takes between 18 to 36 months from the inception of a project until it is ready for use by our troops in the field.

I think none of us, including the President, expects the current level of U.S. involvement in Vietnam to continue for another 1½ to 3 years. As a matter of fact, the President on at least two occasions has indicated that he is going to reduce troops in Vietnam. On one occasion, he ordered a 25,000 troop reduction. So I do not see how we can expect the level of involvement to increase in Vietnam, in view of the statements of the President of the United States.

But, the question is asked, what if there is a large, unexpected increase in our research and development demands? In addition to the \$50 million Emergency Fund, the Secretary's \$150 million transfer authority, and his reprogramming authority, there is still the Secretary's \$10 million contingency fund and the possibility of a supplemental appropriation from the Congress.

In short, weighing the probable demands on our research and development program for the coming year against the resources available to meet these demands, I can find no sound justification for doubling the emergency fund to \$100 million.

In concluding, I want to make clear that this debate does not involve our national security. According to Mr. Sullivan, whether he receives the additional \$50 million for the emergency fund or not, his office will be able to meet all of the needs of our troops in Vietnam. What is at issue is whether he will be forced to haggle with the various Services for low priority or superfluous funds if PROVOST costs exceed his initial estimates. This is an exercise he has performed successfully for the past 4 years with no apparent injury to our national security.

What we are talking about is an economy measure. We are in the midst of a serious inflation. We have just saddled the American people with an extension of the 10-percent surtax. In return, we have promised to cut all Government spending that is not absolutely essential to the Nation's well being.

Mr. President, I have devoted considerable study to the Defense Department's request for a doubling of the emergency fund.

I do not question the manner in which the past emergency fund have been used, nor do I doubt the sincere motivation behind the desire of the Department of Defense for an additional \$50 million. If I were the Secretary of Defense I would probably be asking for that also. But I am not the Secretary of Defense. I am a Senator representing the people

of Maryland. In my view, and the view of so many of my colleagues who are co-sponsoring the amendment with me, we do not believe this additional money is warranted. In the name of economy, I ask that the Senate support the measure reducing the amount to the \$50 million of last year's appropriation.

Mr. STENNIS. Mr. President, will the Senator yield?

The PRESIDING OFFICER (Mr. DOLE in the chair). Does the Senator yield?

Mr. TYDINGS. I yield.

Mr. STENNIS. Mr. President, I appreciate the Senator's yielding to me. He has gone into this matter very thoroughly.

For the record, I have a statement which will show the amounts appropriated for this emergency fund in the past. In the past, Congress has always recognized the need for a limited emergency fund which would allow the Secretary of Defense to apply the necessary resources to exploit sudden technological breakthroughs or satisfy unanticipated research and development needs, and to do so without disrupting planned and on-going programs.

In fiscal years 1962, 1963, and 1964, we appropriated \$150 million for this purpose each year. In the fiscal years 1965, 1966, 1967 the approved fund was \$125 million. In fiscal year 1968 it was reduced to \$100 million. In 1969, although the Defense Department requested \$125 million, the emergency fund was reduced by Congress to \$50 million. In each of these years the fund was augmented by authority to transfer other appropriated funds in the amount of \$150 million each year.

Mr. President, this matter is complicated, as are so many other matters, by the situation with reference to Vietnam. I know it has upset the budget, it has upset these accounts, it has upset the transfer, and it has upset everything. For 2 years we had to insist on money being put in for the expense of the war. There was nothing in the appropriation bill.

I wish to point out that this matter deals with the matter of transfer. Just what does that mean? That is a matter handled by the Committee on Appropriations. They have the language provisions in their bill governing transfers of funds. It really does not come within this bill, but it is related.

Mr. TYDINGS. It is very related.

Mr. STENNIS. Transfer means the transfer from one account to another, such as a transfer from the research and development account to the O. & M. account—the operations and maintenance account. I am just making this statement for the record. To reprogram means to bring one item in the same account over to another item in the same account; transferring some item of research and development over to another research and development within that general account.

I would rather have a definite and positive figure in here for the emergency use only in the breakthroughs that we are trying to reach, and require them to exhaust that money first before they could have any transfers from another account. As I have said, we do not control all of that. It is within the authority

of the provisions in the appropriation bill.

The reasoning with respect to the \$100 million was simply this. We have a reduction here, as Senators know, from the \$8.222 billion requested in the budget of April 15. The committee made a reduction to \$7.170 billion, using round numbers. That is well over \$1 billion.

In making such a vast reduction, which is more than at any time recently, we were trying to cover the proposition of a real breakthrough and a possible emergency of some kind. Our thinking was merely commonsense; that it might prove that the knife was in too deep in some items; and there ought to be more than a nominal sum that could be used.

The Senator traced the history of all this matter. I have mentioned the transfer authority. I think, frankly, it is nothing to argue over a great deal. I do not think it is necessary to have a rollcall vote or anything of that nature.

If the Senator feels as if he can accept it for \$75 million and let it go at that figure, we will put something in our report or in a letter to the Department of Defense, and particularly Dr. Foster, that we think this was allowed for that purpose; not to go into the transfer of funds until he has at least exhausted this money. If they are going to use a lot of transfer money first, we will take this out altogether next year.

I respond to the Senator in that way. If he would be willing to make it \$75 million, I think we could accept such an amount.

Mr. COOK. Mr. President, will the Senator yield?

Mr. TYDINGS. I yield.

Mr. COOK. Mr. President, I would like to substantiate the \$75 million figure of the Senator from Mississippi on this basis. Referring to the report of the Committee on Armed Services, I might suggest that the committee was told that of the \$50 million it had expended \$47.002 million, which left \$2.998 million.

Mr. TYDINGS. That was May 22, a month and a half before the end of the fiscal year.

Mr. COOK. The Senator is correct. But at the same time, Dr. Foster indicated there were \$25 million in programs that were then pending; that they had to decide what should be done, but they only had \$2.998 million and felt it should run until the end of the year.

The point I am trying to make to the Senator from Maryland is that if he would consider \$75 million, I think we can get it by reason of the fact that they had expended almost the \$50 million and had \$25 million-plus of programs that were in existence for R. & D. for which funds were not available.

I agree with most of what the Senator from Maryland has said with respect to the transfer of funds, but I would suggest, as one who is economy minded, that for me to suggest raising the amount from \$50 million to \$75 million is only on the basis that the committee itself has already deleted from the budget more than \$900 million of research and development funds, and there is not the ability to transfer back and forth. Even the ability to transfer in the \$150 million float account is of such a nature that it

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may not be as easy in the future for Mr. Sullivan or anyone else to be able to shift those funds one way or the other as he saw fit.

I think there is ample authority. As a matter of fact, if I may speak for a minute longer, the distinguished Senator from Maine (Mrs. SMITH) brought up this very subject with Dr. Foster in the testimony and asked him about the additional \$25 million of programs waiting that could not be funded. She asked whether he did not feel, perhaps, that he should raise the \$50 million figure. So I can only say that I think there is ample precedent for the Senator to consider an increase from \$50 million to \$75 million. I hope that he will give the proposal serious consideration.

Mr. TYDINGS. I thank the distinguished Senator from Kentucky for his contribution. He is also persuasive. I might point out that of the almost \$1 billion reduction in research and development made by the Committee on Armed Services, only 20 percent of the \$1 billion was not for specific items deleted by the committee itself. But I certainly think that the Senator is very persuasive.

Mr. PROXMIRE. Mr. President, will the Senator yield?

Mr. TYDINGS. I yield.

Mr. PROXMIRE. I am wondering whether there should be an increase from \$50 million to \$75 million. Was that the suggestion?

Mr. TYDINGS. That is correct.

Mr. PROXMIRE. When the situation, as I understand, deals primarily with Vietnam and related projects.

Mr. TYDINGS. Last year, as I recall, 82 percent of the fund was applied to Vietnam and related items.

Mr. PROXMIRE. I think one of the most persuasive aspects of the Senator's excellent speech was his emphasis on the fact that everything we are told is that the war in Vietnam is being deescalated. The President has already announced his plan to withdraw 25,000 troops, and we accept that. Certainly it is irreversible, in the view of most of us.

As the Senator said, within a year and a half to 3 years, it should be possible to withdraw very largely from Vietnam—not entirely but largely—under these circumstances, the increase in the contingency fund for Vietnam for certain things in Vietnam does not seem to be logical. What is the answer?

Mr. TYDINGS. Let me say to the Senator from Wisconsin, that is a difficult question in light of the President's statements about reduction of American involvement, de-Americanization of the Vietnam war, and bringing home our troops. The increase in the Emergency Fund, say 80 percent of it, can be reasonably expected to be used in defense-related research and development for Southeast Asia which by the testimony of Mr. Sullivan will not be completed for 18 to 36 months.

Mr. PROXMIRE. What was the cost of that last year when the situation was far more complicated than every indication is it will be this year? Last year, when we had 550,000 American troops in Vietnam, we did not exhaust the fund last year; is that not right?

Mr. TYDINGS. That is correct. I think for the RECORD, just to make it absolutely clear, we should put the colloquy between the Senator from Maine (Mrs. SMITH), the ranking Republican minority member of the Armed Services Committee, and Dr. Foster, together with his response to her when she questioned him about the emergency fund, which appears on page 1854 of the authorization for military procurement research and development hearings before the Armed Services Committee, part 2 of two parts. We should include this colloquy just to complete the record in this matter.

Mr. DOMINICK. Mr. President, will the Senator from Maryland yield?

Mr. TYDINGS. I yield.

Mr. DOMINICK. I should like to make the record clear that this research contingency fund is not just for Vietnam but covers all research. Maybe it was 80 percent that was spent on it the last time. We may well spend another 80 percent of it for research and development on a Middle East situation the next time. We cannot tell where the need for these funds will arise. We cannot equate the withdrawal of troops from Vietnam with our need for this research contingency fund.

With all respect to the Senator from Wisconsin, I think he is clouding the record. It should be made crystal clear.

Mr. TYDINGS. I think it is clear. In fiscal 1965, 88 percent of the total went to Vietnam. In 1969, 81.7 percent went to Vietnam. I might say that if we were not in Vietnam I do not think this would even be an issue before the Senate today, for were there no war, I think it would be up to the Armed Services Committee to specify what research and development was going to take place. Unanticipated R. & D. costs would not constitute a serious consideration.

Mr. PROXMIRE. Furthermore, \$40 million to \$45 million has been for Vietnam. There will be less activity for Vietnam now. It is prudent, wise, economical, and logical for us not to increase the fund, which is all the modest amendment of the Senator from Maryland would do. So that I wonder, would not the distinguished Senator from Mississippi accept a compromise and go to \$75 million from the \$50 million. I wonder about the wisdom of that review of the whole history of this, in view of the expectations about Vietnam.

Furthermore, I should like to ask the Senator from Maryland, is it not true that the original Defense Department's request was for only \$52 million? That is what they wanted.

Mr. TYDINGS. In January of this year, Secretary of Defense Clifford requested \$50 million in the original budget. Two months later, the request was increased to \$100 million by Secretary of Defense Laird.

Mr. PROXMIRE. Is it not also true that not one single request of need by Southeast Asia forces for research and development was denied?

Mr. TYDINGS. The Senator is correct. The fact was that the considerable flexibility which exists within the Department of Defense made it possible to provide for every research development

project which they felt was of high priority.

Mr. PROXMIRE. In the event that this is not enough, there is ample flexibility, \$7 billion in research and development, that can be used at the discretion of the Secretary of Defense in this area if he wants to; is that not correct?

Mr. TYDINGS. That is correct; and there is an additional \$150 million in transfer authority to transfer funds between one section of the appropriation bill and another.

Mr. PROXMIRE. I thank the Senator very much.

Mr. STENNIS. Mr. President, will the Senator from Maryland yield to me briefly again?

Mr. TYDINGS. I yield.

Mr. STENNIS. The Senator has given a fine list of figures here as to what has happened; but so far as the budget is concerned, as of now, we do not know what transfer authority, if any, the Appropriations Committee and Congress are going to put in the appropriation bill. A transfer has to be authorized in the bill. Then it is passed on by the committee. We do not know what language they will have, on what the Congress will approve with reference to reprogramming. Certainly, until those things are known, if those gates should be closed or partly closed, we certainly should not reduce the emergency fund too low.

This is a discretionary matter for Dr. Foster anyway, and for Congress. So I had understood that the Senator from Maryland had weighed this thing considerably in that light.

Mr. TYDINGS. I have. If the Senator from Mississippi offers an amendment to my amendment which, in effect, would reduce the recommendations of the Armed Services Committee from \$100 million to \$75 million—my proposal reduces it to \$50 million—I would accept that.

Mr. STENNIS. Would that be agreeable generally here to those of us who have worked on this matter? I refer to the Senator from Wisconsin (Mr. PROXMIRE) and the Senator from Kentucky (Mr. COOKE) who have already expressed themselves. The Senator from Kentucky has expressed himself as being in favor of such a figure, if I understood him correctly.

Mr. FULBRIGHT. Mr. President, will the Senator from Maryland yield?

Mr. TYDINGS. I yield.

Mr. FULBRIGHT. As I understand it, this bill has not been passed by the House?

Mr. STENNIS. No.

Mr. FULBRIGHT. Therefore this goes in the House bill, and if it follows past custom, will it not, the House will make it considerably larger, I expect.

Mr. TYDINGS. No.

Mr. STENNIS. No.

Mr. TYDINGS. Last year the House Armed Services Committee struck out the emergency fund in its entirety. The Senate authorized \$121 million.

In conference, the Senate receded, the House acceded, and the sum of \$50 million was arrived at. But the House had struck it out in its entirety. So I would

hope that for this year that the result would be that—

Mr. STENNIS. Mr. President, I think there is no reason in the world why we should not be able to settle this matter to and the final amount to the satisfaction of all parties concerned in the bill arrived at in the conference.

Mr. TYDINGS. Mr. President, I ask unanimous consent, then, that my amendment be modified on line 2 by striking out the figure "50,000,000", and inserting in lieu thereof the figure "\$75,000,000."

The PRESIDING OFFICER. Without objection, the modification is made.

Mr. TYDINGS. Mr. President, I ask for the yeas and nays.

The PRESIDING OFFICER. Is there a sufficient second?

Mr. FULBRIGHT. Mr. President, we had better have a quorum call.

Mr. STENNIS. Mr. President, were the yeas and nays ordered?

Mr. FULBRIGHT. No. There was not a sufficient second.

Mr. TYDINGS. Mr. President, I suggest the absence of a quorum.

The PRESIDING OFFICER. The clerk will call the roll.

The assistant legislative clerk proceeded to call the roll.

Mr. McCLELLAN. Mr. President, I ask unanimous consent that the order for the quorum call be rescinded.

The PRESIDING OFFICER. Without objection, it is so ordered.

EXECUTIVE ORDER 11246 "EQUAL EMPLOYMENT OPPORTUNITY"

Mr. McCLELLAN. Mr. President, one of the most alarming and dangerous trends in Government in recent years is the increasing tendency of the executive and judiciary branches of the Federal Government to usurp the lawmaking functions of the Congress. And it is in the area of civil rights that this tendency has been most evident.

A recent and flagrant example of this tendency is the attempt of the executive branch to force racial quotas on Government contractors by executive order.

Title VII of the Civil Rights Act of 1964 dealt in detail with the subject of equal employment opportunity, but much of private industry, especially in the construction field, has been confronted with a far more extensive and burdensome system of regulation in this area under the color of Executive Order 11246 on Nondiscrimination. That order, together with its implementing rules, regulations, and requirements goes far beyond the legislation enacted by the Congress on this subject; indeed, the order is in direct conflict with the policy, purpose, and intent expressed in the 1964 Civil Rights Act.

The clear purpose and intent of that act was to make discrimination in employment on the basis of race, color, religion, sex, or national origin, an unlawful employment practice, whether engaged in by employers, labor organizations, or employment agencies. Congress made it equally clear, however, that merit and capability, as determined by the

employer, should continue to be the determining factors in respect to job qualification and employment.

It was the further intent of Congress that the law was not to be interpreted as requiring the introduction of quotas or other representatives or preferential systems into the employment process. Section 703(j) of title VII, expressly disallowed the granting of preferential treatment to any individual or group in order to correct any imbalance that might exist with respect to the total number or percentage of persons of any race, color, religion, sex, or national origin, employed as compared with the total number of such persons in any community, State, or other area, or in the available work force in any community, State, or other area.

Nothing in title VII imposed—or authorized the imposition upon—private industry of any duty or obligation to institute or finance any training, apprenticeship, recruitment, advertising, or other affirmative programs designed to enhance the employment opportunities or job qualifications of any employee, applicant for employment, or other person. Nor did Congress intend to outlaw or interfere with bona fide seniority or merit systems. See section 703(h). And it is highly significant that Congress, when it enacted title VI of the Civil Rights Act of 1964, entitled "Nondiscrimination in Federally Assisted Programs," expressly provided that it shall not "be construed to authorize action under this title by any department or agency with respect to any employment practice by any employer, employment agency, or labor organization, except where a primary objective of the Federal financial assistance is to provide employment."—Section 604.

Despite this express declaration of congressional intent, however, preaward procedures, including elaborate requirements for "affirmative action" programs designed to impose quota and minority representation systems, have been incorporated in regulations by the executive branch.

Recently the Department of Labor issued an order known as the Revised Philadelphia Plan for Compliance with Equal Opportunity Requirements of Executive Order 11246, regarding Federal construction contracts.

This plan was directed to all Government agencies, and while limited initially to the Philadelphia area, it was to be applied nationally at some later date, to be determined by the Department of Labor.

The plan purported to set up a program of equal employment opportunity for Federal contractors. Pursuant to its terms bidders on Federal construction contracts would be required to submit goals of manpower utilization. Racial employment quotas are plainly required by the language of the plan.

Mr. President, I have received many complaints about the obligations imposed upon Government contractors by Executive Order 11246 and the requirements imposed thereunder by the Office of Contract Compliance of the Department of Labor and various other executive de-

partments of our Government. Those complaints stem from the wide variance and apparent conflict between the policy and burdens imposed by this Executive order and the congressional policy and intent as manifested in titles VI and VII of the Civil Rights Act of 1964.

Because the obvious conflicts between those two programs give rise to serious questions of statutory and constitutional law, I wrote to the Comptroller General of the United States on May 19, 1969, requesting his opinion regarding the validity of Executive Order 11246 and the regulations, rules, procedures, and requirements issued pursuant thereto and being applied by the Office of Contract Compliance and other Federal agencies in the awarding of Federal and Federal-aid contracts. On August 5, I received a reply from the Comptroller General with which he enclosed a copy of his decision—B-16306—addressed to the Secretary of Labor relative to the revised Philadelphia plan.

The Comptroller General's decision confirms my concern in this matter. The so-called Philadelphia plan violates the Civil Rights Act of 1964 and it cannot be supported on the tenuous grounds of any implied, inherent, or derivative authority. And it most assuredly cannot be maintained simply because some Federal social innovator desires it to be so. The Comptroller's analysis of the Philadelphia plan, and its requirements, clearly shows its conflict with and contravention of titles VI and VII of the Civil Rights Act of 1964.

Mr. President, this is the second time that the Federal bureaucracy has tried to initiate a "Philadelphia plan," to impose racial quota systems on Government contractors. The Federal procurement procedures are complex and costly enough without adding this complicating and harassing burden. The Congress has acted in this area; its action is clear, and it is high time that the executive branch takes heed of the laws of this Nation.

It is a well-established principle of constitutional law that the President's power to issue an Executive order must stem either from an act of Congress or from the Constitution itself—*Youngstown Sheet & Tube Co., et al. v. Sawyer*, 343 U.S. 579, 585.

It is an equally well-established principle of constitutional law that although the President's general direction power is constitutional in its source, it is by no means absolute. On the contrary, its exercise is subject to important limitations. Foremost among these is the well-settled rule that an Executive order or any other Executive action, whether by formal order or by regulation, cannot contravene an act of Congress which is constitutional. Thus, when an Executive order collides with a statute enacted pursuant to the constitutional authority of the Congress, the statute will prevail—*Kendall v. U.S.*, 12 Peters 524. Neither the President nor a department head at the President's direction or with his approval, has authority to act at variance with valid statutory provisions—*United States v. Symonds*, 120 U.S. 46.

As Justice Frankfurter said in the *Youngstown Sheet and Tube case*, "Where Congress has acted the President is bound by the enactment." And as Jus-

Justice Holmes declared in *Myers v. United States*, 272 U.S. 52, 177—

The duty of the President to see that the laws be faithfully executed is a duty that does not go beyond the laws or require him to do more than Congress sees fit to leave within his power.

Mr. President, I ask unanimous consent that a copy of Executive Order 11246, together, with my letter to the Comptroller General, dated May 19, 1969, and his reply together with his decision relative to the Philadelphia plan, be printed in the RECORD immediately following the conclusion of my remarks.

The PRESIDING OFFICER. Without objection, it is so ordered.

(See exhibit 1.)

Mr. McCLELLAN. In this connection it is pertinent to quote the following excerpts from the Comptroller's decision:

Whether the provisions of the Plan requiring a bidder to commit himself to hire—or make every good faith effort to hire—at least the minimum number of minority group employees specified in the ranges established for the designated trades is in fact, a "quota" system (and therefore admittedly contrary to the Civil Rights Act) or is a "goal" system, is in our view largely a matter of semantics, and tends to divert attention from the end result of the Plan—that contractors commit themselves to making race or national origin a factor for consideration in obtaining their employees.

We view the imposition of such a requirement on employers engaged in Federal or federally assisted construction to be in conflict with the intent as well as the letter of the above provisions of the act which make it an unlawful employment practice to use race or national origin as a basis for employment. Further, we believe that requiring an employer to abandon his customary practice of hiring through local union because of a racial or national origin imbalance in the local unions and, under the threat of sanctions, to make "every good faith effort" to employ the number of minority group tradesmen specified in his bid from sources outside the union if the workers referred by the union do not include a sufficient number of minority group personnel, are in conflict with section 703(j) of the act.

And finally:

We recognize that both your Department (Labor) and the Department of Justice have found the Plan to be legal and we have given most serious consideration to their positions. However, until the authority for any agency to impose or require conditions in invitations for bids on Federal or federally assisted construction which obligate bidders, contractors, or subcontractors, to consider the race or national origin of their employees or prospective employees for such construction, is clearly and firmly established by the weight of judicial precedent, or by additional statutes, we must conclude that conditions of the type proposed by the revised Philadelphia Plan are in conflict with the Civil Rights Act of 1964, and we will necessarily have to so construe and apply the act in passing upon the legality of matters involving expenditures of appropriated funds for Federal or federally assisted construction projects.

Mr. President, I am not quarreling with the objective of equal employment opportunities for all persons based on merit and capability to do the work, without regard to race, color, religion, or national origin. But I do not believe that discrimination, where it exists, can be remedied by imposing solutions which

are inherently and equally discriminatory. The quota and other requirements imposed by the Philadelphia revised plan seek to remove inequities of one kind by imposing others in their stead, a situation underscored in the following excerpt from the Comptroller's decision:

The recital in section 6b.2 of the order (and in the prescribed form of notice to be included in the invitation) that the contractor's commitment "is not intended and shall not be used to discriminate against any qualified applicant or employee" is in our opinion the statement of a practical impossibility. If, for example, a contractor requires 20 plumbers and is committed to a goal of employment of at least five from minority groups, every nonminority applicant for employment in excess of 15 would, solely by reason of his race or national origin, be prejudiced in his opportunity for employment, because the contractor is committed to make every effort to employ five applicants from minority groups.

Mr. President, I trust that the Labor Department, and all other agencies of the Federal Government will take due notice and appropriate action as a result of the Comptroller General's opinion of August 5, 1969, and begin implementing the laws as enacted and not as some individuals or officials may desire.

EXHIBIT 1

EXECUTIVE ORDER 11246—EQUAL EMPLOYMENT OPPORTUNITY

Under and by virtue of the authority vested in me as President of the United States by the Constitution and statutes of the United States, it is ordered as follows:

PART I—NONDISCRIMINATION IN GOVERNMENT EMPLOYMENT

SECTION 101. It is the policy of the Government of the United States to provide equal opportunity in Federal employment for all qualified persons, to prohibit discrimination in employment because of race, creed, color, or national origin, and to promote the full realization of equal employment opportunity through a positive, continuing program in each executive department and agency. The policy of equal opportunity applies to every aspect of Federal employment policy and practice.

SEC. 102. The head of each executive department and agency shall establish and maintain a positive program of equal employment opportunity for all civilian employees and applicants for employment within his jurisdiction in accordance with the policy set forth in Section 101.

SEC. 103. The Civil Service Commission shall supervise and provide leadership and guidance in the conduct of equal employment opportunity programs for the civilian employees of and applications for employment within the executive departments and agencies and shall review agency program accomplishments periodically. In order to facilitate the achievement of a model program for equal employment in the Federal service, the Commission may consult from time to time with such individuals, groups, or organizations as may be of assistance in improving the Federal program and realizing the objectives of this Part.

SEC. 104. The Civil Service Commission shall provide for the prompt, fair, and impartial consideration of all complaints of discrimination in Federal employment on the basis of race, creed, color, or national origin. Procedures for the consideration of complaints shall include at least one impartial review within the executive department or agency and shall provide for appeal to the Civil Service Commission.

SEC. 105. The Civil Service Commission shall issue such regulations, orders, and in-

structions as it deems necessary and appropriate to carry out its responsibilities under this Part, and the head of each executive department and agency shall comply with the regulations, orders, and instructions issued by the Commission under this Part.

PART II—NONDISCRIMINATION IN EMPLOYMENT BY GOVERNMENT CONTRACTORS AND SUBCONTRACTORS

Subpart A—Duties of the Secretary of Labor

SEC. 201. The Secretary of Labor shall be responsible for the administration of Parts II and III of this Order and shall adopt such rules and regulations and issue such orders as he deems necessary and appropriate to achieve the purposes thereof.

Subpart B—Contractors' Agreements

SEC. 202. Except in contracts exempted in accordance with Section 204 of this Order, all Government contracting agencies shall include in every Government contract hereafter entered into the following provisions:

"During the performance of this contract, the contractor agrees as follows:

"(1) The contractor will not discriminate against any employee or applicant for employment because of race, creed, color, or national origin. The contractor will take affirmative action to ensure that applicants are employed, and that employees are treated during employment, without regard to their race, creed, color, or national origin. Such action shall include, but not be limited to the following: Employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided by the contracting officer setting forth the provisions of this nondiscrimination clause.

"(2) The contractor will, in all solicitations or advertisements for employees placed by or on behalf of the contractor, state that all qualified applicants will receive consideration for employment without regard to race, creed, color, or national origin.

"(3) The contractor will send to each labor union or representative of workers with which he has a collective bargaining agreement or other contract or understanding, a notice to be provided by the agency contracting officer, advising the labor union or workers' representative of the contractor's commitments under Section 202 of Executive Order No. 11246 of September 24, 1965, and shall post copies of the notice in conspicuous places available to employees and applicants for employment.

"(4) The contractor will comply with all provisions of Executive Order No. 11246 of Sept. 24, 1965, and of the rules, regulations, and relevant orders of the Secretary of Labor.

"(5) The contractor will furnish all information and reports required by Executive Order No. 11246 of September 24, 1965, and by the rules, regulations, and orders of the Secretary of Labor, or pursuant thereto, and will permit access to his books, records, and accounts by the contracting agency and the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations, and orders.

"(6) In the event of the contractor's non-compliance with the nondiscrimination clauses of this contract or with any of such rules, regulations, or orders, this contract may be cancelled, terminated or suspended in whole or in part and the contractor may be declared ineligible for further Government contracts in accordance with procedures authorized in Executive Order No. 11246 of Sept. 24, 1965, and such other sanctions may be imposed and remedies involved as provided in Executive Order No. 11246 of September 24, 1965, or by rule, regulation, or order of the Secretary of Labor, or as otherwise provided by law.

does not actually make a change in the law which would provide the President with the authority to have a lower tax rate on outstanding issues from those which pertain to new borrowing?

Mr. LONG. No, that authority is in the House passed bill, which is still in the committee. What we have here is a simple 30-day extension.

Mr. JAVITS. That will be dealt with when the committee has its hearing?

Mr. LONG. The Senator is correct.

Mr. JAVITS. The committee will have hearings?

Mr. LONG. The Senator is correct.

Mr. JAVITS. May I be heard?

Mr. LONG. Yes.

Mr. JAVITS. This is important to me. I have always fought against the interest equalization tax on the ground it represents a protectionist device. However, we have a balance-of-payments problem which is now congealed around the interest equalization tax.

I understand the difficulties of the administration in going along with people such as me.

Now, a certain background has been built up in utilization of the tax based on the fact I think it was unwise taxation and unwise for our country to take in view of the fact that this is the leading money capital of the world.

I wrote a letter to the Secretary of the Treasury on Saturday. He responded, not in terms of the 30-day extension, which is understandable, but the bill as it came from the House. He made the situation clear.

Mr. President, I ask unanimous consent that the exchange of correspondence I had with the Secretary of the Treasury may be printed in the RECORD.

There being no objection, the letters were ordered to be printed in the RECORD, as follows:

AUGUST 9, 1969.

Re Interest Equalization Tax
Hon. DAVID M. KENNEDY,
Secretary,
U.S. Treasury Department
Washington, D.C.

DEAR MR. SECRETARY: The Interest Equalization Tax extension has been slated for floor consideration this coming week, and as you know, I have been following with some concern the reaction which this issue has had in the country. In April of this year, the Joint Economic Committee, on which I serve as senior Minority member, recommended that the IET be phased out as soon as practicable. The Majority noted that suspension of the IET would do little or no injury to the U.S. balance of payments, and that suspension is an appropriate way to begin the elimination of capital export restrictions which "are a direct contradiction of the most fundamental international economic policy objectives pursued by the United States since the end of World War II." The Minority noted the strong and valid arguments which exist for reconsidering the continuation of the IET, and pointed out that significant changes in the structure of capital markets in the United States and abroad have reduced the danger of the greatly increased outflows which the IET was designed to prevent.

These views accord with my prior opposition to the IET. In 1964 when the tax was being introduced, I proposed a "capital issues committee" for regulating foreign borrowings in the United States on a voluntary basis, which would have kept our capital outflows within manageable levels and preserved the traditional U.S. commitment to the freedom

of private transactions. I have since expressed opposition to extension of the tax, and voted in favor of amendments which would have restricted its effect. I continue to have considerable doubts whether extension of the IET would be in the best interests of our country, in the absence of a concrete pledge to begin dismantling this web of capital restrictions at the earliest possible time.

I would therefore like to be appraised of:
(1) your intentions to use the powers which will be given the President to vary the tax rates, so that these rates—for both new and outstanding issues—will be as low as possible consistent with monetary stability;
(2) your actions and intentions which, in your continuing review of the nation's balance of payments program, may result in the gradual relaxation of the restrictions imposed by the Office of Foreign Direct Investment.

Please be assured that I have pledged my efforts to maintaining the strength of the dollar both at home and abroad, and am willing to support any measure which will effect this end and for which no reasonable alternative exists.

With best wishes, believe me,

Sincerely,

JACOB K. JAVITS.

THE SECRETARY OF THE TREASURY,
Washington, August 9, 1969.

HON. JACOB K. JAVITS,
U.S. Senate,
Washington, D.C.

DEAR SENATOR JAVITS: In your letter to me today on the Interest Equalization Tax, you have emphasized the desirability of dismantling our direct balance of payments controls as soon as possible.

On April 4, 1969, President Nixon purposefully began just exactly this type of process consistent with our balance of payments position. At that time he announced a relaxation of the capital restrictions on foreign direct investment and lending abroad by bank and non-bank financial institutions. In addition, he pledged and "we shall find our solutions (to our economic problems) in the framework of freer trade and payments".

The President also pointed out that "The distortions created by more than three years of inflation cannot be corrected overnight. Nor can the dislocations resulting from a decade of balance-of-payments deficits be corrected in a short time." It was against the background of these actions, this pledge and an appreciation of the time it takes to restore balance to the economy that the President announced his intention to seek an extension of the Interest Equalization Tax. The extension legislation now before the Senate has a new provision which would provide to the President the authority to have a lower tax rate on outstanding issues from that which would pertain to new borrowings. The purpose of this provision is to provide that degree of flexibility which could be useful in reducing the reliance upon this tax as a selective restraint in our overall balance-of-payments program. For example, if this authority is employed, a low or no tax on new issues could permit greater access to our markets for new projects without according this benefit to outstanding issues.

The willingness of this Administration to vary the IET tax rate so that it will be as low as possible consistent with monetary stability was demonstrated first on April 4 when President Nixon reduced the IET rate from approximately one-and-one-quarter percent p.a. to three-quarters percent p.a. on debt securities. It is my intention to recommend to the President further use of this authority as circumstances permit, and in this regard I will be specially mindful of the opportunity to employ the additional flexibility we are now seeking from Congress which hopefully will advance the time

when our reliance upon this tax can disappear.

It is also my intention to recommend as soon as possible in the light of balance-of-payments developments, additional steps in the gradual relaxation of the capital restrictions imposed under the foreign direct investment program.

I would emphasize the fundamental fact that our efforts to further reduce reliance upon selective restraints will be greatly facilitated by the evident effectiveness of our program of general restraints in reducing inflation, restoring better balance to our economy, and creating the conditions that make it possible to rebuild our trade position. As inflation is so much the cause of our international payments problem, it is vital that we pursue the fiscal-monetary restraint which will foster our balance growth.

Sincerely,

DAVID M. KENNEDY.

Mr. JAVITS. Mr. President, he made it clear there were certain undertakings which the Treasury was making with respect to the extension of this case.

In his letter he stated that it would provide the President the authority to have a lower tax rate on outstanding issues from that which would pertain to new borrowings. He stated:

If this authority is employed, a low or no tax on new issues could permit greater access to our markets for new projects without according this benefit to outstanding issues.

I would like to point out that the outstanding issue question is complicated because of the reaching out by American banks and others to borrow, and that Americans would flock to get those issues if we took the interest equalization tax off.

I sympathize with the Secretary and what he is doing. I hope the committee considers the matter to make a different rate for new issues as contrasted with other issues.

The letter also stated:

It is my intention to recommend to the President further use of this authority as circumstances permit, and in this regard I will be specially mindful of the opportunity to employ the additional flexibility we are now seeking from Congress which hopefully will advance the time when our reliance upon this tax can disappear.

It is also my intention to recommend as soon as possible in the light of balance-of-payments developments, additional steps in the gradual relaxation of the capital restrictions imposed under the foreign direct investment program.

Mr. President, I have inserted this matter in the RECORD to call it to the attention of Senators so that it may be helpful as they get to the stage of discussion and to prepare for my testifying, which the Senator has consented to.

Otherwise, I have no objection.

Mr. LONG. I thank the Senator for his cooperation. This is a matter which will require the attention of the committee. It will require some study.

We feel there may be considerable outflow of capital and there may be serious problems if the interest equalization tax expires prior to the time we give the matter the consideration it deserves.

I thank the Senator.

The PRESIDING OFFICER. The question is on agreeing to the committee amendment.

The committee amendment was agreed to.

The PRESIDING OFFICER. The bill is open to further amendment.

If there be no further amendment to be proposed, the question is on the engrossment of the amendment and the third reading of the bill.

The amendment was ordered to be engrossed and the bill to be read a third time.

The bill was read the third time and passed.

The title was amended, so as to read: "An act to continue for a temporary period the existing suspension of duty on certain istle and the existing interest equalization tax."

Mr. LONG. Mr. President, I move that the vote by which the bill, as amended, was passed be reconsidered.

Mr. JAVITS. Mr. President, I move that the motion to reconsider be laid on the table.

The motion to lay on the table was agreed to.

ABM

AUTHORIZATION OF APPROPRIATIONS FOR FISCAL YEAR 1970 FOR MILITARY PROCUREMENT, RESEARCH AND DEVELOPMENT, AND FOR THE CONSTRUCTION OF MISSILE TEST FACILITIES AT KWAJALEIN MISSILE RANGE, AND RESERVE COMPONENT STRENGTH

The Senate resumed the consideration of the bill (S. 2546) to authorize appropriations during the fiscal year 1970 for procurement of aircraft, missiles, naval vessels, and tracked combat vehicles, and research, development, test, and evaluation for the Armed Forces, and to authorize the construction of test facilities at Kwajalein Missile Range, and to prescribe the authorized personnel strength of the Selected Reserve of each reserve component of the Armed Forces, and for other purposes.

Mr. FULBRIGHT. Mr. President, a parliamentary inquiry.

The PRESIDING OFFICER. The Senator will state it.

Mr. FULBRIGHT. Mr. President, was the amendment which I offered printed in the Record?

The PRESIDING OFFICER. It was.

Mr. FULBRIGHT. The purpose of the amendment I introduced is very simple. It would reduce the authorization for research development, test, and evaluation, by a total of \$45,614,000. This represents a 7 percent reduction in funds for the "military sciences" research category for each of the three Services and the Department of Defense, plus a 20-percent reduction in the authorization for the Defense Department's overseas research program, Project Agile, which is funded under a category labeled, "Other Equipment." The proposed reductions, by Service, are: Army \$11,893,000; Navy \$10,157,000; Air Force \$9,989,000; and the Department of Defense \$13,575,000. The purpose is to make a modest cutback in the Department's funding of Federal contract research centers—the so-called think tanks—other social and behavioral science research, foreign research, the Department's add-to-educational

program, project Themis, and research on counterinsurgency matters. The intent is to have the \$45 million reduction applied roughly as follows:

First, reduce the funding of the Federal Contract Research Centers by 10 percent, or \$27 million;

Second, reduce research in foreign institutions—colleges and universities, primarily—by \$2 million, or approximately one-third the program proposed;

Third, reduce counterinsurgency research, Project Agile, by 20 percent, or \$5 million;

Fourth, cut other social science research, performed by organizations such as the Hudson Institute by the remaining \$3 million; and

Fifth, hold the line on new starts under Project Themis by reducing the request by \$8 million—a 25-percent reduction.

Let me discuss each of these items briefly.

Last year the Committee on Foreign Relations began an inquiry into research activities of the Department of Defense that relate to foreign policy matters. That study, and followup inquiries, have convinced me that there is a great waste of the taxpayers' money in this field, that the Federal contract research centers are not under effective control by the Congress, that the Department of Defense is financing activities which are not properly its responsibility, and that the thinking permeating much of this research is likely to lead to a larger and larger military establishment and more Vietnams.

The basic problem was put very well by Adm. Hyman G. Rickover in testimony before my committee last year. He said:

There seems to me to be no effective check within the DOD on selection of research projects. I would suggest that only Congress can exert such a check on the DOD.

The DOD has been able to involve itself in research having only the remotest relevance to the problems encountered by the armed services—matters at no previous time, nor anywhere else in the world deemed to lie within the province of the defense function—just because it has the money; it has more money than any other public agency. It gets more money because the word "defense" has in itself an element of urgency. Whatever is asked in its name somehow acquires the connotation of a life and death matter for the Nation.

I believe that Congress should exert the "check on the DOD" Admiral Rickover suggested, by putting the brakes on this research.

There are 16 Federal contract research centers, or "think tanks," which, in fiscal year 1969, received \$263 million from the Department of Defense—a 4 percent increase over the previous year. According to information furnished our committee by the Department of Defense, these organizations, as a group, received 94 percent of their revenues from the Department of Defense last year; nine received 100 percent of their support from the Department of Defense. Only 1 percent of their revenues came from private sources. They are truly creatures of the Government, existing at the taxpayers' sufferance.

The committee's hearing record reveals little about the activities of these establishments and the Senate is, in effect, being asked to provide \$277 million on faith for their operations—a 5-percent increase over last year. There is, in fact, no listing in the hearings of the amounts to be allocated to each.

Upon completion earlier this year of an investigation of certain aspects of research work by nonprofit institutions, the General Accounting Office was sufficiently disturbed by what it found to recommend a Presidential study of the entire subject. The lack of real control over the "think tanks" is evident from this exchange between the Senator from Missouri and Mr. Charles Poor, Acting Assistant Secretary of the Army, during the hearings on this bill:

Senator SYMINGTON. That simply means you give a company so much money.

Mr. Poor. That is correct.

Senator SYMINGTON. But, of research, they don't know what they are going to find out. You give them so much money, and they do as much for that money as they say they can; is that right?

Mr. Poor. That is essentially correct. (p. 525, Armed Services Committee hearings)

Under such an arrangement, we now have a situation typified by a cartoon in a recent issue of New Yorker Magazine: Two strange looking natives are sitting on the ledge of a mountain peak and a bright-eyed American type, with briefcase and coat in hand, is eagerly climbing up to their perch. One native is saying to the other, "Don't look now, but here comes that pest from the Rand Corp. again."

Let us look at some of the projects being carried out by these Defense research organizations:

Here are a few planned by the Rand Corp., which last year received 93-percent of its total revenues from the Government, and in fiscal 1970 is slated to receive \$24 million from the Defense Department:

1. "Military Representation in U.S. Missions": \$40,000.

Official Description: Examine better methods of military representation in handling military aid in foreign countries, specifically India, Indonesia, Brazil, and Iran.

2. "Capabilities and Interests Study": \$150,000.

Official Description: An examination of U.S. interests, commitments, and capabilities required to meet future contingencies that threaten those interests.

Of course, one can easily see from these official statements that they are utterly meaningless, as that one is. One must get into these descriptions a little further.

Here is another:

3. "Project Management, Project Formulation, and Special Requests": \$165,000.

Official Description: RAND management of ISA-sponsored research formulation, and exploration of research relevant to ISA interests, and special studies that may be required on short notice.

Let us look at the Center for Research in Social Systems—the originator of the infamous Project Camelot. Last year 100 percent of its revenue came from the Defense Department and it is to receive \$2,100,000 next year for a payroll of 150 employees to carry out projects like these:

1. "Cultural Information and Analysis Center (CINFAC)": \$750,000.

Official Description: An information storage retrieval, analysis facility providing information services concerning foreign areas and cultures to qualified requestors.

2. "Internal Security": \$80,000.

Official Description: "Research on civil, paramilitary and military police operations related to overseas internal defense and development."

3. "U.S. Army Psychological Operations Requirements Worldwide": \$25,000.

Official Description: "Estimation of worldwide requirements for U.S. Army PSYOPS in time frame 1970-1977."

I might point out that CRESS, of American University, and the Human Resources Research Office, of George Washington University, either have severed, or are in the process of severing, their university affiliations, as a result of student protests over their activities. Here are examples of the research proposed for the human resources research Office, which is slated to receive \$4,300,000 from the Army in fiscal 1970:

1. "Development and Evaluation of a Southeast Asian Cultural Assimilator": \$23,000.

Official Description: "Complete assimilator and evaluate advantages and disadvantages of using this as a principal teaching vehicle."

2. "Program for the Development of Cultural Self-Awareness (COPE)": \$115,000.

Official Description: Design, production, and evaluation of program of audio-visual instruction for development of cultural self-awareness.

That sounds very good and it may be a fine project for the Department of Health, Education, and Welfare, or someone else, but I submit this type of activity is scarcely relevant to the mission, or function, as it is called, of the Military Establishment or the military forces of this country.

Mr. PROXMIRE. Mr. President, will the Senator yield on that point?

Mr. FULBRIGHT. Yes; I yield.

Mr. PROXMIRE. The Senator is referring to the design, production, and evaluation of a program of audiovisual instruction for the development of cultural self-awareness, for which \$113,000 has already been initiated and \$115,000 is planned for the coming fiscal year. Is that correct?

Mr. FULBRIGHT. That is right.

Mr. PROXMIRE. I did not hear the remarks of the Senator from Arkansas, but I wonder if this is a program which should be carried on by the Defense Department; and if so, why? How can the Defense Department use this for defending this country?

Mr. FULBRIGHT. The remarks I made are exactly to that effect. Perhaps the Senator did not hear them. I said that while the project may be justified for some other agency of the Government, I cannot, for the life of me, see its relevance to what I believe the mission of the Defense Department to be.

I have a further comment on that project, if the Senator would like to hear it. This is the Defense Department explanation. It is dated July 31, 1969:

The objective of this Human Resources Research Office research effort is to design, produce, and evaluate a program of audiovisual instruction for the development of cultural self-awareness, (i.e., awareness of

how a person's own thought processes and actions are influenced by his cultural background). COPE—

COPE is the code name for this project—

attempts to make Army personnel understand the influence of the American way of life on their own attitudes and actions in order to gain deeper insight into those of their foreign counterparts, thereby increasing the effectiveness of officers serving in U.S. military missions.

That may be a good project for some purpose, but it does seem to me to go very far afield from the objectives of a military establishment, which I thought was created to provide for the defenses of this country. This seems to me to be a form of rather sophisticated psychological instruction that would be worthy of Harvard or some other university.

Personally, I have great interest in the psychology of all of us. I am only questioning, with respect to most of these projects, whether it is a proper activity for the Department of Defense. I think it is an improper activity.

Mr. PROXMIRE. As I understand it, this program would not provide funds for assisting military officers in securing a greater cultural understanding, but would be a study as to how this would best be done. Is that correct?

Mr. FULBRIGHT. I think that is correct.

Mr. PROXMIRE. Would it be an attempt to study American culture, as to how one can best inculcate values into the hearts and minds of American officers?

Mr. FULBRIGHT. It would seem so; how they can be influenced. Then there would be other activities to attempt to apply what had been learned in research projects. The military, as the Senator knows, conducts very large operations in the exchange of officers with foreign countries, for example. That program is far larger than the civilian exchange program. It involves, I think, some \$70-odd million. The last time I looked at it, it was more than twice the size of the civilian exchange program under the Department of State.

In that military program, I would assume they would attempt to apply whatever they had learned of the psychological aspects of the effect of one's environment upon one's attitude. That may help influence their attitude.

I simply question very seriously that this is the kind of activity our Military Establishment ought to be engaged in.

Mr. PROXMIRE. I am wondering just how and when this information could be used. Could it be used in officers' candidate school? Is it to be used in officers' refresher courses? In what way would that information be used in inculcate a better cultural understanding on the part of our military officers?

Mr. FULBRIGHT. We have educational programs of that kind, of course. The Army War College is a quite sophisticated and highly developed educational institution. It brings every type of officer there. If anything were learned, I can imagine the War College might utilize this information, but it does not strike me as quite within the realm of the De-

partment of Defense to engage in this type of research.

If this is proper research, on that theory, I can think of hardly anything that is not within the scope of their activity. There are a number of educational projects which I do not say are not in themselves justifiable, under proper sponsorship; but I think the amount of money that is spent on this kind of research by the Defense Department is way out of proportion, and is not relevant to their mission.

Mr. PROXMIRE. I agree with the distinguished Senator. As he says, there are endless things they can do; and any amount of money could be justified if there were no limit to our resources and our funds.

But it would seem to me that to proceed on this kind of program, and some of the others that the Senator has listed and that are listed in the hearings, would be extremely hard to justify, in view of the limitation on funds with which we are all familiar. If we had to justify this in any other budget, the Senator can see how difficult or impossible to justify they would be.

Mr. FULBRIGHT. The Senator took the words out of my mouth. If these projects had been presented in some other agency's budget, they would have been gone over with a fine toothed comb; but because they are in the Defense Department and the word "defense" has a certain aura of urgency as well as an implication that our survival depends on it, anything goes.

Mr. STENNIS. Mr. President, will the Senator yield?

Mr. FULBRIGHT. Or practically anything goes, in this research area. Yes; I yield to the distinguished chairman.

Mr. STENNIS. Mr. President, there is no record of any request that the Senator's committee ever made to take over these matters. If the Senator will look at the bottom of page 47—

Mr. FULBRIGHT. Of the hearings?

Mr. STENNIS. Of the report. The Senate was forewarned. The report reads as follows:

The Committee believes measures should be taken to transfer a number of these efforts to other agencies for future fiscal years and that during the coming fiscal year the management of certain projects of interest to the Department of State, Arms Control and Disarmament Agency, the National Science Foundation, and other agencies should be taken over by those agencies particularly the Department of State.

If the Senator has an application list he wants to prepare, we would be glad to have him take any and all of them that he might wish. Then they would be scrutinized, and we would have the benefit of his opinion about them.

Mr. FULBRIGHT. As the Senator from Wisconsin pointed out, the trouble about that is getting the money. The only place you can get the money for these projects is in the Defense budget.

Mr. STENNIS. That would be up to the Senator.

Mr. FULBRIGHT. What I am trying to accomplish by this amendment—the Senator says it is up to me, and I hope he will support it—is that, if we can cut this money out of this bill, the money

will not be spent under Defense Department auspices, but would then be available for other justifiable activities. My guess is that much of this work is probably duplicated by other research in private institutions, but I have not looked into that question.

Mr. STENNIS. We cannot settle it on guesses. We have something definite here to recommend; if the Senate does not want it, that is all right.

Mr. FULBRIGHT. All right.

Mr. STENNIS. But after the hearing and the proof, we decided it would not be well just to throw it all out; so that is why it is here, and we hope next year it will be elsewhere.

Mr. FULBRIGHT. As I said to the Senator, we are not proposing to throw it all out, either, but I believe the Senator's committee is proposing increases, on some of these matters, increases over the amount budgeted.

Mr. STENNIS. Well, the Senator from New Hampshire will speak on that.

Mr. FULBRIGHT. Basically, I object to the Defense Department going beyond its proper activities simply because it has such appeal and such effective representation in both Houses of Congress that its officials can get all the money they want for whatever they propose. That has been true up to now. I admire the Senator from Mississippi for his effectiveness, as well as his predecessor, the Senator from Georgia, and the Representative from South Carolina (Mr. RIVERS). They have been able to get the money for these projects. That is as great a compliment as I can pay the Senator in this particular area. I know of no other committee that has been so successful.

All we are trying to do is to review these projects and programs in a way similar to the way we look at others, and bring them into balance, using the words the Senator from Mississippi used earlier. But the effort should be to balance our national program, rather than just to reach a balance within the Pentagon, as if that were the only program we had in our Government.

The Military Establishment, as I said this morning—is able to get a lot of money because we have been in one war after another, and we have had crisis after crisis. It is easy to create the impression that we are about to be overwhelmed by either the Chinese, the Russians, or perhaps the Biafrans, or Nigerians, or perhaps the Biafrans or Nigerians.

I do not think that is a good enough reason, but that is the only reason. I think the fact that the committee itself recommends some activities be transferred is good; but they do not recommend that we take the money along with it.

However, even if they do transfer them I still think there is a grave question whether, in times like the present, we ought to be engaging in a proliferation of research activities that have no immediate usefulness. Research is fine, and pure research is fine in certain circumstances, but we are in such difficult and straitened financial circumstances at the moment

that I think we ought to cut back on some of these things.

I yield to the Senator from New Jersey. Mr. CASE. Mr. President, the point of limited resources is a very important point. I think of equal importance, if the facts justify it, is the criticism of this practice based upon its tendency to give the Defense Department and the Defense Department planners a monopoly on intellectual opinion in the country, or at least an important segment of it—for example, the behavioral sciences, just as one, a field in which there are not enormous numbers of people, and in which it might be very possible to set a trend in research, in opinion, and then in opinion forming.

I am not suggesting a conscious effort to mold American opinion in this fashion, but the effect, it seems to me, is very likely to be the lessening of independent scrutiny by independent academicians, because there are not any more, or at least not sufficient numbers, because so many of them are tied in with the research sponsored by the Defense Department into many things which are probably in themselves very useful, but have very little bearing on the direct needs of the Department, properly conceived, and which have this insidious long-term effect.

Is that a possibility?

Mr. FULBRIGHT. I agree with the Senator. He has expressed very well, I think, one of the major considerations. We do not wish to turn this country into a militaristic state. We still believe it should be primarily a civilian state, with the Military Establishment supporting it. Continuing year after year with this sort of project will, I believe, have the tendency the Senator has mentioned.

I may say, in addition, that there has been considerable protest about this tendency during the past year. A delegation of students and professors from the Massachusetts Institute of Technology called upon me for advice about what their proper attitude should be with relation to the military activities in their university. This is a complicated matter. They were very proud of their university. They did not wish to have it known simply as a military agency, as a military department. That does not mean that they do not appreciate the work of the military or that they do not respect the uniform or are in some way critical of the military as such is quite wrong. That is not so.

As has often been pointed out, the Director of Research of the Defense Department and the men who are in that group and who really developed these projects, are not military men. Mr. John Foster is not a military man. He is a scientist. He is an energetic man, a physicist, whose training was in the laboratory. He has unlimited imagination, and he thinks of these things.

But the secret of proliferation is the availability of money. What we can do is to help to restrain that aspect.

Mr. CASE. Mr. President, will the Senator further yield?

Mr. FULBRIGHT. I yield.

Mr. CASE. The Senator has put his

finger on the key point. I agree that this is our responsibility. If we do not assume it, as in all the other major policy matters brought up by the bill, nobody else will.

Mr. FULBRIGHT. Nobody.

Mr. CASE. This is not a criticism of the standing committees of the Senate, specifically not of the Committee on Armed Services. The Committee on Armed Services cannot do this kind of job. No single committee of Congress can. This is the kind of thing that happens once every 6, 8, or 10 years. It happens more or less spontaneously because we sense the need to do it. The whole Senate is involved and the Senator from Arkansas is performing a most useful function in his talk on this particular subject.

Coming back to his specific amendment, it is a most undesirable situation in which a man of the caliber of Dr. Foster—and I am sure he is an excellent man—should be the person to whom one goes if he needs money for research. This in itself—the hope of this kind of thing, as well as its actual culmination or realization—has an inhibiting effect upon the academic community of the country, it seems to me.

Mr. FULBRIGHT. That is correct.

Mr. MCINTYRE. Mr. President, will the Senator yield?

Mr. FULBRIGHT. Yes, I yield to the distinguished Senator from New Hampshire.

Mr. MCINTYRE. When the Senator first digressed to talk about the project he had in mind, I did not quite understand him. Is it the audiovisual project that he is belaboring?

Mr. FULBRIGHT. Mr. President, I am not belaboring it. I am discussing it. It is called the Program for the Development of Cultural Self-Awareness.

Mr. MCINTYRE. Mr. President, I will be very brief. When the Armed Services Committee got into the projects concerning three very important areas—human performance, manpower selection and training, and the human factors involved—we found a great deal of sense in the projects and the plans. And, strange as it may seem, in many instances the decisions that were reached on these projects and the applications of the lessons learned were great money savers.

When we consider that we have 3.5 million Americans in uniform, when we conceive of the fact that there is a turnover of some 29 percent, when we consider the complexity of modern weapons, and when we think of what we can achieve when we are trying to come up with 100 or 1,000 radar operators, by giving the people who are applying for the positions a moderate test we can make certain that the ones undergoing the training would be more likely to be successful than if there were a hit-and-miss program.

I point out that we do have some areas that have been cut. However, when we came to the area of human performance and the areas of training and manpower selection, we found these programs to make a lot of sense.

We will be able to go along with some

of the others that the committee has already agreed to tone down. However, in this area it was agreed that it was good work and should be continued. That is funded at the level, I believe, of \$35 million.

Mr. FULBRIGHT. Mr. President, I can understand that if it is the only opportunity that a country has. Maybe eventually, if we consider the present policy, the only opportunity for a decent education will be in the armed services. But I had always assumed, and still hope, that in our country, which professes to be a democratic, constitutional, republican system, the best training of people is to be obtained in public or private schools.

Most of the 3.5 million men that the Senator mentioned are not professional soldiers. Most of them are nonprofessional soldiers, and I did not assume it was the function of the Army and the military to take these raw recruits and give them all kinds of education. They are assumed to have obtained a basic education in civilian life.

If we are going to go all the way to a military state, the Senator is correct. They ought to have the best possible educational opportunities, audio, visual, and every kind of education, and the military should take over the schools.

My point, and I think the point of the Senator from New Jersey, is that we think the Army and military affairs have a rather limited function—to defend the country with the manpower available, plus the professionals who are trained in West Point.

We are not saying that it may not be proper to have a program of psychological indoctrination at West Point or Annapolis for the officers. However, this is a research project. It is one that I would call pure research. It does not seem to be an example of what the Military Establishment should be doing unless we have a Military Establishment as the dominant influence within the country.

Mr. McINTYRE. Mr. President, I think the Senator from Arkansas has made it very plain already in his remarks that there should be a reduction of spending by the military in general. I think that across the board the Senators share this feeling. The committee is going to come in with a reduction of very nearly \$2 billion.

Mr. President, I agree with the Senator. We do not want America to become a military state. I do not think it ever will become a military state. However, I would not want overlooked the fact that one of the greatest services the armed services perform is giving occupational training to high school dropouts who have come into the service and sending them back after 3 years into his community. This does not apply just to the present time, in the Vietnamese situation. The armed services send the men back into their communities able to win gainful occupation.

I agree that we do not want the military to take over the education field. However, the military has done a fine job in training and educating many of our youngsters today.

Mr. FULBRIGHT. Mr. President, I have heard that said. If they cannot get the education in any other way, I suppose that is a good way to get it.

I am not sure—and only time will tell—whether that training is associated with other training which will, in effect, mean that our country will continue to follow policies of which I disapprove—policies of intervention around the world and the policy with which I often associate the former Secretary of State: that it is our duty to intervene and keep the peace around the world all by ourselves.

In my view, that is contrary to what I thought our policy was. We get into very deep foreign policy matters there.

I know that one of the fallouts of much of the military training will be a sense of discipline and, as the Senator said, the education of some of the dropouts. However, the great mass of the soldiers are not dropouts.

I would assume that the great mass of them, by far the majority of them, are the normal, best young men of our country who have gone to the best schools we have. And they have had what we will call a normal and successful education in their schools. They go to serve in the armed services for a limited period of time.

Nobody is complaining about that now. My complaint has never been leveled at the Army or the military as such. My complaint has always gone to the policies of the civilian policymakers of our Government in creating a situation like Vietnam.

However, that is all we hear. I think we are trying, as the Senator said, to bring some restraint into the military budgetary matters.

This is a relative matter. No one wants to cut out our armed services. We spend a lot more money now on the military than does any other country in the world, including Russia. And we spend a very high percentage of our national budget, perhaps 40 or 50 percent.

It goes up so fast that I cannot follow it. However, \$80 billion is what is proposed to be spent. This amounts to about 60 percent of the total budget when social security and all the other trust funds are not included.

Mr. McINTYRE. I thank the Senator from Arkansas for yielding to me.

Mr. FULBRIGHT. Another research center is the Research and Analysis Corporation, budgeted to receive \$10,800,000 to support 587 employees. Here is a sample of its projects to be paid for under this authorization bill:

1. "Strategic Analysis of Europe-1969": \$128,000.

Official Description: Includes studies of French foreign policy, European trade prospects, development of Siberia, and Soviet-Japanese trade.

2. "Strategic Analyses of Sub-Saharan Africa-1969": \$74,000.

Official Description: Includes studies of U.S. strategic interests, environmental trends, and U.S. policies and programs.

A study of French foreign policy, European trade prospects, development of Siberia, and Soviet-Japanese trade—it would strike me that if this is justified at all, or if we need it, this certainly would

be for the Department of State and/or the Department of Commerce. Why is this in the Department of Defense?

Studies of French foreign policy—well, perhaps it can be argued that the officers in the Department of Defense should have knowledge of French foreign policy. But studies or analyses of French foreign policy would necessarily, I would think, take place in the Department of State—unless the Department of State has gone so far that it is nothing but a small bureau within the Department of Defense.

I confess that the revelation to me just recently that the agreement signed by the prime minister of Thailand was not in the custody of the Department of State but in the Department of Defense did shock me a bit, as to the relative significance of the Department of State and the Department of Defense.

But I submit that this kind of study is not appropriate for the Department of Defense.

The list could go on indefinitely. Congress should make a start toward bringing the operations of these organizations under more effective control. The Committee on Armed Services is to be commended for putting a limit of \$45,000 on salaries for research center officers. It is a step in the right direction, but much more needs to be done. And a reduction in funds, I propose, is the best way to go about it. The salary of the head of one of these research centers was \$90,000 last year, when we discussed this matter on the floor of the Senate.

All Defense-financed foreign affairs research is not done by the "think tanks," by any means. The "think tanks" I mentioned are the research centers, of which I believe there are 16. Much of it is carried out by universities, other private research organizations, and even by military hardware manufacturers. The Hudson Institute, for example, received some 80 percent of its funds from the Defense Department in the last 2 years, according to testimony before the Foreign Relations Committee by a former institute president, Dr. Donald G. Brennan. Yet, it is not classified as a Federal contract research center. This is the organization which the General Accounting Office last year found had charged the Defense Department \$45,000 to \$52,000 per man-year for three research projects which turned out to be virtually worthless. Recent news reports indicate that the institute's latest contribution to the debate over Vietnam strategy is a plan which involves building a moat around Saigon. I ask unanimous consent that an article on this plan, published in the June 27 issue of the New York Times be printed in the Record at the end of my remarks.

That reminds me, I think they also had a plan not long ago to create a great lake in the middle of South America in order to provide communication between all the countries of South America. They were going to dam up the Amazon and have a lake that, I presume, would cover a large part of Latin America. I understand that it did not appeal to the Latin Americans.

Not long ago, Douglas Aircraft Corp. was paid \$89,500 to do a study for the Army, called "Pax Americana," which concluded, among other things, that

While the United States is not an imperialistic nation she exhibits many of the characteristics of past imperiums and in fact has acquired imperial responsibilities.

After trying, without success, to get the Defense Department to declassify the study, it developed that Douglas has printed the same study in unclassified form, for its own promotional purposes. It has gone on to do other research of this nature and recently completed a study for the Air Force, laying out scenarios for several possible conflict situations in which the United States might become involved, and spelling out the Air Force role in the peacekeeping eras that would follow these wars.

The principal Defense Department program of overseas research is project Agile, a series of highly classified projects relating to Vietnam and potential Vietnams. Over \$25 million is being requested for this program in 1970. I do not question the projects relating to Vietnam, no matter how far-fetched they may appear. If they help save one American life, well and good. But I do question the millions to be spent on projects involving other countries where the research is more likely to lead to American involvement in disputes which are none of our business. Unfortunately, the Senate cannot debate these projects on their merits since all information concerning this program is classified.

All too many of the studies listed in the justification data for project Agile and similar research indicate that the Pentagon planners have not learned any lessons from Vietnam, but that they are busily engaged in blueprinting strategies where our military will play the key role in trying to maintain order in a disorderly world. Lt. Gen. Betts, Chief of Army Research and Development, when asked about the Army's research involving foreign areas said:

We have a continuing need to build up a library of information that can be available to our military planners for any country in the world into which we might have to go.

That, I submit, is very reminiscent of statements which we used to hear from the Department of State.

So far, the Army has paid \$541,000 for 27 of these guides to countries where it "might have to go." Some of those countries are Afghanistan, Brazil, Colombia, Congo, Ghana, Iraq, Lebanon, Pakistan, Syria, and Venezuela; a varied list of possible involvements.

I may say that in the hearing the other day on foreign aid, I requested a representative of the Defense Department to supply the committee with any of these secret agreements which might involve our having to go into any of these countries or any other country. So far, I have not received any; but they have been put on notice that we are interested in them.

In May, I asked the Department of Defense for a number of a research reports, selected from the list of projects submitted to the Committee on Armed Services as justification for the 1970 budget request. I want to assure my colleagues that

the titles listed on pages 2209 to 2219 of the committee hearings, although often intriguing, do not give the full flavor of this research program. Only a reading of the actual reports filed reveals the type of information the Defense Department is getting for its money. For example, a project entitled simply "Ideology and Behavior," had this official description:

To provide empirically derived conclusions about ideological movements which support insurgency.

But the report filed on this project—furnished to me by the Defense Department—bears the following titles:

First. "The Attaturk Revolution in Turkey."

Second. "Gandhi, Non-Violence, and the Struggle for Indian Independence."

Third. "The Sinhalese Buddhist Revolution of Ceylon."

Fourth. "The Egyptian Revolution, Nasserism, and Islam."

Fifth. "Militant Hindu Nationalism: The Early Phase."

I must submit, Mr. President, it is incredible that we would spend money at this late date in the military department in studying the revolution in Turkey, which took place a long time ago. Mr. Attaturk was a very great patriot for his country. However, members of the Armed Services do not have to have benefits—

Mr. McINTYRE. Mr. President, will the Senator yield?

Mr. FULBRIGHT. I yield.

Mr. McINTYRE. I heard the Senator enumerate a number of studies. Is the Senator contending those are studies that are going to be performed with money authorized for fiscal year 1970, or is the Senator going back 4 or 5 years to dig up horrible examples? Is this for the fiscal year 1970 authorization?

Mr. FULBRIGHT. No. One cannot find out about 1970. We can only deal with reports that have been completed. This is a recent one. The study is not that old.

Mr. McINTYRE. It is not in fiscal year 1970.

Mr. FULBRIGHT. That is correct. They have us over a barrel, to begin with. So much is classified, such as the PAX Americana report. It was declassified by the Douglas Co.

I am talking now about activities in recent years, but not necessarily projects for 1970.

Mr. McINTYRE. The Senator spoke on the subject of military research in foreign institutions, colleges, and universities. Is that correct? Is that the area the Senator was talking about?

Mr. FULBRIGHT. Yes. In part.

Mr. McINTYRE. That is a part of the Senator's amendment?

Mr. FULBRIGHT. Yes. This is only a part of the purpose of my amendment.

Mr. McINTYRE. This is what?

Mr. FULBRIGHT. I have been talking primarily about the 16 research centers until now. The work I just listed is done in universities. The one I mentioned a moment ago, "Militant Hindu Nationalism," is an example of this research. The project started in 1966. It is supposed to run until the year ending 1971.

I started this particular passage by referring to universities and private insti-

tutions. We have already covered the think tanks.

Mr. PROXMIRE. Mr. President, will the Senator from Arkansas yield?

Mr. FULBRIGHT. I yield.

Mr. PROXMIRE. I should like to support the distinguished Senator from Arkansas and call the attention of the Senate to the difference between the amounts provided for many years to the National Science Foundation on the one hand for this kind of research, and the amounts provided for the Department of Defense.

I hold in my hand a table which shows Federal obligations for research, total Defense Department and National Science Foundation, fiscal years 1956 through 1959, which shows, for example, in the latest year, 1969, that the Department of Defense had \$1,658,000,000 for research in these areas and the National Science Foundation had only \$280 million.

Mr. FULBRIGHT. Will the Senator say that again, please?

Mr. PROXMIRE. The Department of Defense had, in 1969, \$1,658,000,000 as compared to only \$280 million for the National Science Foundation.

Mr. FULBRIGHT. For what purpose?

Mr. PROXMIRE. For obligations for basic applied research. I think that this makes the case clear. The problem is that whereas we have established a Science Foundation for the purpose of making the inquiries and making this research on a scientific basis, in the interest of science, on behalf of all agencies of Government, we provide the Defense Department with six to seven times as much as we provide for the National Science Foundation.

Mr. McINTYRE. Mr. President, will the Senator from Arkansas yield without losing his right to the floor, so that I may ask a question of the Senator from Wisconsin?

Mr. FULBRIGHT. I yield, with that understanding.

Mr. McINTYRE. The figures the Senator from Wisconsin has just stated, I assume correctly, were about \$1.4 billion, in fiscal year 1969, was it?

Mr. PROXMIRE. \$1.658 billion.

Mr. McINTYRE. The Senator says this was for research and applied, what?

Mr. PROXMIRE. Basic and applied research.

Mr. McINTYRE. I want to point out that in the Department of Defense when research is done, it covers testing and evaluation development as well as exploratory development, engineering development, and advance development. It all comes under the broad category of testing and evaluation.

Mr. PROXMIRE. Testing and evaluation development is not included in this figure. This is information which was procured from the Department of Defense itself, with the clear understanding, expressly on their part, that testing and evaluation would not be included.

Mr. McINTYRE. I hasten to say that something must be wrong with the Senator's figures because fiscal year 1970 shows a figure for research, so far as the Department of Defense is concerned, of \$600 million. It seems hardly likely that

in the last year, fiscal 1969, Department of Defense research, applied or otherwise, as the Senator says, went to a figure of \$1,658 million.

I think the comparison should be re-search.

Mr. PROXMIRE. I have three other tables—the second category of Federal obligations and for basic research alone—total Defense and National Science Foundation. For Defense, \$320 million; for National Science Foundation, \$274 million. Again Defense had more, not so disproportionate but substantially more for basic requirements than the National Science Foundation had.

The third table shows Federal obligations for research by agency and performer. Total Defense and National Science Foundation. This includes universities and colleges. It includes FFRDS, administration by universities and colleges that are administered by nonprofit foundations. It shows in every category that the Department of Defense had substantially more than the National Science Foundation.

Mr. MURPHY. Mr. President, will the Senator from Arkansas yield to me, so that I may be permitted to ask a question of the Senator from Wisconsin?

Mr. FULBRIGHT. I yield.

Mr. MURPHY. It is my understanding that the National Science Foundation reaches out into all areas of science where research and development is being carried on, keeps current on all of these matters and brings them together. It makes studies but is not involved to the same degree as is the Department of Defense in research and development on particular, or exact systems, let us say, that they believe they need.

Mr. PROXMIRE. May I say to the distinguished Senator from California that what I am talking about here is the fact that the National Science Foundation would not itself engage in this research, but would commission universities and nonprofit institutions to do it. The Senator knows that in California, Wisconsin, and most States the National Science Foundation has such programs.

Mr. MURPHY. I was merely attempting to point out that the need and conditions under which the Department of Defense operates I do not think would be similar to those under which the National Science Foundation operates, which might very well be a proper reflection of the difference in the amounts of money needed or provided. It is a case of comparing apples and oranges again.

Mr. PROXMIRE. With regard to nonprofit institutions, the National Science Foundation was funded only \$244,000 last year, as compared with \$26,886,000 for the Department of Defense. So here is a discrepancy of more than 100 to 1—\$26,886,000 for the Department of Defense as compared with \$244,000 for the National Science Foundation.

Mr. MURPHY. Here again an entirely different game is going on. I expect tomorrow to make extended remarks on some of the nonprofit foundations, the reasons for their existence, their objectives, the way they operate. We have a couple of them in my State, and over the years I have had the good fortune to go

to them and watch their operations and learn what they are doing. I think there is a reason for that great difference.

I thank the Senator for yielding.

Mr. PROXMIRE. I thank the distinguished Senator from California.

Mr. President, I conclude by saying that tables 4, 5, and 6 bear out in detail and document the point the Senator made.

I ask unanimous consent that, at the end of the remarks of the distinguished Senator from Arkansas, the tables may be inserted in the Record.

The PRESIDING OFFICER. Without objection, it is so ordered.

(See exhibit 1.)

Mr. PASTORE. Mr. President, will the Senator yield to me?

Mr. FULBRIGHT. I yield.

Mr. PASTORE. We have just concluded hearings on the National Science Foundation for this year. The Foundation is asking for \$500 million. The House cut that amount considerably. The Foundation is asking for a restoration of the amount cut. I would hope in the development tomorrow the fact as to whether there is any duplication here could be brought out. Is the Senator from Wisconsin intimating that possibly the Department of Defense is duplicating what the National Science Foundation is doing?

Mr. PROXMIRE. No. I appreciate the statement of the Senator from Rhode Island. I am trying to point out the disproportion between the amount that the Federal Government provides the National Science Foundation and the much greater amount it provides the Department of Defense for research. I do not contend there is any duplication.

Mr. FULBRIGHT. Mr. President, I want to take up the point raised by the Senator from New Hampshire about this particular project, how it was obsolete or out of date. Let me read the description. The description is:

Provide empirically derived conclusions about ideological movements which support insurgency. It started in fiscal 1966 and is to end in 1971.

So it is not an obsolete project. That project is called "Ideology and Behavior." There are the subtitles which I read. I think there were five of them. One of them I particularly mentioned dealt with Ataturk. The University of Massachusetts is in charge of it. It is called "Religion and Revolution: A Study in Comparative Politics and Religion, Technical Report No. 6, August 3, 1968."

That is just 1 year ago. That is the subhead, with the overall project—

Mr. McINTYRE. Mr. President, will the Senator yield?

Mr. FULBRIGHT. Let me finish it first.

It says:

Research supported by the advanced Research Projects Agency under order No. 883 and monitored by the Office of Naval Research, Group Psychology Branch, under contract NONR 3357(08), NR 177-907.

That is an example of what I mean when I say how far afield they go.

Mr. President, I yield to the distinguished majority leader with the understanding that the request he will make

will come after this exchange and that I do not lose the floor.

AMENDMENT OF HIGHER EDUCATION ACT OF 1956—UNANIMOUS-CONSENT AGREEMENT

Mr. MANSFIELD. Mr. President, there seems to be some interest in the bill (S. 2721) to amend the Higher Education Act of 1965 to authorize Federal incentive payments to lenders with respect to insured student loans when necessary in the light of economic conditions, in order to assure that students will have reasonable access to such loans for financing their education.

After discussing this matter with the most interested people, I think, I ask unanimous consent that, at the conclusion of the prayer tomorrow—and the Senate will convene at 10 o'clock tomorrow morning—there be a time limitation of 1 hour on the banking amendment to be offered by the distinguished Senator from Colorado (Mr. DOMINICK).

Mr. JAVITS. Mr. President, may I identify it?

Mr. MANSFIELD. Yes.

Mr. JAVITS. The amendment deals with section 2(a) (6) of the bill, appearing on page 7, lines 11 through 17 inclusive.

Mr. MANSFIELD. I ask unanimous consent that there be a limitation of 1 hour on that amendment, the time to be equally divided between the majority and minority leaders, or whomever they may designate; one-half hour on other amendments, and 1 hour on the bill.

Mr. FULBRIGHT. Mr. President, reserving the right to object, earlier in the day I was informed that the Senator from Oregon (Mr. HATFIELD) wanted to speak. Has this request been cleared with the Senator from Oregon?

Mr. PROXMIRE. If the Senator will yield, it was cleared with him.

Mr. FULBRIGHT. The Senator from Wisconsin or someone else told me he wanted to speak in the morning. We were negotiating whether I was going to speak or whether he was today.

Mr. DIRKSEN. Mr. President, there was no order.

Mr. FULBRIGHT. I raised this question because he discussed it with me. He did not delegate me to speak for him, although I thought he was owed that courtesy.

Mr. PROXMIRE. Mr. President, the Senator from Oregon expected to speak. He had a speech on peace through law, which relates directly to the bill, but I am quite sure he will be willing to speak directly after the vote.

Mr. FULBRIGHT. It does not make any difference to me.

Mr. STENNIS. Mr. President, reserving the right to object—and I do not object—let me ask the Senator from Arkansas if we can have an agreement now on a limitation of time with reference to his amendment. Would the Senator now entertain a unanimous-consent request along that line?

Mr. FULBRIGHT. Not until I finish my speech. I should have been through long before this. We passed three bills. Perhaps I should not yield so readily. I

over

am too easy. I have not got through my speech and it is not a long one, only 20 pages. I could have finished it in 30 minutes if I had not been interrupted. The chairman of the Finance Committee interrupted me, and now there is this request, and there were two others. When I finish I shall be glad to talk.

The PRESIDING OFFICER. Is there objection to the unanimous-consent request of the majority leader? Without objection, the order is entered.

The unanimous-consent agreement, reduced to writing, is as follows:

Ordered, That, immediately after approval of the Journal on Tuesday, August 12, 1969, the Senate shall proceed to the consideration of the bill (S. 2721) to amend the Higher Education Act of 1965 to authorize Federal incentive payments to lenders with respect to insured student loans when necessary, in the light of economic conditions, in order to assure that students will have reasonable access to such loans for financing their education, and that debate on the amendment to be proposed by the Senator from Colorado (Mr. DOMINICK) to Section 2 (a) (6), on page 7, beginning with line 11, shall be limited to one hour, to be equally divided and controlled by the majority and the minority leaders.

Provided further, That debate on all other amendments shall be limited to ½ hour, to be equally divided and controlled by the proponent of the amendment and the manager of the bill, or someone designated by him.

Ordered further, That debate on the bill shall be limited to one hour, to be equally divided and controlled by the majority and minority leaders.

ABM

AUTHORIZATION OF APPROPRIATIONS FOR FISCAL YEAR 1970 FOR MILITARY PROCUREMENT, RESEARCH AND DEVELOPMENT, AND FOR THE CONSTRUCTION OF MISSILE TEST FACILITIES AT KWAJALEIN MISSILE RANGE, AND RESERVE COMPONENT STRENGTH

The Senate resumed the consideration of the bill (S. 2546) to authorize appropriations during the fiscal year 1970 for procurement of aircraft, missiles, naval vessels, and tracked combat vehicles, and to authorize the construction of test facilities at Kwajalein Missile Range, and to prescribe the authorized personnel strength of the Selected Reserve of each reserve component of the Armed Forces, and for other purposes.

Mr. FULBRIGHT. Mr. President, without interruption, I would like to finish my speech. The Ataturk study is a fascinating one. I want to read some of the Ataturk study. This is the official summary:

SUMMARY

The Turkish Revolution led by Ataturk can be divided into two phases. During the first stage that began with Kemal's arrival in Anatolia in May 1919, religion and nationalism combined to provide the fervor and elan for a successful war of independence. The sovereignty of the Turkish nation was secured against foreign enemies and their domestic collaborators, and in October 1923 the Turkish republic was formally proclaimed. The second phase of this revolutionary upheaval lasted until Kemal's death in 1938 and involved a series of far-reaching political, legal and social reforms aimed at achieving the Westernization of Turkey. This program of radical reform deprived Islam of

its political role and resulted in the construction and consolidation of a secular Turkish state. Both phases of this revolution had roots in the Ottoman period; in some ways the revolution of Ataturk was the culmination of a process of gradual reform that had begun well over one hundred years before the collapse of the Ottoman empire.

ABSTRACT

Beginning with a brief discussion of the decline and fall of the Ottoman Empire, the report analyzes the interplay between Ataturk and the forces of religious traditionalism in the Turkish revolution. Special attention is given to the role of religion in the struggle for national sovereignty that ended in 1923. The report concludes with a brief discussion of the position of Islam in contemporary Turkish society.

That is a current study, as current as any of them can be. It is a part of an ongoing project called "Ideology and Behavior."

This may be perfectly proper for the Union Theological Seminary, but I say it has no place in a defense-supported research project, which taxpayers pay for, usually at three times the amount it could be done for at Harvard, Yale, or the University of Arkansas. I think it is nonsense, frankly.

Mr. McINTYRE. Mr. President, will the Senator yield?

Mr. FULBRIGHT. I yield.

Mr. McINTYRE. All these programs seem to begin in fiscal year 1966 and terminate either in 1970 or 1971.

Mr. FULBRIGHT. This particular group does.

Mr. McINTYRE. The group the Senator has mentioned.

Mr. FULBRIGHT. That is right.

Mr. McINTYRE. He says they are current. I say we are here considering the fiscal year 1970 budget. It is also very difficult for me to know in what area of the social behavioral science research field he is involved, but I assume it must be policy planning. I have to take a wild guess at that. All he would say is, this includes your FCRC's and your universities.

The first thing I wish to point out is that what I was concerned with on the committee was the amount of programs and projects we have in effect during fiscal 1970 programs and projects that we are initiating and have underway.

For the Senator's information, we took \$700,000 out of their \$6.4 million request. We cut this budget 11 percent. The Senator's amendment, as I understand, proposes a cut of some \$3 million.

This, as far as I can see, after a program has been as well scrubbed down as this one, would be so devastating as to bring it practically to a point of cessation.

Mr. FULBRIGHT. Programs of this kind ought to be ceased. That is the point I am making. I am not saying, "let us dispense with half of these." I have not read all of them, but I shall put the list in the Record at the conclusion of my remarks. They are descriptions of projects, and they ought to be ceased as a function of the Defense Department.

Mr. McINTYRE. What the Senator has done, of course, is pick out four or five, talking about Ataturk and Turkey, or some other things that had fancy names.

Mr. FULBRIGHT. No, those five are in one project.

Mr. McINTYRE. If the Senator will allow me to respond—

Mr. FULBRIGHT. Certainly.

Mr. McINTYRE. What he is doing is picking out four or five programs, singling them out for attention, and trying to cast innuendos about this very important part of the Defense Establishment.

Mr. FULBRIGHT. I certainly did not intend any innuendo. I intended to make a direct, flat statement that this is unjustified, unrelated, and ought to be stopped, as far as the Defense Department is concerned. What is the innuendo about that?

Mr. McINTYRE. The innuendo is that the Senator is going to put in the Record the list of the rest of the programs, but he is not going to read them out here.

Mr. FULBRIGHT. I will read them all, if the Senator prefers.

Mr. McINTYRE. I am ready to listen to them.

Mr. FULBRIGHT. The Senator is?

Mr. McINTYRE. Yes.

Mr. FULBRIGHT. Nobody else is. It will take a while to read them.

Mr. McINTYRE. We have heard about Ataturk. What else does the Senator have?

Mr. HART. Mr. President, will the Senator yield at that point?

Mr. FULBRIGHT. Yes, I am happy to yield.

Mr. HART. I ask the Senator from New Hampshire, why should we get the last chapter on Ataturk? Why do we not stop where we are?

Mr. McINTYRE. I think the simple reason is that the vastness of this program of research gets to the point where, if we are not on the subcommittee which is looking into the matter, we do not have time to sit down and have the definitive story told us on every one of these programs. Is it all right for the Senator to come in and say, "Let us cut them all out?"

Mr. FULBRIGHT. The Senator is quite correct, and that is why I say he certainly should not take this as a criticism, at all.

Mr. McINTYRE. I do not.

Mr. FULBRIGHT. He certainly does not have time to look into these. These are activities that have no business being before the Committee on Armed Services. Nobody in the Committee on Armed Services has ever taken the time to look into them. Neither has the Bureau of the Budget. I asked Mr. Schultze, the Director of the Budget, whether he had looked over these projects. He said, "No." This was when he was the Director, last year. I asked him in open session, before the Committee on Finance, and that is what he told us.

If the Senator would like, I will read a few more.

Mr. McINTYRE. I think the Senator should read a few more. I do not know what he is talking about.

Mr. SYMINGTON. Mr. President, will the Senator yield to me at that point?

Mr. FULBRIGHT. I yield.

Mr. SYMINGTON. First, Mr. President, I commend the able Senator from New Hampshire for the superb work he did as chairman of the subcommittee,

this year. I mean that with great sincerity. His subcommittee's effort and the report by the distinguished junior Senator from Nevada on technical airpower probably represent the finest work that has been done by this committee in a long time.

As I remember it, as a result of the work that was done by the able Senator from New Hampshire, in the taxpayers' interest, he has cut this budget by about \$1 billion; is that not correct?

Mr. McINTYRE. That is correct; and on this particular program we have cut it back 11 percent.

Mr. SYMINGTON. As I understand it, what the Senator from Arkansas is saying, after his investigation, is that he would like to take an additional \$45 million of this total budget, roughly; is that correct?

Mr. FULBRIGHT. That is correct. Spread over the various items, I stated it precisely in my opening comments.

Mr. SYMINGTON. So, therefore, what he is asking to take out of the research and development budget, after his study, is much less than one-half of 1 percent of what the able Senator from New Hampshire thought could be taken out, without affecting our national security.

I only mention that because I, too, was interested, a couple of years ago, in some of these problems. I believe they came up in a hearing of the Appropriations Committee, where there was a question about a considerable amount of money that was spent on a study of women divers in Korea. I questioned it, if the Senator remembers, and we were investigating why they did it. It turned out there was a pretty good reason: they dive in colder waters than divers in any other part of the world when they dive, I believe, for pearls.

I have not been present for most of this debate, but I think the Senator from New Hampshire has done a superb job in saving a billion dollars. We have been looking at these social sciences for a long time. If the Senator from Arkansas thinks he can add \$45 million to that \$1 billion, I would hope, the facts could be dealt with on their merits, and not through any impingement on an already superb accomplishment.

Mr. McINTYRE. The difficulty is that the Senator from Arkansas comes in with some of these choice ones. All of a sudden, somebody asks, "Why are we studying why South Korean women can dive in cold water?"

The reason we studied this was because it apparently had little effect on their hearing. The actual facts support the study, but the question itself casts aspersions on all the rest of the program.

The committee on which the Senator from Missouri serves, as he knows, cut \$700,000 out of this \$6.4 million, and brought it down to \$5.7 million. On top of that, the amendment of the Senator from Arkansas requests that we go further, and cut out another \$3 million, bringing it down to \$2.7 million. That is much too drastic, particularly in the face of the hard look we took at it.

Mr. FULBRIGHT. Mr. President, it depends on whether it is justified. If it is a big program that was proliferated

without attention from anyone, then it ought to take a hard look.

Let me point out that this is not new with me. A year ago when the bill was being considered, I raised the question on the floor with the Senator from Mississippi.

The Senator from Mississippi will recall that we discussed the matter. And he said that he was going to look into it and have a study made. I congratulate him because he did so. All I say now is that I do not think it went far enough, in view of all of the overall circumstances of the government and the nature of the studies and the fact that the studies have no relevance whatever to military responsibility. That to me is the determining thing. I do not actually believe that anyone at this late date should be spending much money on looking into Attaturk's experience.

This has been studied from A to Z. Everyone knows about it.

The Senator said this is a peculiar one. I do not see the relevance of the "Sinhalese Buddhism Revolution of Ceylon", which is part of the same project.

It seems to me unrelated to military function.

Mr. McINTYRE. Is that part of it?

Mr. FULBRIGHT. This is one of the five parts of the "Ideology and Behavior" study.

If the Senator wants a different one, here is "Changing Roles of the Military in Developing Nations."

This is a completely different project. The contractor here is CRESS, which is the research center associated with American University. This one is dated February 1969. That is about as late as we can have.

It is entitled "The Chinese Warload System: 1916 to 1928.

The author is Hsi-hseng Chi, assistant professor of political science at the University of North Carolina.

I will not read all of this just the foreword:

FOREWORD

This study was conducted under a program designed to encourage university interest in basic research in social science fields related to the responsibilities of the U.S. Army. The program is conducted under contract by The American University's Center for Research in Social Systems (CRESS), and CRESS in turn has entered into subcontracts supporting basic research in a number of major universities having a marked interest in one or more of these research fields.

The research program was formulated by CRESS in terms of broad subject areas within which research would be supported, with the scholars themselves selecting specific topics and research design and utilizing information normally available to academic and private individuals. Under the terms of the subcontract the authors are free to publish independently the results of such research.

In this study Hsi-sheng Chi describes the military aspects of the political contest for control of the central government in the context of the disorganized sociopolitical structure of China from 1916 to 1928. It was prepared at the University of Chicago's Center for Social Organization Studies under the supervision of Professor Morris Janowitz, principal social scientist for research conducted under subcontract between CRESS and the university.

The report is a useful corrective to the popular image of the Chinese warlords during this period of their greatest activity. The study points out that the warlords were not merely military men exploiting China's condition for private gain in their various domains, nor were they seeking to destroy or replace the central government in the classic pattern under which many Chinese dynasties have historically emerged.

To keep his study focused on the theme of the warlord system, the author chose not to deal with the activities of the incipient Chinese Communist Party during the 1916-1938 period.

I submit that kind of activity is unrelated to the Department of Defense. It is a kind of good will offering to various universities. I suppose, of course, that they would be appreciative of the Department of Defense and its good judgment.

That, as I say, is a different one. I have a lot of them. I do not think the Senator is interested in my reading them all.

The Senator will remember that my point is that these are not military-related investigations. They have nothing to do with the responsibility of the Department of Defense, so far as I am able to see.

I have not read all of the summaries.

Here is a long one in that same project on "Gandhi, Nonviolence and the Struggle for Indian Independence." It is a very interesting subject, but it has nothing to do, in my opinion, with the military department. And that is true of most of these.

I have a great variety of them here. I will have them printed in the RECORD at the conclusion of my remarks for people to read and determine their relevance to military responsibility.

I point out that I hope the Senator from New Hampshire does not take any of this as a reflection upon him or his case.

This has grown up over the past 25 years, just as a lot of this has, without any supervision. This is not the responsibility of the Senator from New Hampshire or of anyone else in particular.

It grew like Topsy. They had the money. There was a period during which we were so rich that we thought we could afford anything.

I confess to being a party to the distortion of our priorities. However, I now think that influence of the military in our Government has gone beyond all reason.

The Senator says that they cut this 11 percent. Is it not a fact that the budget had been increased over the past year's program by 5 percent?

Mr. McINTYRE. It was reduced by \$500,000.

Mr. FULBRIGHT. Under what figure? Mr. McINTYRE. In the policy plans, \$6.9 million.

Mr. FULBRIGHT. I think for the last 2 preceding years the budget request at least had been increased.

I am interested in an exchange program. It has been cut 67 percent in Western Europe. It has been practically eliminated. It was only \$56 million. And then it was \$46 million. It is now \$31 million. It is practically nothing.

But Department of Defense programs have gotten so big that they juggle around sums of \$700 million or \$500 million just as if it were a pittance.

Our Government loses its sense of perspective on military programs.

All I am trying to do is to bring this back into perspective. One way is to disassociate the Defense Department from sociological and ideological studies. They have nothing to do with it.

We could not do anything about the ABM, which we all grant to be defective, but it is at least a military program. These programs are not even military.

Mr. MCINTYRE. Mr. President, will the Senator from Arkansas yield, so that I may answer his question?

Mr. FULBRIGHT. I yield to the Senator from New Hampshire.

Mr. MCINTYRE. In fiscal 1969, the amount was \$6.9 million. This was reduced to \$6.41 million for fiscal year 1970. As I have said, that amount has already been reduced by the committee some \$500,000, to make the amount about \$5.9 million.

Mr. FULBRIGHT. The Senator is talking about two categories.

Mr. MCINTYRE. I am talking about policy planning studies. I am trying to keep the Senator in one avenue without going to others.

Mr. FULBRIGHT. My bill relates to the total for 1970. In the total of the items for social and behavioral sciences and research studies there was an increase.

But the point I make is that we do not want to go off on the assumption that we are dealing only with a slight cut in a perfectly valid program. I am actually raising a question as to the justification for practically all of this program. I should like to have gone further than I did, but I comprised my principles in the hope that I could get something done toward redirecting the research activities of the Defense Department to defense matters and taking it out of unrelated matters.

Mr. STENNIS. Mr. President, will the Senator yield?

Mr. FULBRIGHT. I yield to the chairman of the committee.

Mr. STENNIS. I appreciate the Senator's concern about this subject. I have already stated that our report suggests that we are going to undertake to transfer many of these items next year. In all sincerity, I propose to the Senator that he go through the hearings and pick out the items that he thinks should not be in the military section, and then of that group pick out the ones he thinks should come under the Department of State. If he will then join in an amendment taking them out of this bill, and if an authorization bill is required, he will have time in the Committee on Foreign Relations to hold hearings and purify the whole atmosphere. He can throw out the ones he does not want in this bill and then submit a definite report recommending an authorization.

Supplemental appropriation bills are coming along all the time. It is my privilege to be a member of the Committee on Appropriations. I will guarantee the Senator that I will fight to place in one of the supplemental appropriation bills any

appropriations he may have approved in an authorization bill. That will get to the heart of the matter. It is the best way to have it properly considered.

I urge the Senator to consider the proposal seriously. I am satisfied that our committee will not be able fully to satisfy the viewpoint of the Senator from Arkansas. I say that with all deference to him, but here is a chance, really, to satisfy him with respect to items that relate to the State Department.

Mr. FULBRIGHT. I appreciate the Senator's comments.

First, I may say that a number of these I do not think should be transferred anywhere, if they are to be done at all. If they have any validity, they would be done by places such as Columbia, Harvard, and so forth. They have nothing to do with the State Department or the Defense Department. But since we are talking about a particular bill—well, I have described them as best I can. I do not see why there is any need for the State Department to pay money for research involving Attaturk government; I really do not.

Mr. STENNIS. I see that.

Mr. FULBRIGHT. I do not think that is valid.

I certainly will take under consideration the suggestion of the Senator from Mississippi. I think he genuinely would like to see this reform. Last year he told me that he would. I sense that he is sympathetic to the objective. Of course, I realize that once these things become imbedded in a great program, it is not easy to get them out. It is very difficult, indeed.

Mr. HART. Mr. President, will the Senator yield?

Mr. FULBRIGHT. We are dealing with such vast sums when we get into the Pentagon and this appropriation, compared with all the others, that it is hard to get back a sense of perspective.

We voted, a moment ago, \$75 million just for what in political terms they call a slush fund, for no certain purpose; just a contingency fund. But the \$31 million I mentioned a moment ago is for a program that has been going on 20 years, for 41 countries; and the cutback imposed means the death of about half of those programs.

I yield to the Senator from Michigan.

Mr. HART. Mr. President, I am sorry that the able chairman of the Committee on Armed Services temporarily has had to leave the Chamber.

Mr. FULBRIGHT. He said he had a telephone call.

Mr. HART. But while the Senator from New Hampshire is in the Chamber, permit me to make a comment that reinforces the Senator from Arkansas' expression of appreciation to the Senator from New Hampshire which he voiced a few minutes ago.

To get this matter into perspective, to figure out where we are and how far we have come, and then to take up the problem of how much further we have yet to go, I turn our minds back more than a year ago to the day when this bill was before the Senate in 1968. It was in April of 1968. The Senate had just enacted the surtax, with its direction

that budgeted expenditures for that fiscal year be reduced by, I think, \$6 billion. At that time, the report of the Committee on Armed Services accompanying the authorization bill reminded us that the Department of Defense had to share the burden of disciplining itself with respect to expenditures.

I recall sitting in the Chamber. The Senate had just acted, as I recall, on an agriculture bill to which a number of us had sought to attach some money to feed children during the summer, when schools were closed but stomachs still functioned.

Leafing through the report of this committee, a year ago in April, to the caption "Research, Development, Test, and Evaluation," we discovered that there was not any disciplining of the Pentagon on research and development proposed last year; rather, they proposed to increase it some \$750 million, to close to a total of \$8 billion.

I recall asking the able Senator from Mississippi, who was handling the bill, why the increase. He said, "Well, some of it was bookkeeping adjustment." The actual increase proposed to be authorized was only \$508 million.

Mr. FULBRIGHT. A pittance.

Mr. HART. I offered an amendment at that time to hold the research and development figure at the then current level, which was somewhere between \$7 and \$8 billion. I am not sure precisely where it was.

The Senate—this indicates how far we have come—discussed that amendment for perhaps a couple of hours. I doubt that it was any longer. The Senator from Arkansas expressed a concern; others did. On a rollcall, the Senate rejected that amendment by three votes. So last year we were not able to hold the Defense Department to the then level of research and development spending authorized.

How far have we come? This year—and this goes to the contribution that the Senator from New Hampshire has made—the Committee on Armed Services itself has recommended a reduction of more than a billion dollars in research and development. That is progress in anybody's book.

Mr. FULBRIGHT. It certainly is.

Mr. HART. And it is largely a reflection of the leadership of the Senator from New Hampshire took to try to get hold of this massive, surging—I guess that is a good way to describe seven and a half billion dollars that is running around the country for research purposes—area. He has done, indeed, a magnificent job.

Mr. FULBRIGHT. I agree with the Senator.

Mr. HART. He is able to cut a billion dollars where the Senate itself last year would not support our effort to maintain the then level.

So, first, we should understand the progress that has been made. I am thinking about the ABM vote, comparing it with the vote a year ago on research and development, which we lost by three votes. Even Steven a few days ago on ABM. These defeats nonetheless have their long-term purpose.

Back to research and development: What is wrong with the effort now being made by the Senator from Arkansas, if in fact we can spot additional research and development which appropriately should not be charged to the Defense Department? An argument can be made as to whether somebody else should get the final chapter on Ataturk's government, not the Department of Defense. Why, if we can highlight the remaining research efforts which seem imprudent to authorize, should we not go ahead and do it? It, indeed, will be a very minor addition to the magnificent work of the Senator from New Hampshire, but it nonetheless will be some additional progress.

Mr. FULBRIGHT. I think the Senator has put it very well. I have said time and again that I do not mean any criticism of the Senator from New Hampshire—and the Senator from Mississippi, also.

Last year when I raised this matter—I confess that it was the first time I raised it—the Senator from Mississippi said, "I am going to look into it and make an effort." He did look into it. And he, with the Senator from New Hampshire, made a good effort.

I am trying to go further than that. Of course, we want to save the money, but I feel that to go into this area, for the military to do so, gives a wrong direction to our life. It gives a wrong impression to our university people, to our young people, and to other people of the militarization of the life of this country.

The Senator from Mississippi made a very moving statement this morning about our security.

I do not disagree with him about security. I only state that there is a lot more to security than simply military hardware. The health of our internal educational system, the health of our internal social system in all its aspects, our economy, all of it, are a part of it. A strong security stance cannot be maintained if justice is not done to the rest of our society. It is one entire ball of wax. It is not only defense. I think we have gone so far because of these recurrent crises in the foreign field involving military action that we have gotten our sense of perspective a little out of focus.

Here is one aspect of it that I do not think for a moment would harm our defense posture. I do not think the projects we have studied add one iota to the defense of this country. I think that is wrong.

I have said I have been guilty in the past of taking the attitude that our colleges and universities have been starved and needed to get money for the vast number of new students; that if the only way they could get it would be to take a handout from the Pentagon I would not complain too much. I have always supported Federal aid to education.

However, I have come to reconsider that approach for a variety of reasons. One of the main reasons is to get away from this attitude that the military has an undue influence in our universities. I have told about the visit of the students from MIT. Senators know about the riots. One aspect has been the fear on the part

of students that the military dominated our society. I realize that the war has contributed to the situation. This is only one little segment of Defense activities I am talking about. It is not much we are asking.

As the Senator from Michigan said, "You have done a good job, but I think you can go further in these restricted areas." The amount is small. I hesitate when we deal with big sums.

I feel I am nit-picking when I ask for a cut of \$45 million. On the other hand, the Senator from South Dakota and I would love to pick up \$5 or \$10 million to keep the exchange program alive. In that context it is a lot of money. To contemplate you could get that amount here for that program is beyond anyone's dream. Forty-five million dollars is a large sum of money, except with respect to the Pentagon, there it seems small.

I suppose people think I am nit-picking to save \$45 million. But in addition to that I would like to get the Pentagon out of the business of subsidizing our liberal arts institutions. I used to think it would be a good idea because they were so poor they could use some help from the Defense Department. However, I feel the military has become too powerful in our entire society.

I am not trying to engage in commercialism, but I picked up *Look* magazine this week and most of it is devoted to the subject.

I would like to make a small contribution toward the rehabilitation of this country, and of returning to a humane society where the military has a place—but not the dominant place—in the Government.

I think this research program is an important area because much of it is in the academic field. What we do on programs like this will have much to do with the attitudes of this and future generations. That is the best explanation I can give.

Under the leadership of the Senator from New Hampshire we have made progress and I think we can make more progress.

I shall complete this part of my speech and insert in the *RECORD* the remainder of these projects. I might mention a few others in case anyone thinks that is the only one I have.

Mr. McINTYRE. Mr. President, will the Senator yield?

Mr. FULBRIGHT. I yield.

Mr. McINTYRE. Regarding the \$700,000 cut that the committee recommended in this area against the \$6.4 billion request, is it not possible that all those horrible examples may be the ones to go under the knife that the Department of Defense will cut out?

Mr. FULBRIGHT. I hope so.

I will describe a few of the others.

Another project, entitled "Social Change as a Result of Modernization," was designed, the description stated:

To determine most effective uses of DOD aid to developing nations so that conflict between traditional cultural values and pressures toward modernization are minimized.

The completed reports on this project are entitled:

1. "Institutional Obstacles to Industrial Development in Peru"
2. "Peruvian Managers Opinions on Problems of Industrialization"
3. "Some Advantages and Disadvantages of Small Scale Industry in a Highly Industrialized Economy"
4. "The Decline in Paternalism Among Peruvian and Japanese Laborers"
5. "Mutual Obligations Between Management and Workers in Peru"
6. "Some Organizational Adaptations to Labor Problems in Peru"

With respect to Peru it was no more than a couple of months ago, I believe, that the Peruvian Government invited our representatives to leave the country. Senators will recall the furor in Chile in connection with Camelot. I believe believe these activities contributed to the deterioration of our relations with these countries. These studies may have some intellectual value. I doubt that they are relevant to anything. We know that in Peru our relations recently hit an all-time low. Certainly research activities like this do not help the situation.

Mr. McINTYRE. Mr. President, will the Senator yield?

Mr. FULBRIGHT. I yield.

Mr. McINTYRE. That is an excellent study that the State Department might be interested in. It was in the area the chairman said he would like to transfer many of these programs. It might do the State Department good.

Mr. FULBRIGHT. I do not know what they have relevance to. I do not know what use the State Department would have of it, outside of a scholar writing a thesis for a Ph. D. Anything can have relevance to that.

After receiving a vast number of these completed research reports, I asked the Department of Defense to tell me how much each cost. After a month and a half of deliberation, the Department, in a letter of July 24 from Dr. Foster, finally told me that it did not know.

Any effort to isolate a cost figure for a given report would be arbitrary and probably would not represent the actual costs involved—

Dr. Foster's letter said, adding—nor would a cost estimate represent a measure of the payoffs from the research.

I can well understand the Department's reluctance to put a price tag on, or try to assess the military benefits of, a report like "The Ataturk Revolution in Turkey." How can the Senate, or the public, be expected to assess the value of this research when neither we nor the Department of Defense knows how much it costs? I ask unanimous consent to have the letter printed in the *RECORD*.

There being no objection, the letter was ordered to be printed in the *RECORD*, as follows:

• DIRECTOR OF DEFENSE RESEARCH
AND ENGINEERING,
Washington, D.C., July 24, 1969.

Hon. J. W. FULBRIGHT,
Chairman, Committee on Foreign Relations,
U.S. Senate, Washington, D.C.

DEAR MR. CHAIRMAN: This letter is in response to your request of June 10, 1969, for the costs of the individual research reports sent to you on 4 June 1969.

The reports which you received were produced from projects designed to provide a number of outputs of significance to DoD

including: (1) a variety of technical reports and papers, in addition to a major final report covering the research and studies undertaken; (2) interchange between DoD officials and technical personnel in a position to lend an outside perspective to DoD problems; and (3) continued development of research results and capabilities relevant to DoD responsibilities. Funding of these projects is based on a total project cost, with such multiple outputs anticipated. Any effort to isolate a cost figure for a given report would be arbitrary and probably would not represent the actual costs involved. Nor would such a cost estimate represent a measure of the payoffs from the research.

In the case of projects not yet completed and for which only interim reports are available, significant results can be expected in the future. In the case of completed projects, the final report represents only a portion of the total output. For example, in one project funded over a period of 9 years, a total of 29 technical reports, 12 scientific journal publications, and significant contributions to a book were produced in addition to the final report which you received.

The total funding to date in the projects represented by the reports you requested was \$11,530,408, covering a period of more than 15 years.

If you desire any further clarification on this matter, please let me know.

Sincerely,

G. L. TUCKER,
(For John S. Foster, Jr.)

Mr. FULBRIGHT. Mr. President, the proliferation of Defense-supported research in foreign areas is illustrated by what has taken place in Thailand. The research bibliography for Thailand is 63 pages long and lists 508 separate reports. Much of this research was really foreign aid and should have been charged as such. The General Accounting Office recently found that in a country in South Asia, whose name I cannot use because of the security classification put on by the Defense Department, the Department had undertaken to spend \$4.2 million on nine social science research projects which the GAO believes should have been charged against foreign aid. I do not believe that the Department of Defense should dispense foreign aid through a research program.

Mr. MCINTYRE. Is not the Senator talking about some past history? Are not these programs which were years ago?

Mr. FULBRIGHT. There is no way for me to foresee the future. All I can talk about is past history and what has been done. If I were a prophet and could tell the Senator what is going to happen next year, I would talk about it, but the Senator knows I can talk about only that which has happened.

Mr. MCINTYRE. The Senator is talking in a foreign area, regarding security. This area is less than a \$1 million figure. There is also less than a \$1 million figure for Korea and Thailand. That is for fiscal 1970. What the Senator is talking about happened a year or two ago.

Mr. FULBRIGHT. I have a list in my hand right now. I am glad to show it to the Senator. It is secret. It concerns Project Agile. If the Senator will come over here, I can show it to him because it is against the law for me to read it into the record. It is a research project. I am not at liberty to talk about it.

Mr. MCINTYRE. Not the Agile program.

Mr. FULBRIGHT. It is a current program. It is not past history. Here it is.

Mr. MCINTYRE. The Agile program is a counterinsurgency study.

Mr. FULBRIGHT. It is called that. The GAO, as I told the Senator, says it looks like foreign aid. We can make a play on the words about it. If it were actually foreign aid—and that is what it is, at least the GAO thinks it is, and it strikes me that way too.

Mr. MCINTYRE. If the funds are cut, this program will have to bear the brunt of that cut.

Mr. FULBRIGHT. I am glad to hear that, but if the Senator wishes to look at this specific thing I am questioning, it is right here. It is secret. It tells the situation and some of the things that we cannot mention the precise name of. I can assure the Senator that this is not dreamed up. As to the statement about Thailand, the Senator does not question that, I believe.

In the next fiscal year the Department of Defense proposes to spend \$7,547,000 on research about foreign areas. Yet only \$125,000 is budgeted for external research by the agency responsible for our Nation's foreign affairs, the Department of State. The entire budget for the State Department's Bureau of Intelligence and Research is only two-thirds the \$6.2 million budgeted by the Defense Department for foreign policy research. It is obvious that the Department of Defense is involved in many research activities simply because it, and not the Federal agency with proper jurisdiction, has the money available. Although the Armed Services Committee has recommended that efforts be made to transfer some of this research to other agencies, particularly the Department of State, I believe it will find that much of this work is of no interest to other agencies when they must foot the bill.

Another aspect of the military research program which merits a drastic reduction is research carried out by foreign institutions, primarily colleges and universities. According to the Defense Department, 440 research projects are now underway in 44 foreign countries throughout the non-Communist world. The sum of \$5.7 million is budgeted for foreign research in 1970 and a staff of 100 Defense Department employees is stationed abroad just to look after the program. There is trouble aplenty over military research being carried out in our educational institutions and there is no need to ask for the same kind of trouble in 44 other countries. A compelling need in our foreign affairs today is to make the American presence abroad less visible; we do not accomplish that by linking foreign universities to our Military Establishment.

Finally, I wish to mention a specific aspect of Defense Department research arrangements with American universities. Of the top 500 defense research contractors, 99 are educational institutions and the Defense Department's 1970 budget for university research would be increased by 20 percent over last year, to a total of \$306 million. But I wish to discuss only one small part of that effort, Project Themis, the Department's

program to build up the science departments, physical and social, of universities around the country which do not now do much research for the military. The budget request for Themis is \$33 million, up 12 percent over 1969, and will support continuation of 92 projects at 52 universities and colleges, plus allowing initiation of an additional 25 projects. Admiral Rickover, in discussing this project last year said:

Now it seems to be the most farfetched reasoning to conclude that it is the Department of Defense that must help develop these sciences and train these scientists. The result of a project like Themis is that there will be university professors who get additional money besides their university salaries—money given them by the Department of Defense and therefore to some extent beholden to the military. This strikes me as most undesirable.

Project Themis could be cut back drastically with no ill effects to the Nation's defense posture. The Department of Defense is not the proper agency to provide Federal aid to education.

Mr. President, our constituents are growing increasingly bitter over continued increases in taxes, waste in defense spending, and the lack of funds for urgent social needs. We have just passed a bill to extend the 10-percent war tax. I believe that we owe it to the taxpayers to eliminate all unnecessary spending and that these Department of Defense research activities should receive the same critical questioning they would receive if they were being financed by other Government agencies.

The committee has recommended an 8-percent cut in the military sciences item, the funding source for most of the programs I have discussed. This is but a slap on the wrist and I think that the circumstances call for a more meaningful reduction in nonessential research activities. I propose that the Senate cut this category by an additional 7 percent to, in effect, impose a 15-percent surtax on these programs, with the cuts to be allocated between the Federal contract research centers, particularly the non-physical science activities of these organizations; other social and behavioral science work; foreign research; and Project Themis. My amendment would also reduce by \$5 million the funds for Project Agile, the overseas research which is funded under the "Other equipment" category.

It cannot be said that the amendment ties the hands of the Defense Department since each Service will be left with considerable flexibility to distribute the cutback within these general areas. I might add that, under provisions of this bill, the Department of Defense will still have a \$75 million emergency fund to play with, if the Senate's action today is held up in conference. This is still half again as much as was voted last year.

It is time that the Senate took a hard look at what the taxpayers' money is being spent for in the Defense research program. This amendment is but a small step—but it is a step in the right direction.

I urge the Senate to adopt it.

Mr. President, I ask unanimous consent that an article in the June 27 issue of the New York Times, entitled "Think Tank Offers Modified Policy For Vietnam," to which I referred in my comments, be printed in the RECORD: and in addition the summaries of a number of other recent research projects of the type I have been discussing.

There being no objection, the material was ordered to be printed in the RECORD, as follows:

"THINK TANK" OFFERS MODIFIED POLICY FOR VIETNAM

WASHINGTON, June 26—A proposal for a modified strategy in Vietnam, conceived by a "think tank," is circulating at high levels in the Nixon Administration.

The authors of the plan, at the Hudson Institute in Westchester County, N.Y., are said to maintain that it could cut American casualties to a handful, make the war "acceptable" in the United States and either increase chances for a peace settlement or offer a long-term chance of "winning" the war.

The proposal includes a reduction of American forces to 100,000 or 200,000 men by the middle of 1971, reliance only on volunteers, extension of the tour of duty to two years for each soldier and construction of new types of "death-belt barriers" around Saigon and along the Cambodian border to block infiltration. It also calls for new combat tactics.

Officials said that the institute's proposal had grown out of a series of studies in Vietnam financed by the Defense Department. The principal architect of the new approach is Herman Kahn, a witty, rotund physicist who made his reputation as a nuclear-war strategist.

BROAD RANGE OF STAFF

The Hudson Institute, situated at Croton-on-Hudson, is a small, independent organization that makes analytical studies for Government departments and private industry. Its staff includes physicists, economists, social scientists, mathematicians and former members of the diplomatic, intelligence and military services.

Administration officials who have attended briefings on the plan in recent weeks at the Pentagon, The State Department and the White House say it combine old and new ideas in a wide-ranging package that has "considerable appeal."

One official said that while it was unlikely the whole package would be carried out, some of the ideas were "being woven into the fabric of our strategy." He declined to say which ones.

Reached by telephone today, Mr. Kahn said it would be "inappropriate" for him to discuss the plan. But others who have heard his briefings filled in some details.

The Hudson plan would cut the present force of 540,000 American servicemen in Vietnam over the next two years to a strength of 100,000 to 200,000. Half of these would form a strategic reserve force of two to three combat divisions that would be pulled back to the coast. It would be available primarily to reinforce South Vietnamese troops if North Vietnam suddenly moved a large new invasion force into the country.

MORE SPECIAL FORCES URGED

The rest would be in tactical fighter squadrons, helicopter companies, long-range artillery batteries and logistics units. Their job would be to support the South Vietnamese military units that would take over the principal burden of fighting the war.

This breakdown is similar to the concept already tentatively accepted by the Administration in its long-range planning, officials say.

But the Hudson plan differs in some details. For example, it would double or triple

American Special Forces units in Vietnam to build larger units of irregular Montagnard tribesmen to roam the desolate border regions of the country, harassing enemy troops. At present, the Administration is cutting down on Special Forces as more and more of the irregular units are turned over to South Vietnamese leadership.

The Hudson plan would deemphasize large-unit sweeps through enemy base camps, substituting many very small patrol actions lasting several days each. When a patrol found an enemy force or camp, it would call in air strikes and artillery fire.

Most large South Vietnamese military units would be drawn back toward the populous coastal plain. There they would provide a screen behind which local troops and a much enlarged police force would provide greater security by setting up thousands of night ambush positions to catch enemy guerrillas and agents trying to slip in or out of the populated regions and to root out the Vietcong's undercover agents in the villages.

Mobile reaction forces would be put on call around the clock to reinforce any position that was attacked by a sizable enemy force.

A novel part of the plan calls for construction of two deep fortified canals. One would run along the Cambodian border from the Gulf of Siam to a point west of Saigon where it would veer eastward and connect with a similar canal around the periphery of Saigon.

The earth dredged from the canals would form a bank 50 yards high. Two chainlink fences would be built, one on the canal side of the slope, the other along the top of the bank. The far bank of the canal would be fortified with barbed wire, minefields and electronic sensors. Heavy air strikes and artillery barrages would be brought down at any point where an attempt was made to breach the barrier.

SOCIAL CHANGE AS A RESULT OF MODERNIZATION

Description: To determine most effective uses of DOD aid to developing nations so that conflict between traditional cultural values and pressures toward modernization are minimized. Transfer to non-DOD agency under discussion.

Contractor: Kalamazoo College.
Fiscal Year: Start 1966; end 1970.
Cost: Unknown.

PERUVIAN MANAGERS' OPINIONS ON PROBLEMS OF INDUSTRIALIZATION

(By Stillman Bradfield, Kalamazoo College and Anibal Del Aguila Peru-Kalamazoo Project, 1967)

Abstract

This paper contains a brief analysis of part of a questionnaire administered to 100 graduates of an executive development program in Lima, Peru. They were employed in many different sectors of the economy, and half were at least part owners of the company where they worked. It focusses on managers' opinions as to the major problems they face on their jobs, and their opinions as to the major obstacles to industrial development in Peru. The most important single on-the-job problem they identified was in the area of finance, followed by production and sales. In general, they did not perceive accounting, industrial relations, administration and organization, or government regulations and controls, as important problem areas in their companies as compared with the first three mentioned. A closer examination of the problems within these areas indicated that they felt that most of them were outside their area of control, and most commonly outside the influence of the company.

SOCIAL CHANGE AS A RESULT OF MODERNIZATION

Description: To determine most effective uses of DOD aid to developing nations so that

conflict between traditional cultural values and pressures toward modernization are minimized. Transfer to non-DOD agency under discussion.

Contractor: Kalamazoo College.
Fiscal Year: Start, 1966; End, 1970.
Cost: Unknown.

SOME ADVANTAGES AND DISADVANTAGES OF SMALL-SCALE INDUSTRY IN A HIGHLY INDUSTRIALIZED ECONOMY

(By Stillman Bradfield, Kalamazoo College, and Anibal Del Aguila, Peru-Kalamazoo Project, 1967)

This work was carried out under financial support from the Advanced Research Projects Agency, Department of Defense. The contract with Kalamazoo College is administered by the Group Psychology Branch of the Office of Naval Research.

Abstract

The survival of many of the small scale manufacturers in Kalamazoo is explained in terms of the special flexibilities and opportunities they possess which enable them to isolate themselves from the competition of larger producers, and occupy a special niche in the market. Close, personal contact between the owner-manager of a small manufacturing plant and his employees, suppliers and customers enable him to give special attention when required, and also to be able to obtain good technical advice when needed. Inefficiencies resulting from a lack of specialization of personnel are in part compensated for by the costs avoided when the manager fulfills all of these functions himself.

SOCIAL CHANGE AS A RESULT OF MODERNIZATION

Description: To determine most effective uses of DOD aid to developing nations so that conflict between traditional cultural values and pressures toward modernization are minimized. Transfer to non-DOD agency under discussion.

Contractor: Kalamazoo College.
Fiscal Year: Start, 1966; End, 1970.
Cost: Unknown.

THE DECLINE IN PATERNALISM AMONG PERUVIAN AND JAPANESE LABORERS

(By Stillman Bradfield, Kalamazoo College, 1968)

This work was carried out with financial support from the Advanced Research Projects Agency and The Wenner-Gren Foundation. The Contract with Kalamazoo College is administered by the Group Psychology Branch of the Office of Naval Research.

Abstract

This study compares questionnaire responses of Peruvian and Japanese laborers with respect to their opinions of their duties to their companies and their companies' obligations to them.

Workers in both countries see management as obliged to continue employment of workers regardless of the economic situation. Similarly, workers in both countries expect paternalistic treatment by the company where this is to their economic benefit, in such areas as recreation, vacation, savings, housing, etc. However, Peruvians were generally more willing to return traditional loyalties to the company than were the Japanese.

In both countries the trend seems to be away from paternalism, especially on work issues. Workers of both countries are willing to continue recognizing traditional status obligations in off-job areas where there are no economic costs. Where the costs fall to the company, paternalistic treatment is still favored. Workers in both countries, but more so in Peru, are pressing for more participation in the decisions that affect how they carry out their jobs.

August 11, 1969

SOCIAL CHANGE AS A RESULT OF MODERNIZATION

Description: To determine most effective uses of DOD aid to developing nations so that conflict between traditional cultural values and pressures toward modernization are minimized. Transfer to non-DOD agency under discussion.

Contractor: Kalamazoo College.
Fiscal Year: Start, 1966; end, 1970.
Cost: Unknown

SOME ORGANIZATIONAL ADAPTATIONS TO LABOR PROBLEMS IN PERU

(By Stillman Bradfield, Kalamazoo College, 1969)

This work was carried out with financial support from the Advanced Research Projects Agency and the Wenner-Gren Foundation. The contract with Kalamazoo College is administered by the Group Psychology Branch of the Office of Naval Research.

Abstract

Owing primarily to rigidities in labor-management relations, a number of Peruvian industries are moving toward a system of subcontracting for major services. This passes on many of the labor relations headaches to smaller companies, and leaves the principal company in a more flexible position, viz a viz changes in market demand for its product. The system also provides advantages for the subcontracting companies and quite possibly for the country as a whole. It provides a mechanism by which capital can be attracted into industry, the maximization of managerial resources in the country, and the development of new entrepreneurial talent.

SOCIAL CHANGE AS A RESULT OF MODERNIZATION

Description: To determine most effective uses of DOD aid to developing nations so that conflict between traditional cultural values and pressures toward modernization are minimized. Transfer to non-DOD agency under discussion.

Contractor: Kalamazoo College.
Fiscal Year: Start, 1966; end, 1970.
Cost: Unknown.

INSTITUTIONAL OBSTACLES TO INDUSTRIAL DEVELOPMENT IN PERU

(By Stillman Bradfield, Anibal Del Aguila, September 1966)

Introduction

The Peru-Kalamazoo Project is a two-year project doing a comparative study between similar industries producing the same product, on the same scale, with the same technology in both Peru and in Kalamazoo, Michigan to specify as nearly as possible the institutional obstacles to industrial development in Peru. We will be concerned with the following questions:

(1) To what extent do the same technology and scale of operation require the same work organization and behavior in two different countries at different stages of development?

(2) To what extent are work organization and behavior in industry affected by different sets of institutional conditions operating in the society at large?

(3) In what ways do these sets of institutional influences either promote or impede the industrial development of Peru?

This report is concerned with giving some of the results of our first two and a half months of field work. This has been an exploratory stage in which we have been concerned with visiting 25 industrial plants in 20 different industries, and talking with businessmen, engineers, and labor leaders as to the problems they face in carrying out their jobs. We also attended a number of conferences and meetings with engineers,

businessmen, government officials, and labor leaders.

SOCIAL CHANGE AS A RESULTS OF MODERNIZATION

Description: To determine most effective uses of DOD aid to developing nations so that conflict between traditional cultural values and pressures toward modernization are minimized. Transfer to non-DOD agency under discussion.

Contractor: Kalamazoo College.
Fiscal Year: Start, 1966; end, 1970.
Cost: Unknown.

MUTUAL OBLIGATIONS BETWEEN MANAGEMENT AND WORKERS IN PERU

(By Stillman Bradfield, Kalamazoo College, 1968)

This work was carried out with financial support from the Advanced Research Projects Agency and the Wenner-Gren Foundation. The contract with Kalamazoo College is administered by the Group Psychology Branch of the Office of Naval Research.

Abstract

This paper compares questionnaire response of management and labor sectors in Peru on their opinions as to the duties of the worker and the company's obligation to the workers. There is surprising agreement between the management and labor groups interviewed on important issues, such as: that the incompetent worker should be fired; that impersonal, objective criteria should be used in selecting new workers; that reasonable working rules should be strictly enforced; that high quality norms should be insisted upon; and, that supervisors should try to settle the problems of workers if at all possible rather than pass them all on to higher management. Generally there was also agreement between both sectors that ability, rather than seniority, should be the determining criteria for wage increases.

IDEOLOGY AND BEHAVIOR

Description: Provide empirically derived conclusions about ideological movements which support insurgency. (Terminating; in final report stage.)

Contractor: University of Massachusetts.
Fiscal Year: Start, 1966; end, 1971.
Cost: Unknown.

THE ATATURK REVOLUTION IN TURKEY

(By Guenter Lewy, Department of Government, University of Massachusetts, Amherst; Religion and Revolution, a study in comparative politics and religion, technical report No. 6, August 1968)

(Research supported by the Advanced Research Projects Agency under Order number 883 and monitored by the Office of Naval Research, Group Psychology Branch, under contract Nonr-3357(08), NR 177-907.)

Summary

The Turkish Revolution led by Ataturk can be divided into two phases. During the first stage that began with Kemal's arrival in Anatolia in May 1919, religion and nationalism combined to provide the fervor and elan for a successful war of independence. The sovereignty of the Turkish nation was secured against foreign enemies and their domestic collaborators, and in October 1923 the Turkish republic was formally proclaimed. The second phase of this revolutionary upheaval lasted until Kemal's death in 1938 and involved a series of far-reaching political, legal and social reforms aimed at achieving the Westernization of Turkey. This program of radical reform deprived Islam of its political role and resulted in the construction and consolidation of a secular Turkish state. Both phases of this revolution had roots in the Ottoman period; in some ways the revolution of Ataturk was the culmination of a process of gradual reform that

had begun well over one hundred years before the collapse of the Ottoman empire."

Abstract

Beginning with a brief discussion of the decline and fall of the Ottoman Empire, the report analyzes the interplay between Ataturk and the forces of religious traditionalism in the Turkish revolution. Special attention is given to the role of religion in the struggle for national sovereignty that ended in 1923. The report concludes with a brief discussion of the position of Islam in contemporary Turkish society.

IDEOLOGY AND BEHAVIOR

Description: Provide empirically derived conclusions about ideological movements which support insurgency. (Terminating; in final report stage.)

Contractor: University of Massachusetts.
Fiscal Year: Start, 1966; end, 1971.
Cost: Unknown.

THE SINHALESE BUDDHIST REVOLUTION OF CEYLON 1956-1959

(By Guenter Lewy, Department of Government, University of Massachusetts, Amherst, technical report No. 1, January 1967)

Abstract

Research sponsored by the Advanced Research Projects Agency under Order number 883 and monitored by the Office of Naval Research, Group Psychology Branch under contract Nonr-3357(08), NR 117-907.

The origins of the resurgence of Buddhism in Ceylon following the election victory of the Sri Lanka Freedom Party, headed by S.W.R.D. Bandaranaike, in 1956 are analyzed. Bandaranaike failed to control the Buddhist elements who had helped him to obtain political power and he was assassinated by a Buddhist monk in September 1959. The report concludes with a discussion of the future of organized Buddhism as a political force in Ceylon.

IDEOLOGY AND BEHAVIOR

Description: Provide empirically derived conclusions about ideological movements which support insurgency. (Terminating; in final report stage.)

Contractor: University of Massachusetts.
Fiscal year, start 1966; end 1971.
Cost: Unknown.

MILITANT HINDU NATIONALISM: THE EARLY PHASE

(By Guenter Lewy, Department of Government, University of Massachusetts, Amherst Religion and Revolution; A Study in Comparative Politics and Religion, technical report No. 2, April 1967)

Research sponsored by the Advanced Research Projects Agency under Order number 883 and monitored by the Office of Naval Research, Group Psychology Branch under contract Nonr-3357(08), NR 177-907.

Abstract

Following a brief discussion of the Indian political tradition, the report analyzes the origins and significance of militant Hindu nationalism in the period 1880-1916. The ideas of several representative nationalist leaders—B. G. Tilak, Aurobindo Ghose, Lajpat Rai, B. P. Pal—are examined and their influence on the terrorist movement is discussed. The report concludes with some thoughts on contemporary Hindu communalism.

IDEOLOGY AND BEHAVIOR

Description: Provides empirically derived conclusions about ideological movements which support insurgency. (Terminating; in final report stage.)

Contractor: University of Massachusetts.
Fiscal year start, 1966; end 1971.
Cost: Unknown.

GANDHI, NON-VIOLENCE, AND THE STRUGGLE FOR INDIAN INDEPENDENCE

(By Guenter Lewy, Department of Government, University of Massachusetts, Amherst, Religion and Revolution; A Study in Comparative Politics and Religion technical report No. 4, November 1967)

Research sponsored by the Advanced Research Projects Agency under Order number 883 and monitored by the Office of Naval Research, Group Psychology Branch under contract No. NR-3357(08), NR 177-907.

Abstract

The report begins with an analysis of the character and the intellectual origins of the Gandhian doctrine of Satyagraha. The dominant force in Gandhi's life, it is concluded, was Hinduism. His appeal to the Indian masses rested upon his standing as a Hindu holy man. Gandhi's role in the Congress' struggle for independence is discussed. The tension between Gandhi's functioning as a prophetic figure, following what he considered to be the voice of God within him, and his role as a national leader paying heed to political realities, accounts for many of the mistakes committed by the Congress; it probably delayed the achievement of Indian independence.

IDEOLOGY AND BEHAVIOR

Description: Provide empirically derived conclusions about ideological movements which support insurgency. (Terminating; in final report stage.)

Contractor: University of Massachusetts.
Fiscal year start, 1966; end, 1971.
Cost: Unknown.

THE EGYPTIAN REVOLUTION: NASSERISM AND ISLAM

(By Guenter Lewy, Department of Government, University of Massachusetts, Amherst; Religion and Revolution, A Study in Comparative Politics and Religion; technical report No. 5, March 1968)

Research supported by the Advanced Research Project Agency under Order number 883 and monitored by the Office of Naval Research, Group Psychology Branch, under contract Nonr-3357(08), NR 177-907.

Abstract

Following an introductory discussion of the Islamic political tradition, the report examines the events leading up to the seizure of power by the Free Officers, led by Nasser, in July 1952. Relations with the Muslim Brotherhood are traced and the role of Islam in the ideology of Nasserism as well as in Egyptian foreign policy, domestic reform, education, law and the court system are discussed. The report concludes with an analysis of the interaction between the Islamic religion, modernization and legitimacy.

IDEOLOGY AND BEHAVIOR

Description: Provide empirically derived conclusions about ideological movements which support insurgency. (Terminating; in final report stage.)

Contractor: University of Massachusetts.
Fiscal year start, 1966; end, 1971.
Cost: Unknown.

MILITANT BUDDHIST NATIONALISM: THE CASE OF BURMA

(By Guenter Lewy, Department of Government, University of Massachusetts, Amherst; Religion and Revolution, A Study in Comparative Politics and Religion, technical report No. 3, August 1967)

Research sponsored by the Advanced Research Projects Agency under Order number 883 and monitored by the Office of Naval Research, Group Psychology Branch, under contract Nonr-3357(08), NR 177-907.

Abstract

Following a brief discussion of the interaction of Buddhism and government in tra-

ditional Burma until 1885, the report analyzes the emergency of the political monks as the main force in the militant nationalist movement for Burmese independence. Buddhist monks played an important role in the violent agitation of the 1920's and in the Saya San Rebellion of 1930-31. In the 1930's the monks are gradually overtaken by secular-minded nationalists. The report concludes with a brief examination of the place of Buddhism in post-independence Burma.

CHANGING ROLES OF THE MILITARY IN DEVELOPING NATIONS

Description: Subcontracted studies of changing roles of military establishments.

Contractor: CRESS.
Fiscal year: Start, 1964; end, 1969.
Cost: Unknown.

THE CHINESE WARLORDS SYSTEM: 1916 TO 1928

(By Hsi-hseng Chi, February 1969; the American University Center for Research in Social Systems, 5010 Wisconsin Avenue, N.W., Washington, D.C. 20016)

The author

Hsi-sheng Chi is an Assistant Professor of Political Science at the University of North Carolina. He received a B.A. in literature from Tunghai University, Taiwan, and is at present a Ph.D. candidate at the University of Chicago.

A substantially revised and enlarged version of this report has been submitted by the author to the University of Chicago as a doctoral dissertation.

Foreword

This study was conducted under a program designed to encourage university interest in basic research in social science fields related to the responsibilities of the U.S. Army. The program is conducted under contract by The American University's Center for Research in Social Systems (CRESS), and CRESS in turn has entered into subcontracts supporting basic research in a number of major universities having a marked interest in one or more of these research fields.

The research program was formulated by CRESS in terms of broad subject areas within which research would be supported, with the scholars themselves selecting specific topics and research design and utilizing information normally available to academic and private individuals. Under the terms of the subcontract the authors are free to publish independently the results of such research.

In this study Hsi-sheng Chi describes the military aspects of the political contest for control of the central government in the context of the disorganized sociopolitical structure of China from 1916 to 1928. It was prepared at the University of Chicago's Center for Social Organization Studies under the supervision of Professor Morris Janowitz, principal social scientist for research conducted under subcontract between CRESS and the university.

The report is a useful corrective to the popular image of the Chinese warlords during this period of their greatest activity. The study points out that the warlords were not merely military men exploiting China's condition for private gain in their various domains, nor were they seeking to destroy or replace the central government in the classic pattern under which many Chinese dynasties have historically emerged.

To keep his study focused on the theme of the warlord system, the author chose not to deal with the activities of the incipient Chinese Communist Party during the 1916-1938 period.

ABSTRACT

The steady weakening of the Manchus in the China of the early twentieth century and the expanding military strength of the warlords created a climate for civil war. The warlords were unable to unite the country

in spite of their dominance in both military and political spheres. The eventual rise to power of Chiang Kai-shek and the Kuomintang brought about the decline in the warlords' widespread domination. (Extinction of the warlords was not accomplished until the Communist takeover in 1949.)

CHANGING ROLES OF THE MILITARY IN DEVELOPING NATIONS

Description: Subcontracted studies of changing roles of military establishments.

Contractor: CRESS.
Fiscal year: Start, 1964; end 1969.
Cost: Unknown.

A SURVEY OF ELITE STUDIES

(By Carl Beck, James M. Malloy, and William R. Campbell, assisted by Jerry L. Weaver, March 1965; the American University Center for Research in Social Systems, 5010 Wisconsin Avenue, N.W., Washington, D.C. 20016)

Foreword

This survey was conducted, as a part of SORO's Basic Studies research program, under sub-contract to the University of Pittsburgh with Dr. Carl Beck of the Department of Political Science as principal investigator. The Basic Studies Division was formed to encourage, promote, and conduct research on fundamental social and behavioral processes that influence the U.S. Army's special warfare mission in developing nations and remote areas. One such fundamental area of interest is leadership structure, interaction, and processes.

Leadership in the emerging nations is widely recognized as a crucial factor in the insurgency situations that many of these countries face. It follows that success of the U.S. counterinsurgent mission is dependent upon knowledge that will be helpful in dealing with indigenous civilian and military leadership groups. An understanding of leadership structure and interaction is required. The knowledge needed is to be found in answers to the following types of questions:

What leadership techniques are common to most of the political systems found in emerging nations?

What techniques are unique to particular kinds of political systems?

Are there identifiable patterns of change for leadership groups in these contexts?

Do patterns vary according to different types of political systems? Only with this kind of background knowledge is it possible to assess adequately the significance, to a counterinsurgent situation, of specific types of changes in leadership groups, or the use of particular kinds of leadership techniques. The problems presently being faced in Viet Nam are a dramatic demonstration of this need.

In planning and developing research programs in new areas of interest to the U.S. Army, the essential first step is a survey of past literature and research to indicate gaps in existing knowledge as well as the need for future work. Dr Beck's paper was designed to serve this purpose for both the military and academic communities. It was decided to assess current understanding of the role and functions of leadership groups in different types of political systems. In so doing, Dr. Beck supplies us with a conceptual essay on "the study of political elites" that considers the problems of identifying elites, describing elite structure, etiquette, and techniques of control, conceptualizes idealized elite systems, and analyzes political elite change. This essay should be of special interest to military users, since it provides a systematic approach to leadership groups and leadership interaction. It should also be of value to researchers who require a briefer state-of-knowledge assessment as a basis for planning. Dr. Beck also includes a bibliography of over 290 references for those who wish to delve further into par-

ticular problems or examine special areas of the world in more detail.

In addition to the materials contained in this report, Dr. Beck prepared abstracts of the studies listed in the bibliography and an inventory of major propositions and statements about elite structure and interaction. These are available on loan from the SORO Library as source materials for researchers and military personnel who may wish to conduct further work in this important problem area.

RITCHIE P. LOWRY,
Acting Chairman, Basic Studies Division.

CHANGING ROLES OF THE MILITARY IN DEVELOPING NATIONS

Description: Subcontracted studies of changing roles of military establishments.

Contractor: CRESS.

Fiscal year: Start 1964; end, 1969.

Cost: Unknown.

SOCIAL STRUCTURE AND REVOLUTION

(By Jack Bloom, August 1966; prepared under subcontract by the University of Chicago, Center for Research in Social Systems, The American University, 5010 Wisconsin Avenue, N.W., Washington, D.C. 20016)

Abstract

Few researchers have studied revolutions from the standpoint of purely social structural analysis. This paper adopts that perspective and looks at revolution as a special case of social change, as a part of a developmental process. In particular, three countries in the middle 19th century (Germany, France, and Great Britain) are compared and contrasted to determine whether or not changing relationships between social status groupings can become the basis for predicting revolutionary outcomes.

Six "classes" are identified: aristocracy, bourgeoisie, petite bourgeoisie, artisans, industrial workers, and peasantry. France and Germany offer examples of revolutionary development which resulted in failures in their own separate ways. Britain offers an example of a country with similar cultural preconditions but which had no complete revolutionary development. Comparisons of class structure and interaction in these cases disclose important relationships. For example, in the development of revolutionary processes key roles are played by (1) the petite bourgeoisie and artisans who can act as determining swing groups, (2) a viable and powerful aristocracy who can determine the ultimate outcome of revolutions particularly as other groups relate to or align with them, (3) the relationship between the aristocracy and the peasantry especially as this determines the attitude of the peasantry toward revolution, and (4) all classes as internecine conflict and antagonism may redirect and diffuse hostilities. Schematic depictions are provided for these types of relationships. Further research can be conducted by broadening the case base to test the applicability of these ideas for predicting the development of revolutionary processes in a society.

CHANGING ROLES OF THE MILITARY IN DEVELOPING NATIONS

Description: Subcontracted studies of changing roles of military establishments.

Contractor: CRESS.

Fiscal year: Start, 1964; End 1969.

Cost: Unknown.

PROBLEMS OF STUDYING MILITARY ROLES IN OTHER CULTURES: A WORKING CONFERENCE

(By Ritchie P. Lowry, editor, September 1967)

Abstract

On 26, 27, and 28, May 1965 a conference was convened by what was then the Special Operations Research Office (now the Center for Research in Social Systems) of The American University in Washington, D.C.

The purpose of the conference was to discuss research experience and strategies in the study of changing military roles in developing areas. Some 15 scholars from major universities and selected representatives of SORO (CRESS) who were identified as having conducted significant research in the subject of discussion were invited to participate. Some types of problems covered in the 10 major papers and comments include problems of analyzing field research experience, problems of questionnaire experience, problems of achieving clarity in studying military roles, and the problems of the influence of political and sensitivity bias. Individual presentations were grouped within three sessions of the conference: An Introduction to the Topic, Problems of Studying Military Roles in Latin America, and Problems of Studying Military Roles in the Near and Far East.

CHANGING ROLES OF THE MILITARY IN DEVELOPING NATIONS

Description: Subcontracted studies of changing roles of military establishments.

Contractor: CRESS.

Fiscal year: Start, 1964; end, 1969.

Cost: Unknown.

CROSS-NATIONAL STUDIES OF CIVIL VIOLENCE (By Ted Gurr with Charles Ruttenger, May 1969)

Foreword

This report was produced under a program designed to increase university research interest in fields related to the U.S. Army mission and to support basic research. The program is conducted by the Center for Research in Social Systems (CRESS), and for it CRESS has negotiated subcontracts with a number of major universities that have a marked interest in one or more of the appropriate subject fields. This report was prepared at Princeton University under such a subcontract.

The paper summarizes the first phases of research designed to evaluate a multivariate theory of "the genesis of civil violence," using cross-national aggregate data for a large number of policies. Some of the methods and data developed, the results of initial multiple correlation analyses, and a new coding instrument for collecting systematic information on characteristics of civil strife are reported on here. The initial phase of research is completed; the larger comparative study of which it is part is still in process. Much additional research, using a variety of techniques, will be required before any substantial proportion of the questions raised by the theoretical model and by the results reported here can be answered.

SOCIAL PROCESSES RELEVANT TO MILITARY PLANNING FOR STABILITY STUDIES OF AFRICAN GROUPS

Description: Study of African sociopolitical structures, dynamics, and leadership resources and attitudes.

Contractor: CRESS.

Fiscal year: Start, 1967; end, 1969.

Cost: Unknown.

URBAN DYNAMICS AND BLACK AFRICA

(By William J. Hanna, Judith L. Hanna, June 1968; The American University Center for Research in Social Systems, 5010 Wisconsin Avenue, N.W., Washington, D.C. 20016)

Authors' preface

From Dakar to Mombasa, and from Fort Lamy to Lusaka, Black Africa's land and people display great diversity. Yet using Black Africa as the geographic unit of analysis is a viable research strategy because of the area's marked similarities in colonial past, revolutionary change, and contemporary dynamics. In addition, there is virtual unity in race—although not all indigenous Africans nor Negroid—and, at least according to some

Africans, there is considerable cultural uniformity.

We have chosen to study the towns of independent Black Africa for reasons of policy, science, and personal experience. Towns are keys to understanding the countries in which they are located, because they are centers of African cultural, social, economic, and political innovation and diffusion. The rapidity of change in some spheres, illustrated by the independence surge in the late 1950's and early 1960's as well as by the recent spate of military coups d'état, makes analyses of the contemporary dynamics of towns a prerequisite for policy decisions which are relevant to current realities. Implicit throughout the study is our assumption that the policymaker's choices among alternatives of action and inaction are improved by increased understanding and that science and government should be mutually supportive.

Social science may also be served. After reading more than one thousand papers, articles, and books concerned with towns in Black Africa, we concluded that the available information had not yet been well integrated and that its theoretical relevance had not yet been fully extracted. Thus, the scientific justification for this study is whatever progress it makes toward such integration and theoretical development, as well as toward the identification of critical knowledge gaps.

At the personal level, it is our hope that reports such as this may in some small way repay the people of Africa for the hospitality and friendship they have shown us here and abroad. Repayment might come from more informed policymaking by those outside Africa who are concerned with the continent. Or, it might come by helping to bring African data into the mainstream of world social science, through our efforts directly or by whatever catalyzing effect we have upon others.

FOREIGN COMMUNICATIONS AND DEFENSE

Description: Describe communication mechanisms of China and Soviet Union and develop computer simulation of message flow so as to predict spread of information and news in future. (Expires 9/69)

Contractor: MIT/Dr. Ithiel Pool.

Fiscal year: Start, 1963; end, 1970.

Cost: Unknown.

THE USE OF FREE TIME BY YOUNG PEOPLE IN SOVIET SOCIETY

(By F. Gayle Durham, Research Program on Problems of International Communication and Security, Center for International Studies, Massachusetts Institute of Technology, Cambridge, Mass., January 1966)

Preface

The use of an individual's free time, and its quantity, are very relevant to this communications behavior. The activities available to him for use during his free hours to a great extent involve mass media and conversation with friends. Much of the information he gleanes from his environment is accumulated during his free time use of these sources, although his working hours and so-called "self-maintenance" time are also by no means devoid of information-gathering activity.

The study of the use of free time in Soviet society is particularly interesting, since it both provides the reader unfamiliar with the daily life of the Soviet citizen some insight into the influences on those leisure and informative activities, and allows an assessment of the effectuality of the efforts of the regime to mutate the character of its citizens through means of mass influence during those activities.

In order to survey the use of free time, we have chosen one sub-group of the population for preliminary investigation. This group

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may be termed young people, and includes specifically those between the ages of sixteen and thirty. Our reasons for this choice stem from various considerations. Inasmuch as our underlying concern is to learn more about how Soviet citizens use communications media, we chose a group which we believe to be more or less homogeneous in its patterns of daily life.

The research was sponsored by the Advanced Projects Agency of the Department of Defense (ARPA) under contract #920F-9717 and monitored by the Air Force Office of Scientific Research (AFOSR) under contract AF 49(638)-1237.

METHODOLOGY FOR ANALYSIS OF INTERNAL SOCIAL MOVEMENTS

Description: Providing predictive base for forecasting social movements in selected countries.

Contractor: University of Pittsburgh, Holzner and Yang.

Fiscal year: Start, 1966; end, 1970.

Cost: Unknown.

Conducted under AFOSR grant No. AF-AFOSR-1304-67.

Report period: July 1, 1967-June 30, 1968.

Final report: Not for publication.

METHODOLOGY FOR THE ANALYSIS OF INTERNAL SOCIAL MOVEMENTS (SOCIAL MOVEMENTS AND SOCIAL SYSTEM CHANGE)

(By Burkart Holzner and Ching-Kun Yang, August 1968, Department of Sociology, University of Pittsburgh, Pittsburgh, Pa.)

Abstract

This project develops methods and theory for the study of incidents of violent social protest and broad social movements in the context of social system change. The method of building computer based inventories of incidents of protest and conflict permits the quantitative description of large numbers of such events, based on easily accessible public records and historical documents. Critical instance case studies supplement the quantitative data through detailed qualitative investigation. The project's frame of reference emphasizes *event sequence analysis* in conflict and mobilization. In order to assess flexibility and power of the procedure, long time series, the entire 19th century, were chosen for incident inventories on two societies of widely different characteristics. An Oriental society (*China*) and a Western society (*Germany*) were selected. The data gathering phase for China (31,000 incidents) has been completed, for Germany it is presently underway.

FOREIGN COMMUNICATIONS AND DEFENSE

Description: Describe communications mechanisms of China and Soviet Union and develop computer simulation of message flow so as to predict spread of information and news in future. (Expires 9/69)

Contractor: MIT/Dr. Ithiel Pool.

Fiscal Year: Start, 1963; end, 1970.

Cost: Unknown.

THE FILM INDUSTRY IN COMMUNIST CHINA

(By Alan P. L. Liu, research program on problems of international communications and security, Center for International Studies, Massachusetts Institute of Technology)

Introduction

This is a study of the film industry in Communist China. It is part of a research program on international communication conducted by the Center for International Studies, Massachusetts Institute of Technology. The research for this paper was sponsored by the Advanced Research Projects Agency of the Department of Defense (ARPA) under contract #920F-9717 and monitored by the Air Force Office of Scientific Research (AFOSR) under contract AF 49(638)-1237.

This report seeks to update the data on the subject and to understand the dynamics of the Chinese Communist film industry. In order to put the present film industry into its proper socio-historical context, we also deal briefly with the Chinese films in pre-Communist era.

The report is based almost exclusively on Chinese publications. They include mainly Chinese Communist press reports and translated Chinese materials. Only three non-Communist books (Chinese) could be found on Chinese films and our brief discussion on the pre-Communist period was based on them. We were particularly interested in statistical information on the present Chinese film industry. Yet propaganda-free statistical reports from Communist China were hard to come by. After 1959 even publications of propagandistic statistical information from Communist China stopped. Since 1964 there have been some signs of the availability of such statistics but systematic statistical reports such as those published before 1957 have not yet appeared. We have practically exhausted all the major sources on this subject in Chinese which are publicly available abroad. We have combed the holdings in such major libraries as the Chinese-Japanese Library and the East Asian Research Center at Harvard University, The Library of Congress and the Hoover Institute at Stanford University. As our research continues, new information will be acquired. This report, representing research done so far, will be enlarged and updated in the future.

BEHAVIOR NORMS: JAPANESE AND AMERICAN YOUTH

Description: Comparison of attitudes and behavior of the youth of two countries for military assistance and manpower resources purposes.

Contractor: University of Maryland/Dr. E. McGinnies.

Fiscal Year: Start, 1967; end, 1969.

Cost: Unknown.

A cross-cultural study of normative behavior among Japanese and American girls in the 11 to 18-year age range, by Satoru Inomata, Litt D., Department of Psychology, Shiga University; Elliott McGinnies, Ph.D., Department of Psychology, University of Maryland)

Since 1945, the Japanese people have adopted many of the precepts and practices of American democracy. Adolescent boys and girls in Japan are now growing up in this new social climate. How are Japanese young people reacting to the dramatic changes that have taken place in their country? Are they coming increasingly to resemble their American counterparts, or have they taken on the form rather than the substance of Western political and social values? In order to approach some answers to these questions, we undertook a cross-cultural study of social attitudes among the youth of Japan, patterning our survey after one conducted with American teenagers a few years previously. In this way we hoped to be able to make comparisons between the social attitudes of teenagers in Japan and in the USA. We adopted the same questionnaire materials and methods of sampling used in a nation-wide survey of American youth by the Institute for Social Research at the University of Michigan.

ANTHROPOLOGICAL RESEARCH TO ASSIST NAVY STRATEGICAL PLANNING

Description: Investigator will combine anthropological variables with econometric techniques in order to conceptualize and predict mobility in foreign military hierarchies.

Contractor: University of Texas.

Fiscal year: Start, 1968; end, 1970.

Cost: Unknown.

MATHEMATICAL PROGRAMING AND ECONOMIC ANTHROPOLOGY

(By Ira R. Buchler, J. R. McGoodwin, Department of Anthropology, University of Texas)

Presented at a conference on Mathematical Approaches to Cultural Evolution.

Technical Report 1: Comparative Econometrics Project.

Reproduction in whole or part is permitted for any purpose of the United States Government April 24, 1968.

This research was sponsored by the Group Psychology Branch, Office of Naval Research (Contract No. N00014-67-A-0126-0005; NR 170-717/1-5-68 Code 452) as the initial technical report of the Comparative Econometrics Project—Ira R. Buchler, Director.

Introductory comments

The general purpose of this paper is (1) to provide a partial and preliminary survey of several related mathematical decision-making models—in particular, mathematical (or linear) programming—(2) to consider their relevance for a wide class of optimization problems in economic anthropology, and (3) to assess some of their implications for various theoretical issues in evolutionary studies—the related notions of "cultural intensity" and "evolutionary potential." This essay is the initial (and therefore tentative) report in a series of studies that will demonstrate the underlying mathematical relatedness of military and economic programming and logistic problems on the one hand and aspects of economic anthropology, economic development, social organization and the prediction of mobility processes in political systems on the other. This discussion is consequently directly relevant to the formalist/substantivist opposition in economic anthropology, a theoretical bifurcation that is due to a considerable extent to the substantivist *magnum opus Trade and Market in the Early Empires* (Polanyi et al., 1957).

THE DEVELOPMENT OF A METHOD FOR FORECASTING DECISIONS AND ACTIONS FOR MILITARY GROUPS

Description: Make cross-national data base analysis of the effects of different military postures and strategies on the decision-making of foreign military groups; research will also be conducted on the predicted responses of these groups to perceive politico-military threats.

Contractor: Western Behavioral Science Institute.

Fiscal year: Start, 1966; end, 1970.

Cost: Unknown.

VALUES, ATTITUDES, AND MULTINATIONAL DECISIONMAKING

(Introduction by John R. Raser, Western Behavioral Sciences Institute, principal investigator, September 30, 1968)

The research reported in these papers was supported in part by the Office of Naval Research, Contract No. N00014-66-C0279, NR 170-704 (Group Psychology).

Introduction

There is a close analogy between the worldwide problems of poverty and war at the international level and the problems of poverty and civil disorder on the national level. In both cases an understanding of the aspirations, values, and opinions of all parties involved is of fundamental importance, both for the successful implementation of programs to even out the differences creating tension and conflict and for the avoidance of escalation of smaller conflicts into disastrous ones. This project is oriented towards the study of the values and opinions about interpersonal, social and international relations of future elites in a representative number of nations of the world.

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One premise underlying the study is that "A more complete understanding of others' values, attitudes, and ways of thinking increases one's ability to communicate effectively with them." Such communication may be across the conference table, through the medium of a strategy which one pursues, or simply that one behaves in a certain way due to his expectations about how others will respond in the long or short run. From this point of view information on the basic values and attitudes of future decision-makers in all nations will be of immeasurable value in helping them to deal more effectively with military, diplomatic, and political decision-makers of other countries as they pursue their careers, adding to the possibility that mankind's common interest in survival may override misunderstanding and misperception of the goals and values of others, by providing a common framework within which national differences in real interests may be seen.

The Conflicts of the world today are, however, only partly based on misperceptions and lack of mutual understanding of the values of others; the conflicts are themselves indicators of the large differences found in the international system. The aim is therefore also to understand some of the factors which create the antagonism and lack of common interest at the international level. The focus of the project is on the impact of the nation-state on the values and opinions of its citizens in nations differing markedly in political system, level of industrialization, investment in military and police forces, and size. Finally, it is a major aim of the project to provide some insight into the background of the student unrest which today, and probably more so in the future, is an important source of political change.

ROLE DIFFERENTIATION IN THAI SOCIAL STRUCTURE IN TERMS OF A SEMANTIC ANALYSIS OF THAI PRONOUNS AND ROLES

(By W. Wichiarajote and Marilyn Wilkins, Institute of Communications Research, University of Illinois, Technical Report No. 57 (68-2), June, 1968; Communication, Cooperation, and Negotiation, in Culturally Heterogeneous Groups)

(Project Supported by the Advanced Research Projects Agency, ARPA Order No. 454 Under Office of Naval Research Contract NR 177-472, Nonr 1834 (1936), Fred E. Fiedler and Harry C. Triandis, Principal Investigators.)

Abstract

Fourteen Thai first-person pronouns and sixty Thai social roles were scored on a common set of eleven features. Following a model of semantic feature analysis developed by Osgood, usage of the various pronouns within the various roles was predicted: appropriate (+), permissible (0), or incongruous (-). These predictions were obtained by multiplying feature codings on the pronouns with corresponding codings on the roles; the algebraic sum of these products yielded a +, 0, or - outcome for each pronoun-role combination.

Validity of the model was evaluated in terms of: the percentage of predictions which were accurate; correspondence of the semantic features with factors obtained through factor analysis; and the information revealed

concerning the structure of Thai role differentiation.

Fifty-three Thai high school students were asked to judge the appropriateness of the 14 x 60 pronoun-role combinations. This data constituted the criteria for evaluating success of the semantic features and also provided material for the factor analysis.

Six factors were found to describe 94% of the variance. They appeared to incorporate nine of the eleven semantic features. These, in turn, accurately predicted 85% of the Ss' specific judgments. The semantic features further revealed a hierarchic, tree-like structure within the semantic patterns of Thai pronouns and social roles.

TRANSFER OF TECHNOLOGY UNDER MILITARY AUSPICES

Description: Cooperation with foreign military assistance and training programs.

Contractor: Howard University, Dr. D. Spencer.

Fiscal Year: Start, 1964; end, 1970.

Cost: Unknown.

MILITARY TRANSFER OF TECHNOLOGY—INTERNATIONAL TECHNO-ECONOMIC TRANSFERS VIA MILITARY BY-PRODUCTS AND INITIATIVE BASED ON CASES FROM JAPAN AND OTHER PACIFIC COUNTRIES

(By Daniel L. Spencer, Chairman, Department of Economics, Howard University, Washington, D.C.)

ABSTRACT

Transfer of technology through military and related channels. Case studies drawn from Japan, Taiwan, and Korea. The materials constitute a first attempt to bulldoze through a new dimension in cost/benefit assessments of military activity overseas. Concludes that a dollar spent on military assistance may produce as much benefit as, or more than, a dollar spent on economic assistance.

TRANSFER OF TECHNOLOGY UNDER MILITARY AUSPICES

Description: Cooperation with foreign military assistance and training programs.

Contractor: Howard University, Dr. D. Spencer.

Fiscal Year: Start, 1964; end, 1970.

Cost: Unknown.

THE TRANSFER OF TECHNOLOGY TO DEVELOPING COUNTRIES—PAPERS AND PROCEEDINGS OF A CONFERENCE HELD AT AIRLIE HOUSE, WARRENTON, VA., APRIL 28-30, 1966

(Edited with an introduction and summary by Daniel L. Spencer and Alexander Woroniak, Department of Economics, Howard University, Washington, D.C.; prepared under Grant No. AF-AFOSR 533-66 from the Air Force Office of Scientific Research, Office of Aerospace Research, U.S. Air Force)

FOREWORD

"The United States and the West must either lead in the process of modernizing the underdeveloped area, or by default, contribute to a kind of world in which our institutions and values cannot survive." This statement by Gabriel Almond echos the thinking of a generation of American leaders who have invested substantial resources and other efforts to improve the conditions of life in deficit areas in the hope that economic advance

would contribute to political stabilization and create the soil in which democratic institutions might take root.

The easy optimism that flourished after World War II has been jarred by the experience gained in two decades of foreign aid and technical assistance to backward and stagnant areas. We have learned that neither economic advance nor political stabilization can be automatically initiated by the investment of U.S. resources. Dr. Carlos Chagas, President of the National Academy of Sciences of Brazil, insists that the technological gap separating the advanced nations from the so-called developing nations has grown wider rather than narrower during the last decade, despite extensive international cooperation. On a more hopeful note, Walt W. Rostow has postulated a theory of economic evolution which includes a "take-off" stage where rapid industrialization can be expected.

The papers that follow were prepared by a group of scholars who are too sophisticated to believe that rapid economic development is a necessary consequence of programs of material aid and technical assistance. While they are fully capable as interpreters of economic history and could develop attractive hypotheses relating to the development of economic institutions, for the purposes of the present conference they have directed their attention to a narrower field of economic theory in an attempt to elucidate the processes of technological transfer and structural change which are basic to economic advancement in backward areas.

Dr. Daniel L. Spencer was encouraged by the Air Force Office of Scientific Research to conduct a conference on technological transfer, because it was felt that further useful work in this field might be stimulated by summing up the current state of knowledge, and focusing attention on problems of a methodological and theoretical nature that are obstacles to further understanding of these important processes.

Our interest in problems of the kind addressed at the conference stems from the fact that the mission of AFOSR is to sponsor basic research in areas of potential applicability to the military. The present effort is part of a research program devoted to those scientific and technical fields which might serve to improve the manner in which U.S. military personnel, skills, equipment, and procurement policies can be exploited to the greatest benefit for the host country and to realize the U.S. national objectives to aid our friends and strengthen our allies. There are many channels within the military services for the use of information derived from research on foreign economic development. Military assistance programs, mobile training teams, technical training, and advanced education provided by the U.S. services for foreign military personnel are some of the bridges to the field of application.

It is a source of gratification to the Air Force Office of Scientific Research that our expectations with regard to the conference on technological transfer and structural change have been fully realized. This task exemplifies the objective of the organization to sponsor basic research in fields relevant to future plans and activities.

CHARLES E. HUTCHINSON,
Air Force Office of Scientific Research.

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EXHIBIT 1

TABLE I.—FEDERAL OBLIGATIONS FOR RESEARCH; TOTAL, DEFENSE, AND NATIONAL SCIENCE FOUNDATION FISCAL YEARS 1956-1969

[In millions of dollars]			
Year	Total	DOD	NSF
1956	852	482	16
1957	925	445	30
1958 ¹	1,079	489	33
1959	1,403	523	54
1960	1,941	861	68
1961	2,620	1,173	77
1962	3,273	1,311	104
1963	4,041	1,605	141
1964	4,464	1,672	156
1965	4,854	1,751	172
1966	5,271	1,849	224
1967	5,273	1,591	241
1968 ²	5,406	1,425	255
1969 ²	5,990	1,658	280

¹ The U.S.S.R. lofted Sputnik on Oct. 4, 1957.
² Estimates by the NSF.

Source: "Federal Funds for Research, Development, and Other Scientific Activities, Fiscal Years 1967, 1968 and 1969," vol. XVII, National Science Foundation Report NSF 68-27, table C-91.

TABLE II.—FEDERAL OBLIGATIONS FOR BASIC RESEARCH TOTAL, DEFENSE, AND NATIONAL SCIENCE FOUNDATION FISCAL YEARS 1952-69

[In millions of dollars]			
	Total	DOD	NSF
1952	162	72	1
1953	154	65	2
1954	148	52	5
1955	162	53	10
1956	206	78	15
1957	262	84	30
1958	335	111	33
1959	517	137	54
1960	610	168	68
1961	825	173	77
1962	1,106	204	104
1963	1,389	231	141
1964	1,567	241	155
1965	1,690	263	171
1966	1,844	262	223
1967	2,015	284	239
1968	2,093	246	251
1969	2,354	320	274

¹ The U.S.S.R. lofted Sputnik on Oct. 4, 1957.
² Estimated by the NSF.

Source: "Federal Funds for Research, Development and other Scientific Activities, Fiscal Years 1967, 1968, and 1969", vol. XVII, op. cit., table C-92.

TABLE III.—FEDERAL OBLIGATIONS FOR RESEARCH BY AGENCY AND PERFORMER TOTAL, DEFENSE AND NATIONAL SCIENCE FOUNDATION

[In thousands of dollars]				
Department/Agency	Total	Universities and colleges	FFRDCS ¹	FFRDCS ¹
			administered by Univs. and colleges	administered by nonprofit institutions
Fiscal year 1967:				
Total ²	5,273,021	1,348,469	427,497	47,577
DOD	1,591,331	246,507	81,681	36,545
NSF	241,164	198,458	16,907	
Fiscal year 1968:				
Total ²	5,405,590	1,396,754	447,180	39,706
DOD	1,424,590	226,537	90,630	25,743
NSF	255,464	210,483	17,798	532
Fiscal year 1969:				
Total ²	5,989,550	1,555,509	466,903	41,224
DOD	1,658,142	277,365	98,303	26,886
NSF	279,882	230,377	19,652	244

¹ Federally funded research and development centers.
² "Federal Funds for Research, Development, and Other Scientific Activities, Fiscal Years 1967, 1968, and 1969," vol. XVII, op. cit., table C-11.
³ Ibid., table C-11.
⁴ Ibid., table C-12.

TABLE IV. FEDERAL OBLIGATIONS FOR RESEARCH BY AGENCY AND FIELD OF SCIENCE, FISCAL YEARS 1967-69

[In thousands of dollars]									
Department/agency	Total	Life sciences	Psychological sciences	Physical sciences	Environmental science	Mathematics	Engineering sciences	Social sciences	Other sciences
Fiscal year 1967:¹									
Total	5,273,021	1,451,306	108,042	1,074,416	670,101	130,021	1,555,014	188,687	95,354
DOD	1,591,331	106,245	23,438	327,479	148,783	89,903	804,060	8,912	82,511
NSF	241,164	57,570	8,040	69,550	42,938	18,887	24,273	16,060	3,843
Fiscal year 1968:²									
Total	5,405,590	1,586,090	112,753	1,136,553	649,549	107,086	1,524,161	207,504	81,898
DOD	1,424,590	93,638	24,196	312,634	127,631	68,227	722,460	8,178	67,626
NSF	255,464	60,148	8,014	71,587	48,284	19,582	26,965	17,100	3,784
Fiscal year 1969:³									
Total	5,989,550	1,765,306	130,642	1,289,778	611,671	144,661	1,695,361	250,524	101,607
DOD	1,658,142	111,060	28,690	352,895	130,463	102,205	841,468	8,242	93,119
NSF	279,882	63,720	8,176	80,899	51,948	22,212	28,342	19,451	5,134

¹ "Federal Funds for Research, Development, and Other Scientific Activities, Fiscal Years 1967, 1968, and 1969," vol. XVII, op. cit., table C-14.
² Ibid., table C-15.
³ Ibid., table C-16.

TABLE V.—FEDERAL OBLIGATIONS FOR BASIC RESEARCH BY AGENCY AND FIELD OF SCIENCE, FISCAL YEARS 1967-69

[In thousands of dollars]									
Department/agency	Total	Life sciences	Psychological sciences	Physical sciences	Environmental sciences	Mathematics	Engineering sciences	Social sciences	Other sciences
Fiscal year 1967:¹									
Total	2,015,182	612,041	60,044	712,929	321,034	64,639	183,998	56,869	3,628
DOD	284,316	32,656	9,234	99,925	49,364	31,191	57,394	3,450	1,102
NSF	238,562	57,570	8,040	69,550	42,938	18,887	24,273	14,869	2,435
Fiscal year 1968:²									
Total	2,092,766	652,869	64,876	726,171	340,436	57,238	179,573	61,796	9,867
DOD	246,428	28,336	7,721	76,781	47,863	25,004	50,938	2,485	7,300
NSF	251,375	59,137	8,014	71,587	48,113	19,582	26,698	15,744	2,500
Fiscal year 1969:³									
Total	2,353,665	716,981	74,665	828,147	382,233	76,255	191,443	69,300	14,651
DOD	320,250	37,644	12,035	92,035	56,027	41,010	66,769	3,730	11,000
NSF	274,253	62,606	8,176	80,899	51,569	22,212	27,517	17,605	3,579

¹ "Federal Funds for Research, Development, and Other Scientific Activities, Fiscal Years 1967, 1968, and 1969," vol. XVII, op. cit., table C-33.
² Ibid., table C-34.
³ Ibid., table C-35.

TABLE IV.—FEDERAL OBLIGATIONS FOR BEHAVIORAL SCIENCE RESEARCH, 1960 AND 1968

[In thousands of dollars]														
Agency	1960 (obligations)			1968 (estimate)			Agency	1960 (obligations)			1968 (estimate)			
	Psycho-logical sciences	Social sciences	Total	Psycho-logical sciences	Social sciences	Total		Psycho-logical sciences	Social sciences	Total	Psycho-logical sciences	Social sciences	Total	
Department of Agriculture	-16,760	16,760		32,873	32,873		Department of Health, Education, and Welfare (total)	16,308	7,103	23,411	79,462	87,716	167,178	
Department of Commerce	113	2,929	3,042	402	7,434	7,836								
Department of Defense (total)	17,959	504	18,463	25,747	8,684	34,431								
Army	5,215	400	5,615	8,856	2,278	11,134						447	592	1,039
Navy	8,209		8,209	7,151		7,151						1,000	200	1,200
Air Force	4,535	104	4,639	5,830	1,938	7,768								
Defense agencies				2,850	3,055	5,905								
Defensewide funds				1,060	1,413	2,473						3,500	14,921	18,421

Footnotes at end of table.

TABLE IV.—FEDERAL OBLIGATIONS FOR BEHAVIORAL SCIENCE RESEARCH, 1960 AND 1968 —Continued

[In thousands of dollars]

Agency	1960 (obligations)			1968 (estimate)			Agency	1960 (obligations)			1968 (estimate)		
	Psycho-logical sciences	Social sciences	Total	Psycho-logical sciences	Social sciences	Total		Psycho-logical sciences	Social sciences	Total	Psycho-logical sciences	Social sciences	Total
HEW—Continued													
Public Health Service	11,529	4,094	15,623	49,655	28,895	78,550	Department of Transporta-tion				4,279	4,279	
National Institutes of Health	(11,506)	(3,282)	(14,788)	(14,352)	(3,850)	(18,382)	National Science Foundation	2,597	1,823	4,420	8,953	18,812	27,765
Social Security Administration		1,469	1,469	200	5,267	5,467	National Aeronautics and Space Administration		430	430	5,073	1,455	6,528
Welfare Administration				216	10,850	10,850	Office of Economic Opportunity					11,000	11,000
St. Elizabeths Hospital							U.S. Arms Control and Disarmament Agency	1,005		1,005	190	2,083	2,273
Department of Housing and Urban Development					10,665	10,665	Veterans' Administration	213	2,560	2,773	3,654	7,065	10,719
Department of Interior	46	1,061	1,107	587	6,244	6,831	Other agencies						
Department of Labor		1,562	1,562		9,988	9,988	Total	38,241	34,854	73,095	124,387	209,323	333,710
Department of State (total)		122	122		1,025	1,025							
Departmental funds					125	125							
International Cooperation Administration		122	122										
Agency for International Development					900	900							

Source: "The Behavioral Sciences and the Federal Government," a report of the Advisory Committee on Government Programs in the Behavioral Sciences, National Research Council, National Academy of Sciences, 1968, p. 39.

TABLE VII.—FEDERAL OBLIGATIONS FOR BASIC RESEARCH IN PSYCHOLOGICAL AND SOCIAL SCIENCES, FISCAL YEARS 1966-69

[Dollar amounts in thousands]

	Department of Defense					Total DOD	Total Federal	Percent DOD/Federal
	Social psychology	Anthropology	Economics	Sociology	Other			
Fiscal year 1966 ¹	\$5,259	\$271	\$150	\$810	\$1,404	\$7,954	\$65,819	12.1
Fiscal year 1967 ²	4,763	40	25	268	3,117	8,213	79,919	10.2
Fiscal year 1968 ³	4,076	85	19	300	2,081	6,561	86,651	7.6
Fiscal year 1969 ⁴	7,376	125	32	412	3,161	11,106	100,772	11.1

¹ Federal funds for research, development and other scientific activities, fiscal years 1966, 1967, 1968 (vol. XVI) p. 155. ³ Ibid, p. 160.
² Federal funds for research, development and other scientific activities, fiscal years 1967, 1968, 1969 (vol. XVII) p. 159. ⁴ Ibid, p. 161.

TABLE VIII.—FEDERAL OBLIGATIONS FOR APPLIED RESEARCH IN PSYCHOLOGICAL AND SOCIAL SCIENCES, FISCAL YEARS 1966-69

[Dollar amounts in thousands]

	Department of Defense					Total DOD	Total Federal	Percent DOD/Federal
	Social psychology	Anthropology	Economics	Sociology	Other			
Fiscal year 1966 ¹	\$7,835	\$324	\$632	\$2,155	\$2,631	\$13,577	\$156,706	8.7
Fiscal year 1967 ²	8,201	578	1,009	1,715	2,160	13,663	168,973	8.1
Fiscal year 1968 ³	6,985	789	796	974	3,134	12,678	179,611	7.1
Fiscal year 1969 ⁴	7,297	660	885	1,067	1,900	11,809	222,502	5.3

¹ Federal funds for research, development and other scientific activities, fiscal years 1966, 1967, 1968, (vol. XVI) p. 178. ³ Ibid, p. 191.
² Federal funds for research, development and other scientific activities, fiscal years 1967, 1968, 1969, (vol. XVII) p. 190. ⁴ Ibid, p. 192.

TABLE IX.—FEDERAL OBLIGATIONS FOR RESEARCH (BASIC AND APPLIED) IN THE PSYCHOLOGICAL AND SOCIAL SCIENCES, FISCAL YEARS 1966-69

[Dollar amounts in thousands]

	Department of Defense					Total DOD	Total Federal	Percent DOD/Federal
	Social psychology	Anthropology	Economics	Sociology	Other			
Fiscal year 1966	\$13,094	\$595	\$782	\$2,965	\$4,095	\$21,531	\$222,525	9.7
Fiscal year 1967	12,964	618	1,034	1,983	5,277	21,876	248,892	8.8
Fiscal year 1968	11,061	874	815	1,774	5,215	19,239	266,242	7.2
Fiscal year 1969	14,673	725	917	1,479	5,061	22,915	323,274	7.1

Source: Tables VII and VIII.

Mr. FULBRIGHT. Mr. President, if there is nothing further on that subject, I have an item on an unrelated subject to discuss.

Does the Senator wish me to yield?

Mr. STENNIS. Just 1 minute; not over 2 minutes.

Mr. FULBRIGHT. I yield.

Mr. STENNIS. The Senator has completed his remarks. The committee has

not used any time. Nevertheless, we might agree now on a limit applicable tomorrow, if the Senator is inclined at all to do so. Would an hour to a side be satisfactory?

Mr. FULBRIGHT. There are a number of Senators—the Senator from Michigan is one—who wish to speak on the subject. I think I ought to consult them before I agree. I personally have

completed my remarks. We should give notice to Senators interested in the subject.

Mr. STENNIS. If we could have a quorum call—

Mr. FULBRIGHT. There is one Senator in particular who should be consulted. Outside of the ABM subject, the Senator from Wisconsin has been the "clearance" in this. The Senator knows

that. I have coordinated this effort with him. I would not wish to enter into any kind of an agreement without a quorum call and without his having notice, because he feels a special responsibility in this matter. The Senator is aware of that.

Mr. STENNIS. Very good. I thought, though, if we could give that notice and have a quorum call—

Mr. FULBRIGHT. We had better do it tomorrow.

Mr. STENNIS. Tomorrow there will be so many other Senators competing for time.

Mr. FULBRIGHT. I may make this suggestion. I am committed to make the statement I am about to make. I must get it in the Record. While I am doing that, perhaps the Senator or someone for him could get in touch with the Senator from Wisconsin, and also, I would hope, the Senator from Michigan, whom I mentioned a moment ago, and see what their views are. While I am making this address, perhaps the Senator could get in touch with the Senator from Wisconsin.

Mr. McINTYRE. Mr. President, will Senator yield me 2 minutes?

Mr. FULBRIGHT. I yield.

Mr. McINTYRE. Mr. President, in view of the fact that the Senator has had his say here about what these policy planning projects are, I thought I might read into the Record some that my subcommittee was concerned with:

Japanese rearmament, nuclear, and space programs: A study of factors and developments affecting the Japanese military contribution to the U.S. effort in Asia, including the security pact.

Chinese military and foreign policy: A continuing analysis of the background and fundamental characteristics of Chinese foreign and military policies to elucidate their implications for U.S. research provides background for consultations with air staff officials and for inputs to interdepartmental studies, such as work on strategic posture toward China.

European security issues a continuing examination of trends in the political and military relations of European states: including possible changes in European security arrangements and national developments affecting the overall European military posture.

Soviet military and foreign policy: A continuing study of Soviet military doctrine, use of military strength for political purposes, foreign policy, and political institutions in the Soviet Union and East European states.

Military representation in U.S. missions: Examines better method of military representation in handling military aid in foreign countries, specifically India, Indonesia, Brazil, and Iran.

That is just naming five. This year these will cost about \$580,000. In comparison with those that our distinguished friend from Arkansas has been referring to, Ataturk and others, it makes a lot of sense to me that we should keep on studying these issues on a continuing basis.

Mr. STENNIS. Until a few years ago, the authorization bill for the military program did not require that the re-

search and development items be included in it, but we learned that we were not getting a major part of a certain weapons system before us—in other words, we just picked it up when it was ready to come off the assembly line, and we had to go back to get all the research and development, the tests, and the engineering. That was when we invented the law to require the research and development. What we were after was to get all the information on the weapons—the hardware, was the way we referred to it—before the Armed Services Committee.

But when we got the research and development required by law, we got a great many other things that we were not particular interested in. They were related, to a degree, and their number seems to have increased greatly year by year. There are so many of them, and many of them are so disassociated, that it is very difficult properly to evaluate all of them.

As I recommended to the Senator from Arkansas—and his response was very logical—we would be glad for anyone to go through and pick out a list that pertained more to the functions of other committees. I suppose almost any kind of list of subjects for research and development might pertain remotely to the work of any committee.

But if Senators will bring out lists of those that belong more properly in the State Department, perhaps some in the Department of Commerce and other departments, they can go to their respective logical places. But this year, after we got into this matter—and the subcommittee did a remarkable job—we could not just turn the file upside down, pour them out on the table, sweep them out with the afternoon trash, and leave them there with nothing done about them and no one to pass on them. We could not summarily reject the whole thing.

So we performed a selective process, here, the best we could, and I hope that when this bill is finally completed we can obtain a further review of it, with the help of the Department of Defense and others, and make specific recommendations as to where these projects should go. But in the meantime, this is just an alternative to cutting them all off.

I hope the Senate will see fit, with the leadership of the Senator from Arkansas and other interested Senators, to find a way to adjust it for this year, and then we will take an approach next year that will be perhaps more satisfactory.

I make these remarks to show clearly what the purpose is, and what the committee is trying to do.

Mr. FULBRIGHT. Mr. President, will the Senator yield?

Mr. STENNIS. I yield.

Mr. FULBRIGHT. I wish to say that the Senator from Mississippi has been most reasonable in his reaction, both last year when this matter first came up, and now. I appreciate what he has said today. I believe the Senator; and I certainly want to reemphasize that I mean no criticism of him.

As I told the Senator, I asked the Director of the Budget, Mr. Schultze, in open session, whether he had looked at it at all. He said he had not.

This is an enormous and complicated program, and there are many more important things, that cost money and are more important to our security. Therefore, I think the Senator from Mississippi would probably be derelict in his duty if he did spend a lot of time on these projects, because I do not think they are really that important.

But I would like to get our information in order, so to speak, to try to get back on the track.

I think there was a period a few years ago when many of us were interested in universities. I live in a university town, and it is always publicized that "we got a research project of \$15,000," and so on. At the time, it seemed all right. But I think it has got out of hand, and I would like to get it back on the track. I think the Senator from Mississippi has shown every indication that he shares that view, and all we have to do now is find out a way to do it. I thank the Senator very much for his remarks.

Mr. STENNIS. I thank the Senator from Arkansas for his kind remarks.

LET'S PUT SPACE TO EARTHLY USES

Mr. FULBRIGHT. Mr. President, I do not think any other Senator wishes to pursue this subject. I want to make some remarks about another subject which has been much in the public eye and which is not, unfortunately, relevant to the pending business but is relevant to something the public is interested in. I feel compelled to make these comments before we recess. I had hoped to have a more appropriate time to make them, but I must do it now.

Like it or not—and I am not at all sure I do—there is no greater spur to human exertion than competition. From the chariot races of ancient Rome to the major league baseball of modern America, contests of courage and skill have provided people with thrills and entertainment. Competition is also one of the powerful engines of economic growth and technological innovation. The rivalry of merchants and manufacturers was a powerful force in setting off the industrial revolution and is still a major—if somewhat dogmatized—factor in our modern economy. The competitive instinct broke the 4-minute mile and sent astronauts to the moon; it also sent tens of millions of people to premature deaths in the two world wars.

Competition between nations differs from the rivalry of individuals in that it is conducted on a far greater scale, brings to bear vastly greater resources, affects the lives of many more people, and is more likely than other rivalries to be conducted without rules or restraints to assure the survival of the participants. In other respects I perceive no important differences between the rivalries of individuals, teams, corporations, armies, and nations. All are engaged in a contest for self-maximization, not just to excel but to exceed, not just to do something well but to do it better than somebody else.

Competition is not the only spur to human exertion. At least in Western cultures the challenge of overcoming natural obstacles has fired the adventur-

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ous spirit in man: The mountain challenges the climber, the wave the surfer, the sea the mariner, the jungle the explorer, the universe the astronaut.

By paradoxical contrast, unnatural—by which I mean manmade—obstacles have no such motivating magic. For most of us such unnatural obstacles as decaying cities and polluted water and air are a tolerated nuisance rather than a motivating challenge—the accepted price of something called “progress.” Western man, it seems, has come close to reversing the ancient stoicism of the East: Restless and insatiable in challenging nature’s creations, he is becoming passive and fatalistic about his own. He will leap to the stars and yet squat miserably in his own fouled nest. Were it not so paradoxical and so debilitating, one might even take this for a new form of spirituality.

Be all that as it may, the competitive instinct is probably the most reliable tool of human creativity. But it has certain risks about it, one being the constant danger that a zealous competitor will compete too well and so put an end to the competition. In sports, in business, and in politics it is essential to confine the contest within rules which will prevent anyone from succeeding too completely, thereupon putting an end to the game and robbing mankind of the creative benefits of the competitive process.

The genius of the American Constitution is that, at least up to now, it has kept the game going and the competitors in competition. The division of governmental powers among three branches and 50 States puts the various contenders for power in the position of having little chance of victory but an excellent chance of survival in the continuing struggle for power. The system works tolerably well largely because it does not depend too heavily on human conscience and voluntary restraints, which, admirable through these are, must be counted among the less reliable of human attributes. Instead, with unsentimental realism, the framers of our Constitution faced up to the universality of the human drive to self-aggrandizement, recognized it for the creative but dangerous force that it is, and harnessed it into a system of regulated rivalries, free enough to generate political energy, restrained enough to protect the people from despotism.

Difficult as it is to control, the competitive instinct is even more difficult to acknowledge. Only in sports are competitions conducted in their own name; the game is for its own sake, for the fun of playing and the hope of winning. But in politics we feel a compulsion to dress up our contentious impulses in the vocabulary of ideals and ideology. No matter what the fight and who is involved in it, we suppose, almost invariably, that some great principle is at stake, some noble and unselfish purpose, such as realizing our own great ideals or, more commonly, saving people from the wicked designs of our rivals.

To hear the Soviet and American leaders talk about the cold war, nothing could be further from their pristine thoughts

than any notion of self-aggrandizement or getting one up on the other. Heaven forbid. By their own accounting of it the Russian leaders sit up nights in the Kremlin thinking up ways to lift the yoke of oppression from the downtrodden of the earth. President Nixon, for his part, recalled in a recent speech that the United States had suffered over a million casualties in four wars in this century, and then claimed that it had all be done out of saintly altruism. He declared:

Whatever faults we may have as a nation we have asked nothing for ourselves in return for those sacrifices. We have been generous toward those whom we have fought. We've helped our former foes as well as our friends in the task of reconstruction. We are proud of this record and we bring the same attitude in our search for a settlement in Vietnam.¹

I do not suggest that Mr. Nixon was insincere in asserting that we had suffered a million casualties in four wars as an act of pure altruism. Undoubtedly he meant it, but that does not make it true. Most of us have a deep and touching faith in our own virtue, and most politicians have an equally tender regard for their own rhetoric. Few people are more moved by a moving speech than the speaker himself—but that does not make what he says true.

Now do I suggest that there are no ideals or generous impulses in politics. I suggest only that they are far less controlling than we like to believe; that more often than not what we take for principle is not principle at all but rationalization; that the thing we are usually rationalizing is our instinct for competition; and that, if anything approaches a controlling influence on our behavior, it is this appetite for contest. I further suggest that there would be much to gain from a candid acknowledgement of our own political nature. Indeed, it is only by recognizing the fragility of our ideals, the limited role they play in guiding our behavior, and their susceptibility to corruption by rationalization that we can have any hope of translating them into reality. The Founding Fathers had no illusions about the behavior of their fellow men and, because of their realism, they were able to discipline the struggle for power so as to protect the people from despotism.

That brings me to the space race and to its possible uses for earthly purposes. The landing of Mr. Armstrong and Colonel Aldrin on the moon called forth a great deal of poeticizing about the human spirit bursting its earthly bonds, about the nobility of man's endless search for knowledge, and about the boundless but unspecified benefits for mankind certain to derive from the setting of human feet upon the surface of the moon.

In all this I perceive not humbug pure and simple but rather more sententiousness than plain hard truth. Americans went to the moon for a number of reasons, of which, I am convinced, the most important by far was our desire to beat the Russians. The kick was not just in

getting there but in getting their first. A football team does not celebrate the number of points it got if the other team got more points. Similarly, when Khrushchev cavorted over his sputnik back in 1957, it was not so much in delight over what the Russians had done as in delight over what they had done that we had not done. Then in early 1961 Yuri Gagarin made his flight around the earth, the United States was embarrassed at the Bay of Pigs, and the American people in general and the Kennedy administration in particular were plunged into depths of gloom and self-flagellation. These events stoked the fires of American competitiveness. It was then that the Apollo program was approved and we set off on the \$30 billion crash program that put Mr. Armstrong and Colonel Aldrin on the moon last week.

I do not wish to belittle the achievement in identifying the driving force behind it. But neither do I see any point in glorifying the motive out of appreciation for the achievement. In the space race thus far both Russians and Americans have accomplished technological prodigies and have done so for the most part because of the desire of each to surpass the other. Although some of us have thought the space contest hasty and extravagant in cost, it has certainly been a more constructive contest than the deadly race in armaments. It has, however, been wasteful: Efforts have been duplicated, priorities distorted, and resources diverted from more urgent needs. The competition bids fair to get out of hand, to pass beyond creativity to prodigality of worse.

I would not eliminate the competition. People like it much too much, and if through some miracle the Russians and Americans could bring themselves to get together, drop the space race and proceed to explore the universe all cooperative and lovey-dovey, it would spoil everybody's fun and likely rob the project of its creative drive. What we might try to do is to devise a way of putting limits on the competition, keeping it within financial bounds, and generally regulating the rivalry in such a way as to have the contest without being consumed by it.

Until now the Soviet-American space rivalry has been a contest without rules, and contests without rules are full of hazard for the participants. There is a latent militarism about the space race. As Prof. George Wald commented on the moon landing:

What should have been a great flight of the human spirit comes to us heavy with threat. Those almost miraculous guidance systems that so uncannily find their targets, will they one day be guiding missiles to find us?²

Spurred by an overly intense desire to “win,” the contest has broken the bounds of “true science,” which the great 19th century French physiologist Claude Bernard said, “teaches us to doubt and in ignorance to refrain.”

Oblivious in our haste to such cautionary warnings, we have scarcely thought

² “Intellectuals Deeply Divided Over Implications of Feat,” *The Washington Post*, July 22, 1969.

¹ Speech of May 14, 1969.

tions by dealers each and every time they purchase sporting ammunition.

And most important of all, this bill will in no way impair the objectives of the Gun Control Act—namely to keep the firearms out of the hands of the wrong people; and to reduce misuse and criminal use of firearms.

Mr. President, S. 2718 is a good bill. I urge prompt consideration and early favorable action.

THE ABM VOTE AND ARMS LIMITATION

Mr. MURPHY. Mr. President, I believe that the long debate on the Safeguard ABM system was an extremely healthy experience for us all. I feel strongly that, in the end, the vote dramatically reflected our deep concern for the continuing security of our great Nation. This was not a partisan victory, nor was it a partisan loss. Senators of both parties rallied to the President's banner in this cause and, I am sure, greatly strengthened his hand in our quest for peace.

An editorial entitled "ABM Vote and Arms Limits," published in the Los Angeles Times of August 8, is a concise and thought-provoking summary of this issue. I ask unanimous consent that it be printed in the RECORD.

There being no objection, the editorial was ordered to be printed in the RECORD, as follows:

ABM VOTE AND ARMS LIMITS

Issue: Now that the Safeguard ABM has won Senate approval, how have prospects for arms control been helped or hindered?

By voting to authorize first-phase deployment of the Safeguard ABM system, the U.S. Senate has enhanced the prospects for an eventual arms control agreement with the Soviet Union. The development is one, therefore, of historic importance.

The margin of victory for the ABM was slim—51 to 50 on one key amendment and 51 to 49 on another—but this is a case where the proverbial inch is probably as good as a mile.

Opponents vow to continue the fight, but most observers share the judgment of Senate Democratic Leader Mike Mansfield that the anti-ABM forces reached their "high water mark" in the voting this week.

The House is expected to approve deployment of Safeguard by a much larger margin than did the Senate. Opponents will make another fight when appropriations for the project come up in separate legislation, but their cause is generally regarded as lost.

It is important, at this point, to cut through the confusion which has been left by many weeks of wordy and acrimonious debate and get straight just what is involved.

The Safeguard ABM, which is a system for defense against missile attack on this country, marks a realistic and laudable attempt by the Nixon Administration to set the stage for an end to the nuclear arms race.

It would offer a "thin" system of protection for the American people against a small-scale Chinese missile attack or an accidental launching from any quarter.

The overriding purpose of Safeguard, however, is to preserve the credibility of our nuclear deterrent in the minds of the Kremlin leaders at a time when the latter are working hard to overcome the U.S. lead in missile striking power.

The premise is that the Russians will never be tempted to launch a surprise missile attack on this country if we keep them con-

vinced that enough of our missiles will survive to destroy the Soviet Union in return.

This could be accomplished, as some ABM critics suggest, by increasing our own force of offensive missiles. But such a move would be far more provocative—and more injurious to the chances of arms control—than deployment of an ABM system which is strictly defensive in nature.

The Safeguard system, if built in total, will cost over \$10 billion, including warheads. But if arms limitation talks with the Soviets produce an agreement to limit ABM deployment, the whole system will not be built.

The Nixon Administration this year is asking only for a \$759 million authorization to go ahead with deployment of two prototype installations.

Congressional approval improves President Nixon's bargaining position for the upcoming arms limitation talks with the Russians—who already have a limited ABM system of their own, and show no inclination to abandon it.

Meanwhile, the closeness of the Senate vote on Safeguard dramatizes the fact that the Pentagon can no longer count on unquestioned congressional approval of expensive new military programs and weapons systems. Military spending will be closely and critically scrutinized.

Even many ABM proponents will agree that the new skepticism is not a bad thing.

NETWORK CIGARETTE ADVERTISING LETTERS

Mr. MOSS. Mr. President, in separate letters to me as chairman of the Consumer Subcommittee, the heads of the three major television networks have responded to my plea that the broadcasters relieve cigarette manufacturers of their contractual commitments so as to enable the cigarette industry to withdraw from all broadcast advertising by January 1, 1970. CBS said yes. NBC and ABC said no.

On July 31, 1969 I sent the following letter to the heads of each of the three major television networks:

As you know, the cigarette manufacturers have now indicated to the Commerce Committee their willingness to withdraw from the broadcast advertising of cigarettes after December 31, 1969, "if the broadcast industry will simultaneously terminate all contractual arrangements for the broadcast of cigarette advertising."

I am not unmindful of the economic disruption which would be caused by such abrupt termination of cigarette advertising. But weighing the public health imperatives in the light of your strong traditions of social responsibility, I would hope that you would find it possible to accommodate the timetable adopted by the cigarette manufacturers.

I would very much appreciate hearing from you about your intentions with respect to enforcement of advertising contracts with the cigarette companies after January 1, 1970.

I have now heard from each network. Mr. Stanton's letter on behalf of CBS is temperate, rational, and in the highest traditions of broadcaster responsibility. Mr. Goodman's letter for NBC is disappointing. Mr. Goldenson's letter on behalf of ABC is unresponsive, shallow, and insensitive.

Mr. Stanton says that if Congress will grant the tobacco industry antitrust immunity for its agreement to withdraw from the broadcast advertising of cigarettes, "CBS will release the cigarette advertisers from their commitments." He

points out that responsibility for granting such exemption properly rests with Congress. We agree and we intend to carry out that responsibility as soon as possible.

Mr. Stanton also raises valid questions which merit response.

He questions the legislative soundness of the tobacco industry's proposal of a "congressional prohibition of any Federal Trade Commission action which would require health warnings in print media." I agree. I, too, oppose any such prohibition, and I see no inclination on the part of the Senate to grant such prohibition. I might add, however, that the National Association of Broadcasters warmly supported such prohibition in the House.

He fears the "transfer of existing expenditures for broadcast cigarette advertising to print media." So do I, as I indicated at the time the tobacco industry made its proposal. This must not be allowed to happen. And if it can be prevented only by FTC action to require a warning in every cigarette ad, the FTC must be left free to require such warnings.

Mr. Goldenson takes the position that even if the termination of cigarette advertising "would greatly reduce cigarette consumption," he would consider that ABC had no responsibility to terminate cigarette advertising unless it were terminated in all news media. In fact, he is shocked by such "discrimination" as contrary to "fair competition."

"Discrimination," and "Fair Competition" are serviceable slogans. But we are not talking about slogans. We are talking about the direct and unparalleled impact of the broadcast media upon the American home. Ever since television became an advertising medium, its salesmen have been contemptuously deriding newspapers and magazines as second-class media. Television with its animated, visual-audial impact upon nonselective viewers, has been heralded as the most powerful sales medium in history. Now Mr. Goldenson claims to be the victim of discrimination.

The unpleasant fact is that television and radio cigarette advertising have been singled out as abominations by every major public health organization concerned with the hazards of cigarette smoking, because they have a direct and inescapable impact upon young people.

As the broadcasting critic of the Washington Post put it this morning, research has demonstrated that "no way exists for avoiding the young viewer of TV."

There are few 4-, 5-, or 6-year-old children in this country who cannot recite by rote a half dozen cigarette jingles and catch phrases. They did not learn them by reading magazines and newspapers. The broadcasters themselves have recognized their unique impact by agreeing to a 4-year phaseout of broadcast cigarette advertising.

Moreover—and the broadcasters conveniently suppress this fact—broadcasters alone enjoy a public monopoly conferred by Congress of broadcast frequencies. Congress has asked in return, only that broadcasters serve the

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"public interest." Magazines and newspapers carry no such burden.

Now, let us look at the shamelessly self-serving argument that until Congress bans the sale of cigarettes, the freedom of unrestrained advertising in all media remains a sacred right.

Of course, if cigarettes were a new product about to be marketed with full knowledge that their consumption would kill hundreds of thousands, their sale would be banned without hesitation or quibble.

But no responsible public health official, to my knowledge, is recommending a ban despite the proven hazards of smoking. Why? Because millions of Americans are addicted or, at least, heavily habituated to smoking. The inevitable consequence of a cigarette ban in terms of a black market and the attendant law-enforcement chaos and social misery would make the bitter experience of prohibition pale by comparison. That is why cigarettes are not banned and the broadcasters know it.

It does not follow as the night the day that the failure of Congress to ban smoking, by law, forces us to permit the unrestricted promotion of cigarettes. Neither logic nor humanity dictates that we leave our young people thus exposed and unprotected.

As I indicated in my letter to the networks, I am not unmindful of the economic dislocation which would be caused by the loss of cigarette revenues. That loss, however, should be viewed only in the perspective of the human and economic loss which accompanies the premature death and disease which strike thousands of Americans each year.

Cigarette advertising on television and radio was certainly not the only factor influencing the decision of 70 million Americans to smoke. But I find it hard to believe that the more than \$2 billion of cigarette advertising revenues enjoyed by broadcasters since 1952 were not instrumental in persuading hundreds of thousands to smoke and hundreds of thousands not to quit.

We are told that experience in other countries proves that the end of television advertising will have no impact on cigarette consumption. But no country in the world has approached the massive exposure of citizens through television to cigarette commercials. There is no comparable experience.

Mr. Goldenson's threat to curtail public-interest broadcasting if cigarette advertising revenues drop is simple blackmail and not worthy of further comment.

While refusing to release cigarette manufacturers from their commitments, NBC expresses its willingness to allow cigarette companies to substitute its non-cigarette brand advertising. Fairness requires that the cigarette manufacturers be able to utilize the maximum feasible time for the advertising of non-cigarette products. The committee will explore this possibility with the cigarette companies.

NBC's recommendation for institutional, public service sponsorship by the cigarette companies is also worth exploring further.

But cigarette manufacturers should not be forced, by commercial considera-

tions, to continue to advertise cigarettes on radio and television.

I am today asking the FCC to take note of the discrepancies among the network responses and to inform me if the FCC's mandate from Congress to see that broadcasters operate in the public interest affords them any opportunity to influence NBC's or ABC's decision.

On our part we in Congress can at least make certain that cigarette advertising on radio and TV will cease by September 1970.

I have asked the Justice Department to prepare legislative language which would facilitate the agreed withdrawal of cigarette advertising from radio and TV by the cigarette industry. The language will not be "discriminatory," but will be broad enough to permit tobacco industry withdrawal from print media as well if that later becomes feasible.

GASOLINE RETAILERS WANT DEPLETION ALLOWANCE AND OIL IMPORT QUOTAS ABOLISHED

Mr. PROXMIRE. Mr. President, all too often we forget that the oil industry is composed of many small businessmen. These small businessmen are not like the giant major oil companies; they do not have the benefit of the oil depletion allowance or oil import quotas. Although these small independent businessmen do not have the gigantic profits or Government subsidies of the major oil companies, they must compete against them.

Mr. President on June 23 and 24 the Retail Gasoline Dealers Association of Wisconsin, Inc., held their convention in Eau Claire. At that convention they adopted the following resolution:

OIL DEPLETION ALLOWANCE

Whereas, it is apparent that petroleum producers have been favored by way of Federal Government oil depletion allowance against income tax to the extent of 27½% annually; and

Whereas, the importing petroleum producers has further been granted favored treatment on foreign crude oil imports; and

Whereas, such special allowances have been conducive to the promotion the ruinous price wars; and

Whereas, such results have caused grave economic hardship and in some cases complete economic disaster to the retailer; Now, therefore,

Resolved, that the Retail Gasoline Dealers Association of Wisconsin, Inc., in convention assembled, urges the Congress of the United States and our Wisconsin Senators and Congressmen to take appropriate action to terminate the 27½% oil depletion allowance to oil producers and to terminate favored treatment on foreign crude oil imports.

I think this resolution is eloquent testimony to the need to change our tax laws and the oil import program which give the major oil companies all these subsidies to the detriment of the consumers and small businessmen. I, for one, shall do all that I can to implement this resolution.

WALKER W. BROWN, PRINCIPAL,
JOHN A. SUTTER, JUNIOR HIGH
SCHOOL, CANOGA PARK, CALIF.

Mr. MURPHY. Mr. President, I should like to give what I feel is much deserved recognition to a distinguished educator

from the State of California, Mr. Walker W. Brown, principal of John A. Sutter Junior High School in Canoga Park, Calif. Mr. Brown has earned the highest esteem of all who have worked with him during the 20 years he has worked with our young people.

In his years as a teacher and administrator, Mr. Brown has always strived to teach his students the American ideals. Through his work with student government, the meaning of democracy and a deep appreciation of it have been brought firsthand to his students, and at the same time, he has been educating and training the responsible leaders of tomorrow.

Under his direction, programs dealing with Americanism and our American heritage have been held and have continued for the entire school year. Due largely to the leadership of Mr. Brown, Sutter Junior High School was named a recipient of the 1968 Principal Award and George Washington Honor Medal from Freedom's Foundation of Valley Forge.

Mr. Brown has shown not only to his students, but also to all the teachers who work with him as well as all of his associates, that no matter what their own personal political leanings, they can still take pride in the great history of our free people and in just being Americans.

Mr. President, I am proud that California has an educator of Mr. Brown's caliber. I am sure that he and his colleagues fully realize that he can best mold responsible citizens of the future at this early age. This is the time when young people are in their formative years, a time when their feelings toward things of great value like democracy and our American way of life are being molded—feelings they will hold for the rest of their lives. And under Mr. Brown's guidance, a giant step is being taken toward ending future campus disruptions and toward providing the responsible leadership that will be so badly needed in the tumultuous years ahead.

Mr. President, I salute Mr. Walker Brown, principal of Sutter Junior High School, for the outstanding work he has done with our young people, and I pray that his sincere efforts may continue for many years to come with even greater success than he has had thus far.

EMERGENCY INSURED STUDENT LOAN ACT OF 1969

Mr. SPONG. Mr. President, on July 24, 1969, at 12:50 p.m., three Americans returned from a trip into space which took two of them to the surface of the moon. Behind the trip lay hours of research and development, billions of dollars, and the dreams of millions of persons through the United States and the world. Preparation for the trip not only produced a mammoth scientific and technological success but also resulted in various spin-off developments which will advance many fields.

All of this would however, been impossible without educated men and women. Education is the single most important element responsible for the recent space feat. It is single most important factor in enabling us to continue

of other weapons systems. "This does not mean that if Safeguard has a transistor that we cannot deal with that transistor in another system, or a weapon, or a Sprint, or a PAR (perimeter acquisition radar), or anything else that happens to be in the Safeguard system." What it did do, he added, was "to reject Safeguard as the system upon which the research and development will be focused."

Richard B. Russell (D Ga.), President Pro Tempore of the Senate, said that backers of the Cooper-Hart amendment had been arguing for additional research and development instead of deployment.

The Smith language, he said, "will kill all the research and all the development of the so-called Safeguard system after Senators have stood here on the floor day after day and stated they were in favor of research and development, but not deployment. This strangles it in the crib."

Another ABM supporter, Howard H. Baker Jr. (R Tenn.), said that the Smith amendment would prevent "evolutionary development" to improve the Safeguard system. "I do not believe we intend to scrap what we have done so far and require our scientists to start over from scratch with some other system," he added, but that was "the inevitable effect" of Mrs. Smith's proposal.

Stennis called the new amendment "a legislative monstrosity, when there is not time to analyze, to find the meaning of words, to check and doublecheck....It is legislating in the dark where we do not know what these words mean."

When the voting ended, Mrs. Smith had joined the backers of the Cooper-Hart amendment but the two Senators whose positions were not known, Anderson and Williams of Delaware, lined up with the Administration.

Under Senate rules an amendment needs a clear majority to carry, and although Vice President Agnew cast a "nay" vote to break the tie, this was not necessary to defeat it. The final vote on the second Smith amendment was 50-51, with 36 Democrats and 14 Republicans in support of it, and 21 Democrats and 29 Republicans plus Agnew against it. Of the 21 Democrats who opposed the amendment, all but five were Southerners. All but seven Northern Democrats supported it.

Cooper-Hart Amendment. Voting on the Cooper-Hart amendment followed immediately after the defeat of the Smith provision. There was a rush of murmurs when Mrs. Smith changed her previous position to vote against the anti-ABM measure. Hers was the only switch, setting the tally at 49-51.

McIntyre Amendment. The next day, McIntyre tried to rally the anti-ABM forces to support his limited deployment compromise. The amendment would allow installation of radars, computers and electronic equipment at two Air Force bases in North Dakota and Montana, but would prevent deployment of operational missiles or acquisition of other sites.

He called the Aug. 6 votes "a hollow victory indeed" for the Nixon Administration. Since "the Senate is in great disagreement among itself" over the Safeguard, he said, the bill should spell out what Defense officials could do rather than give them latitude to act.

Stennis objected to the McIntyre amendment. "Just a few hours ago 51 Senators put their stamp of approval on phase one (of the Safeguard system)." The McIntyre amendment "cuts some pieces out of phase one," he said.

Fulbright said he did not understand how McIntyre's amendment would limit the Pentagon. The amendment

Another Memorable Vote

Sen. Clinton P. Anderson (D N.M.) cast another crucial vote in the field of national defense Aug. 6. It was reminiscent of his vote as a House Member on the 203-202 roll-call that extended the draft Aug. 12, 1941.

Anderson had not announced his ABM position before the Senate showdown on the Safeguard system. Only his stand and that of Sen. John J. Williams (R Del.) were unknown to the public. Williams, typically closemouthed about his vote both before and immediately after the roll-call, would not discuss his views. Anderson's decision and thoughts were made known in an interview with Congressional Quarterly.

Anderson was subjected to a steady barrage of phone calls on the morning of the Aug. 6 vote.

Shortly before 11:30 a.m., President Nixon called and spoke briefly with Anderson. An aide said former Vice President Hubert H. Humphrey, an opponent of the Safeguard system, had called Anderson earlier in the morning.

"I have not had five minutes free this morning because of the telephone," Anderson told Congressional Quarterly shortly after 11:30 a.m. that morning. An aide said Anderson had received about six extended calls from other Senators and estimated that the New Mexico Senator had made several other calls himself.

Anderson said he had made up his mind "probably during the end of last week or the beginning of this week." Referring to his support for ABM in 1968, he said that he didn't really "have to make up his mind much."

Anderson said that he was influenced in reaching his decision by a speech of Hans A. Bethe of Cornell University. Bethe supported a thin ABM system around U.S. missile sites. Anderson also said, "Scoop Jackson's presentation was excellent." Sen. Henry M. Jackson (D Wash.) was one of the major supporters of the Safeguard system.

While saying "I tried my very best to find out what the facts were," Anderson admitted, "I haven't followed the debate in the Senate as closely as I might. There are no new ideas being expressed; the positions have been established for months."

Anderson recalled, "The first vote I cast in Congress in 1941 was to extend the draft. The memory of that has stayed with me for a long time."

He likened that bill, which he said was widely attacked by isolationists, with the Senate vote on the ABM. "The same circumstances exist today," he said. "There were very heavy pressures on me then from the so-called liberal bloc. But I had to vote for the bill."

"Averell Harriman came by yesterday," Anderson added. He described Harriman, an opponent of the ABM, as a "real old friend from the days when we were in the Truman Cabinet together." But, the Senator added, "I couldn't promise everyone everything." (Anderson is a former Secretary of Agriculture.)

Longest Military Debate

The Senate debate on the Antibalistic Missile System, which lasted 29 days, was the sixth longest debate in the Senate since 1945. It was the longest debate since that year on any military authorization bill.

The debate on the Open Housing Act of 1968 lasted 53 days.

The 1964 debate on the Civil Rights Act, lasted 82 days. It was the longest debate in the history of the Senate. The debate on the Foreign Assistance Act of the same year lasted 31 days. In 1960, debate on the Civil Rights bill lasted 39 days, and there were 35 days of debate in 1953 on the bill giving the coastal states title to the tidelands.

"affirmatively authorizes two bases...which are intended to be operative bases," he said. He said he would support it "if I could be convinced it is truly restrictive in a meaningful way."

The vote, the last on the Safeguard ABM during consideration of S 2546, was 27-70. Five Republicans and two Southern Democrats voted for it.

Following the votes, President Nixon was reported by White House spokesman Ronald L. Ziegler as "pleased... and gratified by the results and the bipartisan voting that was apparent in the outcome."

In another reaction the vote was interpreted by the Soviet newspaper Izvestia as a victory for the antimilitary forces in the United States.

Future Controversy. However, continued attempts to block the ABM system were certain later in the session in the Senate where the opposition is centered. Some opponents vowed an attack when the annual defense appropriations bill with funds for the plan is considered later in the session.

In addition, many who opposed the ABM also plan to attack other programs authorized in the bill. The ABM funds authorized in the bill amounted to \$759.1 million out of a total of \$20 billion contained in S 2546. The remaining funds were designated for numerous research and procurement programs by all military services and the Defense Department. Many of these programs had become centers of controversy and criticism during the growing debate over defense spending and contracting and national priorities.

About 20 amendments were either already offered or were being considered on the bill assuring that debate would continue for several weeks. Senate Majority Leader Mike Mansfield (D Mont.) Aug. 6 indicated that debate on the measure would probably continue past the three-week Congressional recess beginning Aug. 13.

The controversial development of chemical-biological warfare weapons was the subject of seven amendments to curtail, oversee or cut back such operations. (*For story on chemical-biological warfare, see Weekly Report p. 1313.*)

William Proxmire (D Wis.), an ardent critic of defense spending, introduced several amendments to oversee job changes of executives between defense contractors and the Pentagon and of contracts and profits. (*For story on defense contracting, see Weekly Report p. 998.*)

ABM Vote-Switchers

Ten Senators who were in the Senate in both 1968 and 1969 changed their votes on similar amendments offered by Sens. Cooper and Hart to delay an ABM defense in both sessions.

A June 24, 1968, amendment to the military construction authorization bill by Cooper and Hart was proposed to delay a \$227.3 million authorization for the Johnson Administration ABM system. Their 1969 amendment barred deployment of the Safeguard system but permitted research.

Six Senators who voted against the 1968 amendment voted for the amendment in 1969. They were: Birch Bayh (D Ind.), Howard W. Cannon (D Nev.), Fred R. Harris (D Okla.), Daniel K. Inouye (D Hawaii), Warren G. Magnuson (D Wash.) and James R. Pearson (R Kan.). Four Senators, Winston L. Prouty (R Vt.), Hugh Scott (R Pa.), Margaret Chase Smith (R Maine), and John J. Williams (R Del.) voted for the 1968 amendment and against the 1969 proposal. (*For 1968 vote, see vote 154, 1968 Almanac p. 34-S.*)

In addition Sens. J. Caleb Boggs (R Del.) and Len B. Jordan (R Idaho) voted against the ABM on at least one of the other occasions in 1968 and for it in 1969. Thomas J. McIntyre (D N.H.) and Joseph M. Montoya (D N.M.) voted for the ABM on all 1968 occasions but against it in 1969.

Proxmire also offered an amendment to tighten spending on the Air Force's controversial C-5A transport plane, for which costs had increased significantly during its construction.

Other amendments were offered to curtail or end spending on the Army main battle tank program, defense research programs, the defense contingency fund and to limit troops strengths. Still others would require reports from the Pentagon on contract progress and release of studies by Defense "think tanks."

Tie Votes Not Uncommon

Although the 50-50 vote on the Smith amendment was the first tie vote in this session of Congress, ties are not unusual. Since 1952 there have been only three years—1954, 1957 and 1962—in which no votes were tied in the Senate.

Article 1, section 3 of the Constitution provides that the Vice President may cast a vote to break a tie in the Senate. Since a tie vote defeats the measure being voted upon, the Vice President usually votes to break the tie only if he favors passage of the measure. The last such occurrence was on March 11, 1968, when Vice President Hubert H. Humphrey voted "yea" to break a 42-42 deadlock on an amendment to provide funds for the Office of Economic Opportunity's Head Start Program. (*See vote 32, p. 10-S, 1968 Almanac.*)

One such moment arose recently when the Attorney General and I took different positions on the issue of voting rights legislation.

The 1965 Voting Rights Act expires next year. I have urged its simple extension. When the Attorney General offered a different proposal, which I opposed, some people asked me why I disagreed with the country's chief legal officer, a member of my own party.

I have the highest personal regard for the Attorney General and I consider him one of the ablest men in public life. He and I are lawyers who disagree on the timeliness and certain provisions of proposed legislation. It is not unusual for lawyers to disagree.

I co-sponsored and fought for passage of the Voting Rights Act in 1965. I believed this landmark legislation was the least we could do to prevent the exclusion of Negroes from the voting rolls in the South. The Act was specifically designed to pinpoint conspiracies that serve to maintain "whites-only" registration. Literacy tests, for example, are prohibited when they are used for the purpose of discriminating. If the effect of the law has been regional, that is only because the pattern of discrimination has been regional.

The Attorney General, however, has proposed new legislation which, among other provisions, would abolish literacy tests in all states and do away with state residency bans. I approve of those features and will vote for them if they are considered as separate legislation after the Voting Rights Act is extended. My present opposition to these provisions is a matter of timing.

There is a danger that the present Voting Rights Act could expire by default. Twenty states now have literacy tests—many of them for nondiscriminatory reasons. Only in the deep South have they been used to exclude Negroes. But any attempt to change the laws of all twenty states would provoke extended debate in Congress and it might prove impossible to get the new law passed before the Voting Rights Act expires. All the progress we have made would go down the drain, as non-complying areas would hasten to exploit the expiration of the Act.

However, there are also other parts of the proposed new law which I would have to oppose, no matter what the timing.

Under the 1965 Voting Rights Act county officials in the South can no longer resort to the kind of tricks which used to keep Negroes from voting. Some areas, for example, had laws which required would-be voters to "interpret the Constitution." Of course, such tests seldom kept whites out of the voting booth. The present Act suspends such devices until the offending counties can prove that they have not been used to discriminate for five full years. We put "teeth" into the law so that no state could get around the Fifteenth Amendment's mandate that the right to vote shall not be denied because of "race, color, or previous condition of servitude."

Unfortunately, the proposed new law would scrap the system under which states now affected must clear with Washington changes in state and local election laws. This would take the heat off states which discriminate by giving the Federal Government a much heavier burden of proof. The Justice Department might have to rush lawyers into every suspect county just before election day trying to protect black voters' rights.

Besides the obvious waste of tax dollars, this procedure would allow county officials to stall the Government with legal maneuvers until the elections were over. That is a step backward. I do not want to endanger what Lord Coke called the "knowne certaintie of the law" when that law has worked extremely well. Therefore, I expect to do whatever is necessary to lead the fight, if I am asked to do it, for the extension of the 1965 Voting Rights Act.

My position is influenced heavily by a deep personal commitment which has been con-

sistent throughout my years in Congress. The extension of the 1965 Voting Rights Act is quite simply a matter of human rights. That guarantees my strongest efforts on the floor of the United States Senate.

CONCLUSION OF MORNING BUSINESS

Mr. MANSFIELD. Mr. President, is there further morning business?

The PRESIDENT pro tempore. Is there further morning business? If not, morning business is closed.

AUTHORIZATION OF APPROPRIATIONS FOR FISCAL YEAR 1970 FOR MILITARY PROCUREMENT, RESEARCH AND DEVELOPMENT, AND FOR THE CONSTRUCTION OF MISSILE TEST FACILITIES AT KWAJALEIN MISSILE RANGE, AND RESERVE COMPONENT STRENGTH

Mr. MANSFIELD. Mr. President, I ask unanimous consent that the Senate proceed to the consideration of the unfinished business.

The PRESIDENT pro tempore. The bill will be stated by title for the information of the Senate.

The ASSISTANT LEGISLATIVE CLERK. A bill (S. 2546) to authorize appropriations during the fiscal year 1970 for procurement of aircraft, missiles, naval vessels, and tracked combat vehicles, and to authorize the construction of test facilities at Kwajalein Missile Range, and to prescribe the authorized personnel strength of the Selected Reserve of each Reserve component of the Armed Forces, and for other purposes.

The PRESIDENT pro tempore. Is there objection to the present consideration of the bill?

There being no objection, the Senate proceeded to consider the bill.

The PRESIDENT pro tempore. The junior Senator from Missouri (Mr. EAGLETON) is recognized.

THE MBT-70—MAIN BATTLE TANK

Mr. EAGLETON. Mr. President, Senator HATFIELD and I, joined by Senators MCGOVERN, MONDALE, MOSS, PROXMIRE, and YARBOROUGH, have introduced an amendment to S. 2546 which would temporarily delay the further development of the Main Battle Tank until the Comptroller General has an opportunity to report to the Congress on the practicability and cost-effectiveness of this highly complex defense system.

This is a modest amendment in terms of the dollars it would strike out of the bill—\$30 million for research and development and \$24.5 million for production base support.

I do not pretend to have the technical competence to judge the ultimate effectiveness of the MBT-70. Nor do I question in any way the sincerity and competence of those military officers and contractors who have brought the system to its present state.

But when the research and development costs of a military system conceived in 1963 have risen 528 percent in just 6 years, when the tank's projected operation date has slipped back from 1969, which was its originally estimated

operational date, to 1974 or 1975; and when the strategic assumptions of a land war in Europe have necessarily changed during the extended period this tank has been on the drawing board; when we consider all these things, and others, I feel that Congress is obliged to know precisely what it is buying before it votes further funds for this project.

Mr. President, the MBT-70 project is a joint undertaking by the United States and the Federal Republic of Germany.

It began as a quest for a dream tank, rather than as a weapon designed to fulfill a specific mission or a specific threat.

Indeed, the Army had no clear idea of what the configuration of the MBT-70 would be until research, development, testing and evaluation was well underway.

Mr. President, General Burba, who formerly was in charge of this project, was interviewed in September of 1967, and in that interview appearing in the Armed Forces magazine he said this:

For the first time in the history of modern tank design, the designers of the MBT were given carte blanche to optimize basic design configurations into which they put the best scientific engineering know-how.

I might add that the designers, as referred to by General Burba, according to the Defense Department, are the contractors on both sides plus the joint engineering agency. As the quotation reflects, they were given carte blanche to come up with almost anything they could conjure.

General Betts, Army Director of Research and Development, explained the spectacular rise in R. & D. costs in these terms:

For the first estimate we did not have a design. We did not have any really detailed idea of what would go into the tanks so the early estimates were very summary in nature.

The most summary kind of cost estimates have become the hallmark of the MBT-70.

The initial 1963 estimate for joint research and development, training, and evaluation was somewhere between \$80 million and \$86 million. In 1965, the ante was raised to \$138 million. Now it is \$303 million.

Those are the estimates for research, development, training, and evaluation originally brought in at \$80 million to \$86 million. That has now now skyrocketed, with its first stop at \$138 million, and now the current estimate is \$303 million.

Mr. President, I have had prepared a chart which is on the easel in the rear of the Chamber. I must confess that my original inclination to make up a chart stemmed from the fact that in discussing military matters, it seems indispensable to have some kind of chart, whether secret or nonsecret, whether classified or nonclassified.

I assure you, Mr. President, that this is the most nonclassified chart in existence.

Having had it prepared, I believe its illustrative purpose will bear out in graphic terms that which I have just verbalized; namely, as to the continued escalation of the estimated costs of research, development, training, and evalu-

ation with the program as it began in 1963.

The difference between the red and green lines on the chart is that when the program was originally conceived in 1963, there was a partnership agreement between the United States and the Federal Republic of Germany, a 50-50 partnership at that time, with \$80 million being the total estimated cost, one-half to be borne by the United States and the other half to be borne—\$40 million—by the Federal Republic of Germany.

That continued in 1965. As to 1966, 1967, and 1968, the costs had risen so much by that time, to \$138 million, but it was still a 50-50 arrangement, one-half German, one-half American, in terms of cost.

It was in 1968 when the greatest escalation in costs took place and the 50-50 partnership arrangement just completely evaporated and it became pretty close to a 75 percent American endeavor—close to \$230 million, and about \$70 million on the German side.

Mr. LONG. Mr. President, will the Senator from Missouri yield?

The PRESIDING OFFICER (Mr. ALLEN in the chair). Does the Senator from Missouri yield to the Senator from Louisiana?

Mr. EAGLETON. I yield.

Mr. LONG. Would the Senator tell me whether those who negotiated that agreement ever heard of the balance-of-payments problems? The fact that the Germans had a good surplus and we had a big deficit, did we know about that in negotiating the agreement?

Mr. EAGLETON. Frankly, in answer to the Senator from Louisiana, I just do not know as to whether the balance-of-payments question was considered or taken into the equation at the time the determination was made. The main thrust of my argument, Senator, is, and I do not wish to becloud the issue or to avoid answering the Senator's question, but the escalation of the costs, the ancillary or subsidiary questions as to the divergence away from the previous 50-50 agreement to what it is now, is loosely a 75-to-25 arrangement.

Mr. LONG. The point is that the chart shows it is "heavying" up on the costs and departing from the 50-50 arrangement where we now do about 75 percent of it, I would assume.

Mr. EAGLETON. That is right.

Mr. LONG. During this same period we were negotiating a treaty that the Germans pay for more of their own expenses of doing business because we could not carry them any longer, with this Nation carrying the cost of this development. Here is an agreement that was apparently negotiated, diametrically opposite, by apparently some enthusiast over in the Pentagon who thought his program was so great that we ought to depart from the 50-to-50 ratio and go to an 80-to-20 ratio, perhaps, at the very time this Government was pressing the German Government to carry more of the burden.

Mr. EAGLETON. I think the Senator is eminently correct. I take it that today, near the latter part of 1969, it is still the pious hope—and I emphasize the

word "pious"—that the German Federal Republic and other governments that constitute our NATO partners will carry a greater burden of defense costs. I emphasize the words "pious hope" because there has been no manifestation, whether it be in the way of troops or anything else, that gives substance to that pious hope. Here in 1968 was an agreement which went into the very teeth of our desire to get out of the dilemma with respect to the twofold problem—for them to carry a greater burden of the defense costs and to some extent relieve our balance-of-payments problem.

Mr. LONG. Here is someone who did not want to be forced by pressure or circumstances; who was being required to dress in a Santa Claus costume and put on a pair of overhauls and go to work; and here is an agreement which was negotiated apparently completely against the current, swimming upstream, while the whole trend was to go in favor of helping us balance our payments. Here was a situation where there was an 80-20 arrangement, when we could not pay and the other fellow could pay, which would require us to move away from the 80-20 arrangement to a 50-50 arrangement, and yet we were moving away from the 50-50 arrangement toward an 80-20 arrangement.

Mr. EAGLETON. I agree with the Senator. If there was any merit, from the international monetary point of view or the balance of payments point of view, in deviating from the original concept of that agreement—to wit, 50-50—the meritorious argument would be for the Federal Republic of Germany to take up 80 percent of the burden and leave us, for a change, on the short end of the stick, and assume 20 percent of the burden. The logical result would have been that result rather than the end result reflected in that chart.

Mr. LONG. If we look at the conditions between 1965 and 1968 and the pressures on our monetary situation, of course, it will be seen that we should have been moving toward a 50-50 arrangement rather than in the other direction.

Mr. EAGLETON. That is right. I thank the Senator from Louisiana.

Mr. SYMINGTON. Mr. President, will the Senator yield?

Mr. EAGLETON. I am glad to yield to the senior Senator from Missouri.

Mr. SYMINGTON. I congratulate my colleague on a typically thorough development of a group of pertinent facts, and was most interested in the comments made by the distinguished chairman of the Finance Committee, who knows, as do we all, of the increasing problems incident to our continuing unfavorable balance of payments. I believe the last quarter was the worst we have had in our history.

I would ask the able Senator where this research and development work was done?

Mr. EAGLETON. The physical site or the physical location?

Mr. SYMINGTON. Both.

Mr. EAGLETON. In both countries it was in terms of the engine, which is still being worked on and not agreed to.

Research was being done in the Federal Republic of Germany, and in the United States, by the General Motors Corp., and the Lycoming Corp. in the State of Connecticut is doing some work in terms of researching a turbine engine that may conceivably some day go into the MBT-70.

Mr. SYMINGTON. When the increased cost developed, as this illuminating chart shows, was the increased cost on work done primarily in this country? How was that divided? In other words, was there any additional direct negative effect on our balance of payments?

Mr. EAGLETON. The backup figures on some of this material are not publicly available, as I am sure the Senator must know, based on his long experience on the Armed Services Committee. The amount of work being done, though, will be reflected at the present time in terms of the amounts here and in the Republic of Germany. It is close to 80-20; 80 American, 20 German.

Mr. SYMINGTON. Has any adequate explanation been given the Senator as to why there was such a sudden sharp increase in the money expended by the United States as against the money expended by Germany?

Mr. EAGLETON. I am sure that perhaps later on the Senator from Mississippi can clarify any erroneous misconception I may have, but the original contract in 1963 was based on \$80 million and a 50-50 coequal partnership, which was estimated on production levels looking down the road. The cost of research went up. The target for production was enhanced and went up. It was assumed that the greatest production would be done in the United States and, hence, the United States should share a greater burden than originally was estimated. That is my impression.

Mr. SYMINGTON. I thank the Senator.

Mr. STENNIS. Mr. President, will the Senator yield?

Mr. EAGLETON. I am glad to yield to the Senator from Mississippi.

Mr. STENNIS. I thank the Senator for yielding to me. On these cost figures, Members of the Senate, the figures I have here come directly from the Army. They are the ones charged with the responsibility. They say that the total program cost before production—that is, real production of the tank, ready to roll out and go out in the field—will be, in round numbers, the United States, \$173 million; Germany, \$130 million.

I will repeat that figure because I think it is important to be heard. Total cost prior to actual production for use, United States \$173 million; Germany, \$130 million.

That is not exactly 50-50, but it is in the neighborhood of it.

My source for that is the Army, and their source is their books. If that is in error, we certainly need to know now.

Mr. EAGLETON. May I respond?

Mr. STENNIS. Yes. The Senator yielded to me.

Mr. EAGLETON. It ill behooves the junior Senator from Missouri to dispute the Senator from Mississippi on any military figures.

Mr. STENNIS. These are not my figures; they are the Army's figures.

Mr. EAGLETON. Here are the figures that were given to us by the Department of Defense on the development concept, as projected: The R. & D. cost to the United States alone was projected at \$227 million, which is an increase of \$184 million, which, as I said in my talk, was 528 percent over the original estimate for our part of the cost, our part originally being \$40 million.

The gentleman who supplied us with this information, if the Senator would like to have his name, was Colonel Petrenko.

Mr. STENNIS. I thank the Senator. I am inclined to believe that the figures I have here are approximately correct, but I will call on them for further verification.

I notice the Senator said projected cost. That was conceived when? Projection means over into the years. When was that cost conceived?

Mr. EAGLETON. There have been different conceptions, as it were, the original one being in 1963, \$80 million; and that was apparently an adequate estimate of projection for the first 2 years of the program. Then it went up to \$138 million. Now, according to my chart, it is \$303 million, to be precise.

Mr. SYMINGTON. Mr. President, will the Senator yield to me for a comment?

Mr. EAGLETON. I yield.

Mr. SYMINGTON. Respecting the colloquy between the distinguished chairman and the Senator from Missouri, it is a bit comparable to what was going on on the floor yesterday with respect to the number of troops in Vietnam. I know the chairman's figures are given with complete sincerity, and I know my colleague's figures are given with complete sincerity. Therefore, I would hope that this matter can be checked for the record, and that whatever the facts are, the record will then so show.

We are having problems of this character in other fields. It is possible that one person in the Pentagon gave a certain set of figures, and another person, in all good faith, gave a different set of figures.

Mr. EAGLETON. If I may comment on the remarks of my senior colleague, I think that is a very apt and adequate summary of the situation. I would be the first to desire to have the accurate figures, and I know the Senator from Mississippi desires the same thing.

Mr. STENNIS. Oh, yes. If the Senator will yield further on that point, the whole answer is just to run back, for verification, our figures. I was stating figures here from a factsheet supplied to me by the Army.

I thank the Senator for yielding. Let me make one further point about the year 1963, that seems so pertinent here.

Mr. EAGLETON. Yes.

Mr. STENNIS. In the year 1963, this tank we are talking about today was merely an idea that Mr. McNamara finally approved—a joint undertaking for a supertank for the 1970's, looking forward into the 1970's, and, frankly,

primarily looking to Western Europe as a possible use for a part of that arsenal.

That required the cooperation of the two governments; it involved the State Department at diplomatic levels, and everything else; and it was 2 years before they really got moving. In 1963, they did not even have a full concept of what the tank would be. They had to get a green light to really go to thinking and putting things down on paper, and drawing lines and rubbing them out.

This time looked long to me, too; but when I got into it, and saw where those 2 years went, it was a little different.

I thank the Senator for yielding.

Mr. FULBRIGHT. Mr. President, will the Senator yield to me?

Mr. EAGLETON. I am glad to yield to the Senator from Arkansas.

Mr. FULBRIGHT. With regard to the point made by the Senator from Missouri, it reminds me of the difficulty I have had on an amendment I have proposed with regard to research projects. I have had one of the best men we have on the staff working as closely as he could with Mr. Foster and his staff in the Pentagon, trying to ascertain the cost of each project—not the overall cost—and they finally just came back and said they could not identify those costs. I shall not present my amendment on those projects until Monday; but I can state now that they just are unable to give me the cost of individual projects carried in their programs. The Department will give us the name of a project, describe what it is about, and where it is done, and so on, but they are unwilling or unable—they said they could not—give me what they called a realistic estimate or price on many individual projects.

So I can well imagine—these are projects many of which run from \$50,000 to \$500,000—that on a project like a tank, they have a very difficult time. They have become accustomed to loose practices. This only emphasizes how very important it was to adopt the Schweiker amendment yesterday. If the Defense people cannot do this kind of job. GAO has got to go in and help them develop a way to keep better track of their accounting methods and estimates on costs.

Mr. President, I wanted to ask a question. I had a committee meeting this morning, and did not hear the first part of the presentation of the Senator from Missouri. Did he discuss the origin of this project? It was 6 years ago, was it not?

Mr. EAGLETON. That is correct.

Mr. FULBRIGHT. There have been changes and developments in the field of missile and antitank weapons, since the project began which suggests to me that ideas which had great validity then may not be valid today. It may be questionable whether the concept of the supertank is really valid now, in view of the great developments, for example in antitank weapons. In this bill itself, I think, there are some 14 or 18 different kinds of missiles, many of which are missiles of a nature that could be used against tanks; is that not correct?

Mr. EAGLETON. That is absolutely correct. In answering the Senator's question, I should like to put it this way: I shall discuss this matter later in my remarks, but I am pleased that the Senator brought it up now, because I think it is currently germane.

Drawing on the very words of the Senator from Mississippi, when this program was conceived in 1963, as the Senator from Mississippi said, it was just an idea, apparently, kicking around the Pentagon, that it would be good to have a dream tank; just as there are a lot of other dream ideas that kick around. There are a lot of dreams that Americans have in the domestic sector of life, and as far as our cities are concerned, as well; we are a dreamy country. But be that as it may, this was a loose, amorphous dream idea that somebody had, that we ought to build a better tank, a better mousetrap, a super deluxe model, and they started off on this 50-50 basis.

I think the Senator is eminently correct in his assessment of the change from what may have been the conditions in the world at that time. As the Senator from Mississippi points out, this was conceived as a tank primarily needed in Western Europe. Certainly the conditions that existed in 1945, at the end of the war, or in 1950, or in the latter part of the 1950's, and conceivably even up until 1963, are not necessarily the same as the conditions of the world, or the nature of possible warfare, or the nature of the threat we face, or the severity of it, in 1969.

This is the dream, or the idea, or the concept of 1963. Perhaps, without admitting that it was relevant at that time, it may be—and, indeed, in my judgment is—irrelevant in the latter part of 1969, so quick and swift are the changes in the nature of the threat we face and the changes in the nature of warfare.

Mr. SYMINGTON. Mr. President, will the Senator yield?

Mr. FULBRIGHT. I yield.

Mr. SYMINGTON. I notice the Senator says the cost is 2½ to 3½ times as much as that of our most advanced present tank, the M60A1. We had some hearings in the Committee on Armed Services, I think last year, which revealed that at that time there were—6,000 is the figure that rests in my mind—American tanks for sale in Europe—tanks that were obsolescent to the point of being obsolete.

Mr. FULBRIGHT. For sale by whom?

Mr. SYMINGTON. That is a good question, and I would ask the Senator not to press it. There were 6,000 American tanks available, let us put it that way, available in Europe because they did not meet the standards of European potential warfare, although apparently they did meet the standards of potential warfare in other places.

With that premise, if the modern new tank is a good tank, and we have another better one close to production, what is the reason we need this third even more expensive and even newer tank?

Mr. EAGLETON. If I may answer the Senator, I think his question goes to the very heart of this issue. His premise, which I know is not his own personal

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belief, but is offered to get at this issue. Our present tank force, with our principal and most modern tank being the M60A1, is far from obsolescent; indeed, according to the Stratton subcommittee of the House Armed Services Committee—which just completed a few weeks ago the most exhaustive analysis of tanks, including the Sheridan, and what has happened to them, why they work and why they do not work—the M60A1, currently deployed in Western Europe, is equal to, or, in their judgment, superior to any tank that the Soviet Union has deployed under the Warsaw Pact or otherwise.

Let me quote, if I may, just briefly, that part of the report.

Mr. SYMINGTON. Does that have to do with the M60A1?

Mr. EAGLETON. Yes. It reads as follows:

Since 1959 the M60A1 main battle tank has been the mainstay of the Army armored units in Europe and the Army currently considers this tank equal to or superior to Soviet-designed tanks . . .

The Stratton committee goes on to point out the dilemma we currently face:

Not only did the Army fail to maintain an adequate production rate of M60A1's during the 1960's, but they slowed down the production line and even closed it in 1967 to produce the M60A1E2, which still cannot be deployed because of deficiencies.

U.S. armored capability was further degraded by the sale of M60A1's to countries other than NATO allies between fiscal year 1964 and fiscal year 1969.

Mr. SYMINGTON. Mr. President, at one point fairly recently a decision was agreed to between our Government and the Government of West Germany, not to pay for the location of our several hundred thousand troops in Europe through the purchase of military equipment, rather to do so as the result of an agreement between the two Governments for the German Government to purchase bonds of the United States.

Could it be that the difference in the amount of research and engineering work done on this particular military development, the cost increase was because of that particular change of policy?

Mr. EAGLETON. I am ready to confess the Senator is getting into a rather sophisticated industrial-military-monetary field that is a bit over my head. However, I surmise that it could be quite possible.

Mr. SYMINGTON. The Senator sees my point?

Mr. EAGLETON. Yes, I do.

Mr. SYMINGTON. It might be that that would have something to do with it. Otherwise, it would seem hard to understand. But in any case, again my congratulations to the Senator for this detailed clear and thoughtful presentation.

Mr. FULBRIGHT. Mr. President, will the Senator yield?

Mr. EAGLETON. I yield.

Mr. FULBRIGHT. Mr. President, concerning the great changes being realized in other areas, we were reminded the other day during the ABM debate of the great accomplishment of our astronauts and scientists in getting to the moon.

I think there might be comparable changes in areas of weapons development.

I am under the impression, for example, that the whole concept of the tank may be incorrect. Tanks may be usable to El Salvador or Peru. However, for the kind of conflict in which this country is likely to become involved, I raise the question of whether the idea of the tank is really appropriate considering the sophistication of the military in other types of weapons.

I am reminded of what the distinguished senior Senator from Missouri has stated on other occasions about the aircraft carrier. He has said that it is very hard to understand why we are the only country that seems still to be bemused with building aircraft carriers. No other country seems to think they are important enough to have even a small one under construction. We have 15 major aircraft carriers. Another one is proposed.

The aircraft carriers are very vulnerable, as I have heard the distinguished senior Senator from Missouri say, to modern weapons and various kinds of missiles including air-to-ground missiles. A ship armed with the missiles can stand quite a ways off from an aircraft carrier and hit it. An aircraft carrier is rather big and a relatively easy target. It is possible to sink one \$500 million ship with a missile that costs \$500,000.

The trouble seems to me to be the great lagtime between the technological dream the Senator spoke about and the actual technological advances that come about daily in fields such as missiles.

I looked at the very great number of missiles described briefly in the report on the pending bill. They involve an enormous amount of money. I ask just how seriously and how much in depth we have considered the appropriateness of the tank under modern conditions. In what depth has that question been examined and by whom?

This is one of the weaknesses of these programs as I see it. Once they get started, they develop a momentum and a kind of constituency of their own. Everyone forgets about what the real original purpose was. No one asks whether the program is still appropriate and whether it will serve a very useful purpose when completed.

I wonder what the Senator thinks about that aspect of the matter.

Mr. EAGLETON. Mr. President, I have given the very question that has been so articulately stated by the Senator from Arkansas a great deal of thought. And it seems to me that while dreams continue to be dreamt by those who would design new weapons systems, sometimes the dreaming continues but is unrelated to changes in facts and conditions and situations that go on on earth and not in the ethereal clouds. As the Senator points out, not that it is in the pending amendment, but presumably it will be in some other measure later, with respect to the concept of the aircraft carrier, the Senator pointed out that we had 15 aircraft carriers. Back in the days of President Harding, when

they had the 5-5-3 conference between the United States and Japan, they agreed on some kind of a ratio, feeling that with the 5-5-3 concept they would have 15.

They had them then, they have them now. Presumably they will have them 30 years from now.

I am informed that the Soviet Union has not built one aircraft carrier. We have 15, and some people think we ought to have more.

Mr. FULBRIGHT. There is provision for another carrier in the pending bill, and at a great cost.

Mr. EAGLETON. The Senator is correct.

Getting back to the specific issue with respect to tanks, I perhaps would not have questioned even this dream in 1945 at the conclusion of the war. Perhaps I would not have questioned the dream or idea in 1950. I think I would have been a little concerned with the matter in 1963.

Obviously, I am questioning it here today because the very nature, as the Senator points out, of tank warfare might have changed.

I call to the attention of the Senator the 6-day Arab-Israeli war in 1967, in which there were some tank engagements. However, there was also air superiority on the side of the Israelis.

I am sure that the memory of the Senator is filled with pictures published in the periodicals at the time of burnt-out Egyptian or Arab tanks, dozens and maybe hundreds of them.

It points out how vulnerable the tanks are when air superiority exists.

I am told we have air superiority in western Europe, and I hope that we do. What are we dreaming about at this time in 1969?

Mr. FULBRIGHT. That is my point. Unless this has to do with possible future engagements of this country—unless it gets into what Secretary McNamara, Secretary Clifford and, I think to a smaller or lesser extent, Secretary Laird, have called posture statements—unless we intend to intervene and try to control by force smaller countries around the world, it is hard for me to believe that there is any use at all for this type of weapon.

If we were to have a war with Russia, which is the danger that concerns us, what would we do with the tanks? Would we ship tanks overseas for a war with Russia? The Senator knows such a war would be a nuclear war and that tanks would be utterly useless.

Mr. EAGLETON. That happens to be my assumption.

Mr. FULBRIGHT. Unless we continue to follow the policy of the last administration by intervening in places like the Dominican Republic and Vietnam. However, our President has said that there will be no more Vietnams, as I interpret his statement made on his recent trip. He said he had no intention of having any more Vietnams, if he had a choice and could avoid it, in small places like Vietnam. He said that we would be of help to them but would not intervene. Perhaps a case could be made that if it was going to help them, we ought to make tanks for use in Cambodia and other countries.

If that is true, it may be that a very much less sophisticated tank would be more appropriate. I do not know whether they could operate a dream tank. It would take a super-duper graduate of MIT to operate a tank as complicated as this.

Mr. EAGLETON. This is the epitome of tanks. It would be meritorious in the Indianapolis speed race and would require a sophisticated wheelman.

Mr. FULBRIGHT. I raise the question, and it has been raised before—I think the distinguished Senator from Arizona raised it—that one missing link in this whole program—and Congress is partly at fault—is a real reevaluation of what we call the mission of the Defense Department. They have had missions, as described, I believe, by Secretary McNamara, of a war in Asia, a war in Europe—full fledged, I presume—and a semi-war in Latin America, all at the same time. If we are going to agree that their mission is that broad then we are called upon to make available almost every conceivable kind of weapon.

What the Senator is doing, and what I am trying to do, is to raise the question whether we should not reevaluate what the mission is, especially in view of these requests, which are now so enormous.

Mr. GOLDWATER. Mr. President, will the Senator yield?

Mr. EAGLETON. I yield.

Mr. GOLDWATER. We were discussing on the floor one day what I believe must be done before we can intelligently talk about force structure or whether we are going to have to be prepared for the two-and-a-half-war theory—that is, what we are going to do relative to our responsibility, say, with the NATO Treaty. Every one of these treaties—I think there are 15 or 17—specifically calls for us to go to war. If we decide that we are not going to pay any attention to those treaties, we can forget all about most of our major weaponry. But if we are going to do as we have always done and respect our treaties, then we are going to need, for an interim period at least, weapons like tanks.

The Russians are not downgrading tanks. They have two with which they are proceeding. I do not know how they compare with this one. I have to say that this tank has not had a happy history. The development of it has not been as rapid or successful as we would like to have it.

But I add another thought that I think will help the Senator in his thinking in foreign relations. The Army had to drop the new helicopter, the Cheyenne. The tank people in the Army tell me that when they get the Cheyenne, they can forget all about tanks. It is going to be the antitank weapon. Knowing what I do about it, I can assure the Senators that it will be the most effective antitank weapon we have ever developed and will serve the purpose of the tank.

As bad a record as this one has had, and as expensive as it has been, it is all we have.

I return to my opening remarks: If we are going to respect our treaties—and the major ones are on the continent

of Europe—I do not think the technology of war has developed yet to the point that we can fight a land war there without tanks. I do not think they are worth a darn in Vietnam, for example. On hard ground over there they can operate.

I am glad of the opportunity once again to urge upon the Senator from Arkansas that his committee really take a look into this matter.

Before I leave, I have the figures that I told the Senator I would supply him with; and as soon as I return, I will give them to him.

Mr. STENNIS. Mr. President, will the Senator yield?

Mr. EAGLETON. I yield.

Mr. STENNIS. I think the Senator should have a reasonable chance to finish his statement, if he wishes.

On the question of mission, our present obligation is along the lines of NATO, of course. But a tank is a basic, fundamental weapon—NATO or no NATO. So this would not just be thrown to the wind if we should terminate NATO. This is a doughboy's weapon. It is out there where the man is fighting, in the grime and in the mud. Our other tanks are not faring too well. Some are old, and there are other complicated matters.

I do not think we can just charge this off by saying we ought to change the mission. Our present mission, anyway, until changed, is along these lines; and we are not going to run out of the use of a tank now, although tanks of any kind are not used much in Vietnam.

Mr. FULBRIGHT. Mr. President, will the Senator yield?

Mr. EAGLETON. I yield.

Mr. FULBRIGHT. I do not think this is inconsistent. I raised this question, and the Senator from Arizona has somewhat confirmed it by saying that if the Cheyenne can be made effective, it will make the tanks obsolete.

What made the battleship obsolete? We have many battleships, with a lot of money in them, and they are considered obsolete. They used to be the very backbone of the Navy, not too long ago. That is all I am trying to say.

I raise this question: When it takes 6 years to develop a weapon, and in the meantime technological changes are so rapid, the original concept may well be obsolete.

I was impressed by the arguments made about Minuteman. It had not occurred to me that the advance being made in the accuracy of strategic missiles is so great that it may be that a static, in-the-ground, missile is becoming obsolete and it will have to be made mobile. It may be that a mobile one is much better than continuing to protect one that is in the ground, if they do make accurate weapons. It is just a matter of technological advance. That is all I am saying.

Mr. HATFIELD. Mr. President, will the Senator yield?

Mr. EAGLETON. First, I should like to comment briefly on some of the observations made by the Senator from Arizona and the Senator from Mississippi and to join, basically, in the sentiments of the Senator from Arkansas.

I am not recommending—and I do not

think any other Member of the Senate recommends—that we abdicate or abrogate our NATO commitments. Also, I do not believe that the continuation of the MBT-70 is the sole basis of survival of NATO, any more than I think NATO would crumble when the Pentagon unilaterally—and I praise them for it—dropped the Cheyenne, unilaterally dropped other weapons systems—the MOL and others—and has disallowed certain other dream concepts that have not even been submitted to Congress but have been vetoed in the Pentagon. NATO did not crumble. It is not a question of NATO going down the drain if we do not have an MBT-70.

I recall and repeat what the Stratton subcommittee of the House Armed Services Committee said, and these are not people who are either unknowledgeable or immune to the sensitivity of modern warfare. Their report on the tank situation was that the M60A1, employed in the NATO area, was superior to or equal to any Russian tank under the Warsaw Pact.

So this is not saying that we are going to keep doughboys from having a helmet or a gun or a hand grenade or even a tank. We have plenty M60-A1's. The problem is that if there was a mistake in the efficacy of tank warfare, which, I agree with the Senator from Arkansas, is highly dubious, to say the least, in the year of 1969—if there is a problem about the efficacy and viability of tank warfare, it relates back to the decision made earlier in the sixties when we had an M60A1, when it was known to be a good tank and an efficient tank and, with respect to cost and production, to be a proper utilization of public moneys. We purposely slowed down on it and even discontinued the production of it in 1967 for awhile, in a fantastic effort, a frenetic effort, to try to develop a new tank. Then the M60-A1-E2—I am not trying to dazzle anybody by a recitation of numbers and statistics—was to be the dream tank of that era.

Where is that? Perhaps the Senator from Arkansas would be interested to know. There are 300 chassis of M-60A2 tanks, like the chassis of cars, stripped down somewhere on a parking lot in Detroit, Mich. It is a boo-boo, it does not work, and there it is. I have a lingering doubt and certain expectation that maybe 5 years from now, or 8 years from now, if this bill is passed as it is, there will be 800 chassis of the MBT-70. Perhaps it will not be Detroit but maybe Pittsburgh or Cleveland.

Mr. STENNIS. Mr. President, will the Senator yield on that point?

Mr. EAGLETON. I yield to the Senator from Mississippi.

Mr. STENNIS. Does the Senator know the reason for the defect in those tanks?

Mr. EAGLETON. The Shillelagh system is part of it, according to the Stratton report.

Mr. STENNIS. But overall they tried to move that vehicle too fast.

Mr. EAGLETON. The Senator is correct.

Mr. STENNIS. But now the Senator complains about this one because it is moving too slowly. I think it is one of the points in favor of the tank that they

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did not run the red lights; they are perfecting this thing as they go. If it is ever completed, it will be the best tank that we or anyone else ever had.

I thank the Senator for yielding.

Mr. EAGLETON. Mr. President, with all due respect, my quarrel is not that the MBT is moving slow. I want it to move even slower; in fact, I want to put the brakes on it; not wipe it out and not completely do away with what has been done so ineptly and put it away and forget about it. All I am asking is that a sober, reflective, dispassionate second look be taken now in 1969 relating to a decision made in 1963. Bearing in mind the enormous headaches developed in this system and the enormous escalation of costs that ensued in that period.

All this amendment asks is that the GAO, the agency which the Senate voted yesterday to assist it, make a determination of workability of the defense systems and its analysis thereof, and that the GAO be given a chance for 6 months to look into this matter. If it is given the green light and they share the optimism of others—and they are legitimate in their optimism; I do not fault them for it—they could go ahead.

Mr. HATFIELD. Mr. President, will the Senator yield?

The PRESIDING OFFICER (Mr. HOLINGS in the chair). Does the Senator yield?

Mr. EAGLETON. I yield to the Senator from Oregon.

Mr. HATFIELD. Mr. President, I would like to inquire as to the preference of the Senator from Missouri as to whether he would like to discuss these points as we come to them in his presentation or whether he would wish to complete his presentation at this time before becoming involved in further colloquy.

Mr. EAGLETON. I have enjoyed so much this exchange I had forgotten my prepared speech.

Mr. HATFIELD. The Senator is only on page 1.

Mr. EAGLETON. I would be glad to yield to the Senator if the Senator wishes.

Mr. HATFIELD. I would rather hear the Senator finish his first speech, which I have had a chance to read, and then ask the Senator a number of questions, all of which bear on the information the Senator has in his presentation. After the Senator has completed his presentation we could then engage in colloquy.

Mr. EAGLETON. I thank the Senator.

Mr. President, I believe that in my prepared text I was at the point where I began an analysis of the chart which is still in the rear of the Chamber, and I pointed out the escalated costs in terms of research, development, and engineering. That is when the Senator from Mississippi and I had our brief exchange as to the figures. I presume we will have a way to verify them later.

I shall now continue with my prepared text.

Nor do these figures include enormous expenditures for many of the MBT-70's subsystems.

The figures on the board thus far relate solely to the MBT-70 itself, but it has elaborate, complicated, and sophisti-

cated subsystems, including the Shillelagh 152-millimeter gun system begun under a 1959 authorization; over \$30 million to Lycoming Corp. for research and development on a turbine engine not yet close to production; and additional expenditures for the acquisition of a scavenger system needed to blow burning residue left by combustible ammunition from the weapons system.

In addition to R.D.T. & E., approximately \$200 million is programmed for production engineering.

Mr. President, what this all boils down to is that the unit cost of the tank is now expected to be between \$520,000 and \$750,000—2½ to 3½ times as much as our most advanced present tank, the M-60A-1. I believe these escalating cost figures alone justify the study we propose.

Next, Mr. President, there is the question of the tank's strategic rationale. This is generally a part of the area discussed in the exchange with the Senator from Arkansas, the chairman of the Committee on Foreign Relations.

The MBT-70 was approved on the basis of expenditure projections far below those which have occurred, and time schedules far better than those met. Once approved, the project gained momentum. It achieved a sort of self-perpetuating justification as the Army deemphasized alternative systems, thus creating a greater need and urgency for a new system than would otherwise have existed.

The Army now justifies the MBT-70 because of the quantitative superiority of tank forces in the Warsaw Pact as compared with NATO. And yet this year's House Armed Services subcommittee's report briefly referred to in the Stratton report, indicates that the M-60A-1 tank, which is recognized to be equal or superior to the Soviet tank, is not being produced in quantity. That is, our best current tank deployed, the M-60A-1 which is equal or superior to anything Warsaw Pact countries have. We are not producing it anywhere near close to its potential. In fact, at the opposite end of the spectrum, it is currently being produced at a very minimal level. The result is fewer tanks at a higher cost—about \$222,000 per unit.

The report states in part:

Since 1959 the M-60A-1 main battle tank has been the mainstay of the Army armored units in Europe and the Army currently considers this tank equal to or superior to Soviet-designed tanks.

Not only did the Army fail to maintain an adequate production rate of M-60A-1's during the 1960's, but they slowed down the production line and even closed it in 1967 to produce the M-60A1-E2, which still cannot be deployed because of deficiencies.

U.S. armored capability was further degraded by the sale of M-60A-1's to countries other than NATO allies—

Made reference to somewhat briefly in the exchange between the Senator from Arkansas (Mr. FULBRIGHT) and the Senator from Missouri (Mr. SYMINGTON)—
between fiscal year 1964 and fiscal year 1969.

I should like at this point to quote another portion of the Stratton report

which will put in precise words that which I summarized in my answer, I think it was, to the Senator from Arizona (Mr. GOLDWATER):

In its rush to develop the Sheridan and the M60A1E2—

That is the one with all the unused chassis in Detroit—

equipped with a Shillelagh guided missile, the Army ordered mass production of these weapons and their related equipment before there was adequate assurance that the designs were suitable and, in some cases, even before production of fund requests had been officially approved. The fear of loss of program funds appears to be the principal reason why the Army top management level urged this mass production against the advice of qualified users and testing agencies and personnel who had persistently attempted to portray the true facts of their sadly lagging development effort.

The Senator from Mississippi pointed this out, and I am not suggesting or criticizing past development of the Shillelagh or the M-60A1-E2 tank because it was too fast. But, yes, I do join the findings of the Stratton committee. But I am not saying now that we must go headlong, full speed ahead, and emulate by repetition that which has already been proved to be so tremendously expensive, if not a financially catastrophic blunder, which constituted the genesis of the Stratton report.

Thus, the caution I am advocating in this amendment is not to throw the whole thing out, to abandon it, to ignore it or to forget it. The caution I am recommending is for a 6-month analysis by the GAO, which the Senator from Missouri (Mr. SYMINGTON) pointed out on yesterday is the watchdog for Congress, that the GAO be given 6 months to take a look at this item which has proved to be so burdensome and difficult to cope with since 1963.

Similarly, antitank weapons, which are presumably an important part of our response to the Soviet tank threat, have apparently been given low priority. This from the Department of Defense itself. The MBT-70 is pushed, advocated, urged, and given high priority, but the antitank weapons, for reasons, frankly, I am unable to understand, are given low priority. Yet in the fiscal year 1969 Defense appropriations hearing, General Miley, Assistant Deputy Chief of Staff for Logistics, Programs and Budget, stated:

The Secretary of the Army postponed the fiscal year 1968 procurement of TOW antitank weapon for higher priority items. The \$11 million for fiscal year 1968 provided a minimum engineering service effort to insure the availability of a production capability for TOW in fiscal year 1969.

The sum of \$11 million for fiscal 1968, providing for a minimum engineering service effort to insure the availability of TOW, thus testified General Miley.

There is another antitank concept, worked upon and researched, called the Dragon. According to testimony before the Defense Appropriations Committee in the 90th Congress, it was stated that there are no funds in that bill for the development of Dragon. The main part of the funds for the research and development, training and evaluation—that was

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\$14½ million, in that instance—came over from the fiscal 1968 appropriations the year prior. Originally the appropriation was \$20 million but \$5.5 million was reprogrammed to "higher priority items."

Mr. President, as a layman, and a nonsophisticate in the art of warfare but, hopefully, endowed with a modicum of commonsense, I find it difficult to understand how it is that a vague idea of a dream tank with highly complicated and terribly sophisticated weaponry, with ventilation systems, special superstructures, and the like, became such a high priority item; and yet the anti-tank weapons, those which can be mass-produced in larger quantities, with greater deployability in terms of the man in the field, or as he was referred to by the Senator from Mississippi as the "doughboy," why those weapons that could be given to the doughboy were given low priority. It just seems to me it defies commonsense. Perhaps there is a military explanation for it.

So while the Army failed to produce enough M-60-A-1's, it also failed to push for antitank weapons—a curious pattern of priorities which could lead one to question the seriousness of the Soviet tank threat.

After all, what this debate thus far has been about, as the Senator from Arizona (Mr. GOLDWATER) points out, has been that we have our NATO commitments, and we have to keep those commitments. The Russians have tanks; we have to have tanks. The Russians possess a serious-threat tank; we will respond by building a bigger and better tank. If we are concerned about Russian tanks in the Russian pact, why is it that we put a low priority on these weapons systems, the TOW and the Dragon, the anti-tank weapons system that could be deployed in the greatest abundance for the men in the field. They would be a combatant and retaliatory response to the Soviet tank threat, if the Soviet tank threat indeed be that enormous.

In any case, it is entirely pertinent to ask whether the MBT-70, as it is now conceived, is truly a necessary and effective means of countering the tank threat in Europe—the point I think well made by the chairman of the Committee on Foreign Relations (Mr. FULBRIGHT). This brings me, perhaps, to the core of my argument—cost and effectiveness. That is what the study we propose would help both Congress and the Pentagon to determine.

If we had unlimited resources, I guess we could take a gamble on the MBT-70, even if the stakes kept going up. But, as every Senator knows—and it is driven home more and more every day as the session grinds on—we do not have unlimited resources. We have lots of things we would like to do but cannot do because our funds are limited.

We have a projected yearly price rise rate of 6.4 percent, the highest in 18 years. We know that inflation has driven prime interest rates to a high of 8½ percent. Therefore, we must exercise prudence in Government spending of public moneys, especially the least economically productive type—military spending.

Is the MBT-70 cost-effective? Mr. Charles L. Poor, Acting Assistant Secretary of the Army for Research and Development, testified before the Senate Committee on Armed Services that it is cost-effective. I will read what Mr. Poor said:

There have been a large number of studies conducted by the Army to determine the cost effectiveness of the MBT-70, and I think I can say without hesitation that all of these studies indicate that the MBT-70 is a more cost effective solution to the large number of Warsaw Pact tanks facing us than any other tank design that we have been able to consider.

That is what Mr. Poor says on behalf of his case. Let me say this about it in response. The most recent computer study of antitank warfare came to the same conclusion. But the cost-effectiveness calculation for the MBT-70, compared with the proven M-60A-1 and other weapons, was based on an extremely low and now out-of-date estimate of the MBT-70's cost. The M-60A-1, by contrast, was priced at a high figure, apparently based on the limited production policy now being pursued. The fewer M-60A-1's produced, the higher the cost per unit, the lower the cost-effectiveness, and therefore the less effective they are. So if we translate the cost of the M-60A-1 per unit, we will have a higher cost; but it is a poor comparison in contrasting it with the MBT-70.

It is my understanding that a very small increment in the price of the MBT-70 would make it no longer cost-effective. It would become less economical to produce and use than other systems. I am awaiting a report of the exact cost figure at which the MBT-70 goes over that line.

In this cost-effectiveness business, there is a sort of magical line beyond which an item becomes, costwise, ineffective and inefficient. It is my understanding that the MBT-70 is close to that line. A small increment in its cost and it would be over. I have asked for a report on that and have not received it yet. With the increased costs, delays, and problems, perhaps it already has gone over the line.

We can surely build a better tank. I do not dispute that, with our scientific, technological, and generally creative genius, given the money in unlimited abundance, we could build a better tank. I guess, when you get right down to it, Apollo 11 proves that, under the most optimum of circumstances, without the intervention of other countries, or without trying to thwart or stop it or resist it or fool with it or foul it, the United States has adequate—indeed, abundant—creative potential to come up with almost anything scientific, except a cure for the common cold.

But the point is we do not have unlimited funds, and for what purpose are we going to build the MBT-70? For what purpose will it be utilitarian in 1974 or 1975 or 1976, whenever it is produced? We keep moving the date back. Originally it was supposed to be in production in 1969. Now it is the mid-1970's. And at what price?

The truth in answer to these questions is that the Senate does not know the purpose or the need or the price.

Mr. President, our proposal is not entirely original. The many problems and doubts regarding the MBT-70 led the Special Investigating Subcommittee of the House Armed Services Committee—that is the Stratton committee—to recommend recently:

The MBT-70 program should be reappraised and a report of finding made to Congress prior to any further steps in committing funds to the production of these tanks.

Representative MENDEL RIVERS' office—and Representative RIVERS is chairman of the House Armed Services Committee—issued this release on July 10, 1969, in connection with the Stratton Army tank report. Here is what Representative RIVERS' office said in releasing this report:

It is also recommended that no additional Sheridans be sent to Vietnam until after all major defects have been eliminated and that the Main Battle Tank (the MBT-70) program be reappraised before further funds are committed.

That is the summary statement issued by the office of the chairman of the House Armed Services Committee, a man intimately knowledgeable of military matters, who says the main battle tank, the MBT-70, program should be reappraised before further funds are committed.

Secretary Laird himself listed the MBT among the problems inherited in the Pentagon on January 20, 1969. Secretary Laird said:

Many problems, large and small, have already been identified. They range from obvious ones such as those connected with the Pueblo, the TFX, and the Main Battle Tank, to less visible ones such as—

Then he went on to recite some less visible ones. Here is the Secretary of Defense, again one who came into this position not unsophisticated in terms of the operations of the Department, considered to be one of the most knowledgeable Members of Congress in Defense and Defense appropriation matters, and he said three of the biggest problems he inherited when he became Secretary of Defense were the Pueblo, the TFX, and the MBT.

Mr. STENNIS. Mr. President, will the Senator yield for a question?

Mr. EAGLETON. I yield.

Mr. STENNIS. The Senator remembers, does he not, that the same Secretary he is talking about asked for \$44.9 million in the last budget to continue this research and development? That is the same man the Senator is talking about.

Mr. EAGLETON. The Senator is eminently correct. The Secretary asked for more than the Senate Armed Services Committee recommended and the item was reduced by \$15 million.

Mr. STENNIS. We reduced it \$15 million.

Mr. EAGLETON. How do I explain it? Mr. STENNIS. Yes.

Mr. EAGLETON. I have difficulty explaining—without using it in the sense of derogation—what I classify as the political schizophrenia that is inherent in

the Secretary's making a recommendation that we expend another \$45 million for R. & D., \$24.5 million for production, and so forth.

In his explanation that we ought to do that—or his request that Congress do that—he says that three of the greatest headaches—problems—I do not want to misquote him—he inherited were the *Pueblo*, the TFX, and the MBT.

Mr. CASE. Mr. President, will the Senator yield?

Mr. EAGLETON. In a moment, after concluding my response to the present question.

I cannot understand it. I would like to have the opportunity but it is not mine—and I am not quarreling about that—to specifically question the Secretary as how he can justify these three incidents. The *Pueblo* certainly was not our shining hour. The TFX was considered to be the calamity of this era, the millstone around McNamara's neck; and then he includes, gratuitously or not, the main battle tank. How he then can recommend we go ahead with it, without any second look, I cannot understand. Perhaps someone can explain it to me.

I yield to the Senator from New Jersey.

Mr. CASE. Mr. President, I do not know that I have an answer, but it does seem to me there is something of a parallel between the circumstances that the Senator from Mississippi has raised with the Senator from Missouri with regard to Secretary Laird's position and the time in, I think September or October of 1967, when, after a magnificent speech pointing out how ineffective an anti-ballistic-missile system would be, and giving all the arguments against it, former Secretary McNamara came up with a recommendation for a so-called thin ABM system—a nonsequitur, it seems to me, comparable in many ways with the nonsequitur which has been posed to the Senator from Missouri here.

Perhaps the same explanations are applicable broadly to each. They may include political pressure, and perhaps pressure from perfectly well-intentioned industrial interests or professional interests within the Pentagon; but in any event, I do not think the Senator needs to be, and I am not myself, embarrassed by this inconsistency, because we have seen it before.

Mr. EAGLETON. I thank the Senator from New Jersey for that very appropriate and apt observation.

I would not speculate; it serves no purpose to speculate whether conceivably, in my judgment, there could be pressure from a contractor or political pressure. Perhaps it could be this—and this may well happen: We have many systems and weapons; the Army wants Nos. 1 through 200, the Navy wants Nos. 201 through 400, and the Air Force wants Nos. 401 through 800. They each want 200 items. So they have this give-and-take process: "Well, I will give in to you on this one, and let you go ahead with this one, but I am going to put the brakes on the Cheyenne. I will let you go ahead with the C-5A, but I have to call a halt on the MOL. Thus, by this process of you give me a little and I will give you a little, we will work out a pack-

age, and perhaps we can put on a harmonious, smiling face and a unanimous front in terms of making a considered presentation to Congress."

There is give and take, I readily admit to the Senator from New Jersey, in all of life, and it is not being critical of the military when I say that this kind of horse trading or log rolling is perhaps part of their existence. It is part of ours, as it is a part of every human being.

Mr. CASE. There is no question about it, and there is no bitterness or any attack on motives or anything else involved in the Senator's position or mine, or any Senator's position, in regard to the military. They are great people, doing an unimaginably difficult job, and we want to be helpful in terms of protecting them from their own inner stresses and excesses.

Mr. MURPHY. Mr. President, will the Senator yield?

Mr. EAGLETON. I am happy to yield to the Senator from California.

Mr. MURPHY. Unfortunately, because of an executive meeting, I have not had the chance to hear the entire presentation of the distinguished Senator, but as to the part I have heard, I might point out, as a member of the Armed Services Committee, that we did not approach our duties on that committee, or at least I did not see any evidence of it, on the basis of any political considerations whatsoever.

We were sent a list of weapons and equipment that, in the judgment of the military experts, was needed for the best balanced defense of the United States, and for the protection of its security.

There were many items that we questioned as to whether they were necessary. We went into it very carefully, and there were long discussions, for instance, as to some of the different missiles. The experts were there to point out the reasons for the difference. We would ask, "Why would not this missile do the same job that the other one would do?" We spent long hours going over such matters very carefully.

There are certain items that certainly I, for one, was not completely happy with. I was one of the earliest critics of the TFX, which the Senator mentioned. But unfortunately, through a series of circumstances over the years, we have not had too many new weapons models. We have had lots of research and development, but not very much building, and we had to take what was in existence. It was not always, in my judgment, the finest choice; it was, you might say, the only game in town. That was what there was; this was the choice, and you had to develop it further, improve it, and hopefully finally get it around to doing the operational jobs that the military felt was important.

So this is the circumstance. I have the greatest sympathy for the Secretary of Defense, in dealing with some of the conditions and some of the complexities that he found. Certainly he was knowledgeable; he had served on the committee of the House of Representatives, but he was not in charge, and when he assumed the job, along with the new administration, he had to accept what

was there, just as our committee, when we sat down to go over the requests and to look at this bill, which is the authorization for military procurement, had to accept the conditions that existed, and there are many areas where there could have been criticism.

But there are always two ways to make an approach, negative or positive. We could find fault forever; but I hope my distinguished colleague—who does not seem to be extremely interested in what I am saying; I hope I am not conducting an exercise in futility here, trying to make an explanation.

Mr. EAGLETON. Oh, no.

Mr. MURPHY. As a member of the committee, having spent many hours, I feel that there was not any political consideration. I have been in and around the military, directly or indirectly, for many years; and I think sometimes unfortunately they are given the blame for things that are not their fault. I should like to make the point that I am in complete sympathy with the Secretary of Defense in the tremendous job that he inherited, with the conditions that he inherited, and I say, in the best judgment of this committee, nonpolitically, with full consideration of the absolute necessity for the protection of this country, this is the way, as far as I was able to ascertain, the committee as well as the military experts that appeared before us honestly felt. I did not see any evidence of a fellow saying, "Well, I have a factory in my State which is going to make some roller skates; therefore we ought to buy them for the Navy." I did not find any of that. I have found a lot of it suggested. I have found a lot of it suggested by innuendo, from time to time. As with so many things in these complex times in which we live, the impulse is to dissent rather than try to put together, and to put the emphasis in the wrong place.

That was my purpose in rising. I thank my distinguished colleague for his courtesy in yield.

Mr. EAGLETON. Mr. President, I certainly thank the senior Senator from California. I hope that by nothing I said, either by spoken word or by inference or innuendo connected therewith, did I imply that there was any politics played in Senate Armed Services Committee.

The Senator from New Jersey commented on how the Secretary of Defense could on one occasion identify the main battle tank in the ignominious triumvirate of the *Pueblo*, the TFX, and the MBT70.

Mr. MURPHY. I think the *Pueblo* is no longer relevant. I think that through the judgment of the Secretary of the Navy that was finalized.

I think there was a problem under the new Secretary of the Air Force. I hope that some of the things referred to when talking about the main battle tank have been very drastically changed and that many of these elements that constituted a problem 2 or 3 or 4 years ago are no longer a problem. There has been a passage of time and what he said on a certain day may no longer apply.

Mr. EAGLETON. I thank the Senator from California. What the Secretary of

Defense may have said a few months earlier in 1969 may admittedly no longer apply, so fluctuating are the justifications for programs, whether it be the quick justification that we debated for 3 months as between the Sentinel thin shield defense of the big cities as against the mad Chinese to a couple of weeks later—that was January 20—to March 14 when the President made his speech on the thin protection of the land-based ICBM's as against an attack by the not so mad Russians.

Justifications change very quickly. I think the point the Senator makes is an important one. Justifications can change. Conditions can change. Events can change. However, the dream never does. The dream is still the 1963 dream.

It was a dream they had lurking around the Pentagon where someone had said, "We want to have a better tank. Maybe somehow, somewhere, we might want one of those good old tanks."

So, in 1963 they were dreaming. And they are still dreaming and dreaming an evermore expensive dream—\$303 million now. God knows what it will be a year from now.

They are still dreaming. As the Senator from California said, times change, and what Secretary Laird meant when he said that the three greatest headaches were the *Pueblo*, the TFX, and the main battle tanks may have changed.

How would the Senator like to be in that company? As little as I think of the MBT-70, nothing I have said before or will say in these remarks would disparage it as much as the Secretary of Defense himself did by associating it with the *Pueblo* and the TFX.

The Senator from California now says that things have changed and that what the Secretary said about the *Pueblo* is no longer in effect. The bumper stickers are off the cars. The TFX is all straightened out, and the MBT-70 is all straightened out. That is a pious hope which, in my judgment, will never be realized.

I revert to my text.

In an exclusive interview with George Wilson, of the Washington Post, the Secretary expressed dismay at the amount of gadgetry which has resulted in expensive breakdowns and repairs on the MBT-70. This was an interview with Mr. Wilson. It was later than the one previously quoted. I am sorry that the Senator from California had to leave the Chamber.

He may think that the MBT-70 is hunky-dory today. However, he did not think it was good when he put it with the *Pueblo* and the TFX, and when he was talking with Mr. Wilson of the Washington Post. He wondered if we need all these extravagant MBT-70 devices when the Russians get along well with simpler equipment.

That is not the Senator from Missouri talking or the Senator from Oregon or anyone else who is advocating the pending amendment. This is an interview with the Secretary of Defense who, as has been pointed out by the Senator from Mississippi, recommends going ahead with the MBT-70 despite the fact that he associates it with the *Pueblo* and the TFX.

In July, 1969, issue of Government Executive, General Betts, the man in charge of this from a programing point of view, stated:

The most important problem is that we have given it a great deal of capability and that means a very expensive vehicle. The problem is whether we have put more in this vehicle than we require. The toughest question is whether we really need everything that's in this tank.

This is not the proponent of the amendment talking, but the general in charge of the program. He wondered, as I wonder, whether we need everything that is in it. Is it programed properly? Do we need it at all? I ask.

General Betts went on to say:

While we continue to test it, we will also continue to analyze whether to give up some of the things that are in it. It doesn't have to have a combination of several weapons systems as it does now. It doesn't have to have all of the integrated computer-controlled fire control that it does now.

Of course, we cannot have our cake and eat it, too, as someone once said. We cannot justify the MBT-70 by dreaming about it and saying we will have all of this sophisticated gadgetry, this dual fire system, the Shillelagh, the 152 mm., and the fire control where, if there is a nuclear explosion, the hatch can be closed and we will live in isolation, somewhat analogous to the astronauts, but not quite so roomy.

We cannot have all that gadgetry and find out it is too expensive, and then ask a rhetorical question, as the general does, and say we have to strip some of this out. We will be back to where we started with the M60A1.

We cannot propose this tank as the ultimate, as the desired objective with its great sophistication and its great complexity and then strip it of that which makes it different and makes it presumably utilitarian and then go forward with it. When you leave it, it will be little better than the existing tank except that the costs productionwise are infinitely more expensive.

The Battelle Memorial Institute is making a study for the Defense Department of MBT-70 components in an attempt to make the system more cost effective. There may well be some changes in components and design, depending on the findings and DOD's willingness to adopt them.

I want to make this clear. I am getting close to the end of my remarks and to the end of my voice.

The amendment we offer today would not in any way prejudice the fate of the MBT-70. It would strike out \$30 million under research and development and \$24.5 million under production-based support which would be used for manufacture of prototypes. That is my understanding of what the item basically consists. It would prohibit further authorization until after a full investigation by the auditing arm of Congress, the Government Accounting Office.

These are our auditors. As the senior Senator from Missouri pointed out, this is the one agency of Government that is sort of ours. We cannot be suspicious of them or fear them or be resistant to

them. They are our creatures. They are not under the control of the President.

The Comptroller General is appointed for a term of 15 years. He is immune except for malfeasance or nonfeasance. He is immune from the pressure of the Executive. All we ask in the amendment is that our auditors, our watchdogs, be given a chance to examine this item afresh, to examine it from a point of view to which perhaps it has never been subjected since its inception in 1963.

Let me add at this point that to do this would not be turning this system over to a bunch of nonknowing, philosophical eggheads. The GAO already has worked in analyzing this system. Their efforts and their endeavors were instrumental to the Stratton subcommittee, which, as has been quoted so often, went into the basic question of tanks, more specifically, the Sheridan, the Shillelagh, and what-have-you, with passing reference to the MBT-70. But the GAO is a well-trained and experienced professional and competent group which has systems analysts who not only would do this study objectively, but also, based on the past performance they rendered to the Stratton subcommittee, are, by actual fact and by case example, equipped to do the job.

So we ask in this amendment to have four questions answered by the Comptroller General. We ask for 6 months in which to have the questions answered.

First, why research and development costs estimates have had to be revised steadily upward since 1965—again referring to the chart in the rear of the Chamber.

Second, whether the MBT-70, considering its revised estimated production costs, will be the most effective weapon to meet the contingency for which it was originally planned.

Third, whether the strategic projections made in 1963 with regard to the use of the MBT will still be valid when it finally becomes available for use. That is, will it be obsolete as the result of advanced technology and new strategy? Again, this has reference to the questions and the comments of the Senator from Arkansas (Mr. Fulbright).

Fourth, whether there are more feasible and less expensive alternatives to the development of the MBT-70.

The amendment requires the Comptroller General of the United States to submit the results of his study and investigation, together with such recommendations as he deems appropriate, to Congress not more than 6 months after the date of the enactment of this act.

Mr. President, we do not ask that the MBT-70 be completely and summarily canceled. This we do not ask. In 1963, when it was conceived, the production date was geared to be 1969. We are in 1969. The production date is now estimated to be some time in the mid-seventies, 5 years or more away. We ask only that, in view of this 5-year delay in production, in view of the increase in the research and development costs, in view of the extremely high projected per unit cost, in view of the improvement in mobile, cheap, and effective antitank weapons, and in view of the changing role of the tank in modern warfare—in view of

all these things, which, to me at least, are legitimate questions, but in the aggregate make an abundant case—that the Comptroller General make a complete and thorough 6-month study to see whether a course that was charted in 1963, under dreams and ideas perhaps appropriate at that time, is justifiable, either scientifically, technologically, militarily, or economically, in 1969.

Mr. CRANSTON. Mr. President, will the Senator yield?

Mr. EAGLETON. I am pleased to yield to the junior Senator from California.

Mr. CRANSTON. I thank my fellow junior Senator, the Senator from Missouri, for initiating a probing examination of one aspect of the military authorization measure before the Senate. This sort of careful study is essential to the well-being of this country, to insure that we have the defense apparatus we need and that we do not spend money on a defense apparatus we may not need.

Frankly, I have not made up my mind as to this amendment and the value of this tank. Some cynical citizens think that nothing is ever determined by fact and logic in the course of a debate in the Senate. I bear witness to the fact that it is, because my vote will be determined by what I learn, in the course of the debate in the Senate, from those who support this amendment and from those who do not.

I am concerned about the inflationary aspects of the defense budget. We are being asked to support an extension of the surtax not only for the remainder of this year but also for a further period of time to deal with inflation. One way to deal with inflation is to have the tightest possible defense budget; and I am not convinced at the present time that all items, including this one, in the defense budget are necessary. I should like to ask the Senator a few questions that relate in part to this aspect.

First, are we contributing at present one-half of the cost of maintaining the NATO defenses in Europe?

Mr. EAGLETON. I wish I had at my fingertips, or based on immediate research, all the answer to the legitimate and probing questions of the Senator from California.

I do not know, in terms of dollars expended, whether we are maintaining half the cost of NATO. It would be my guess that we are, but I do not want to attest to it.

Mr. CRANSTON. At any rate, it is a very high percentage.

Mr. EAGLETON. It is a very high percentage, I think we are safe in saying.

Mr. CRANSTON. One fact I do know is that the cost of U.S. troops in Germany is running, for us, to the tune of \$850 million a year. There is that much drain on the balance of payments in this period of inflation.

This leads me to question whether we should build tanks for a type of war that is unlikely ever to occur. I want to hear the case for this tank and the threat of that kind of war from the chairman of the committee when he responds to the Senator's amendment.

I wonder whether the Senator has any comment on the validity of the threat

that we might find ourselves involved in a conventional or a tactical nuclear war in Europe, whether that threat is so grave that we need this sort of tank?

Mr. EAGLETON. I consider that to be, again, a very wholesome question. I am aware that the Senator from California was away from the Chamber, attending a hearing of the Committee on Labor and Public Welfare on an educational bill that is of vital importance to the Nation. While he was at the committee meeting, an exchange took place between the chairman of the Committee on Foreign Relations (Mr. FULBRIGHT), the Senator from Arizona (Mr. GOLDWATER), and myself, and, in part, also the Senator from Mississippi (Mr. STENNIS)—and perhaps other Senators—on this point, on this fundamental question.

I asked, at the end of my speech, Whither goest the tank? The Senator from Arkansas (Mr. FULBRIGHT) pointed out that tanks may well be the bell-weather of success in El Salvador and Honduras; they may be indispensably necessary in Haiti, where Dr. Duvalier may well need them, to stay in power. They may well be needed in other areas, too.

But, at best, I can only pose the question. It is one of the questions that I, as a freshman Senator—just as fresh as the junior Senator from California—want the General Accounting Office to answer.

I do not pretend to be endowed with all the innate wisdom and experience that are necessary to make a highly sophisticated answer to the question; but I think the question is legitimate. When one who is as experienced as the Chairman of the Committee on Foreign Relations, who has been a Member of the Senate for many years and has seen different wars come and go and different threats come and evaporate—when he, based on that experience, wonders whether the tank is a viable force of modern weaponry in Western Europe under conditions that obtain in the year 1969, at least I have to wonder, at least I have to ask the question and search for the answer. I need the assistance of the Senator from Mississippi (Mr. STENNIS), I need the assistance of the senior Senator from Missouri (Mr. SYMINGTON), men who have devoted their lives to the effort of providing an adequate, proper defense.

I need the assistance of the General Accounting Office and of the Battelle Institute, which have made studies. These are questions that ought to be asked. That is all I am asking in my amendment. I can only ask the question. It is easy to ask questions. It is the easiest thing in the world to cross-question oneself. But when an item has been imbued with delay; is perhaps not of timely essence; is not a make-or-break proposition, that we have to have tomorrow, I should like to have an answer to the question.

I was against the ABM and opposed to those who said we could not wait because it was important that we have it in connection with forthcoming talks on limitations of armaments. That may be so. But no one can say that this item is of immediate essence. It has been de-

layed 5 years now. It was supposed to be produced in 1969, but it will not be produced until 1974 or 1975. I hope that will not be the case.

These are the questions we ask. We ask that we be given 6 months to permit our investigators, our accountants, in the General Accounting Office, an arm of Congress, to take a look at this proposal.

Give us 6 months. I ask that of the Senator from California who is not committed on this vote, and who approaches the matter, as much as any other Senator, on a factual basis without a knee-jerk reaction. Because of his experience as a comptroller, he has an analytical and precise approach. That is the nature of his thinking. He served in California, and it was part of his job to analyze the pros and cons of proposals, although, of course, not weapons systems in a State organization. He did deal with other systems and methodology, and he was able to make a dispassionate, informed, unemotional judgment based on known facts, worthy assumptions, and the like. All I am asking of the Senator from California and other Senators is that the entirety of Congress, all 100 Senators and 435 Representatives, be given the benefit of the kind of dispassionate analysis that the Senator from California would give a system. I ask the Senator from California to make the kind of judgment that he would make back in California or the kind of judgment of this system he would now like to have given by the Comptroller General, Mr. Staats, and his staff.

If we were saying in this amendment, "Knock out all the money—period," I would not support it. I could not have enough knowledge, as a lawyer from the State of Missouri, to know if this is the right thing to do. I am frank to admit I am not that knowledgeable on this subject. But I do ask that we not spend any more for a moment on this painstaking and tortoise-like tank. All I ask is 6 months. I ask that the Senator from California join with me; nothing more.

Mr. STENNIS. Mr. President, will the Senator yield?

Mr. EAGLETON. I yield to the Senator from Mississippi.

Mr. STENNIS. Mr. President, the Senator has been very generous in yielding. I understood the Senator to say that he would not favor knocking out all the money for this item from the bill.

Mr. EAGLETON. No. I said if the bill contained lines 1, 2, 3, and 4, the money items, and did not contain the rest of the items that call for study by the GAO, I would not support the bill.

Mr. STENNIS. The amendment of the Senator does take the money, all of it out of the bill, for this tank.

Mr. EAGLETON. The Senator is correct, and for this limited purpose, for this limited period of time.

Mr. STENNIS. For 6 months. Is that correct?

Mr. EAGLETON. That would be the length of the study.

Mr. STENNIS. The Senator knows he would be taking the money out until there is another authorization bill and

appropriation bill, which is ordinarily 1 year.

Mr. EAGLETON. The Senator is correct.

Mr. STENNIS. That is correct.

Mr. EAGLETON. But there are exceptions, I understand, to the appropriation process, whereby a supplemental appropriation could come in.

Mr. STENNIS. That is not ordinarily done, and there could not be money transferred for this purpose, because when the appropriation is cut out, the artery is cut that gives it life.

Does the Senator know that this operation would close down and stop by September 30, and that the people who are there would no longer be employed, certainly not in that project? To start it up is not like lighting a fire. You would have to get men who are qualified and get them back on the job and get it fired up in that way.

I am told by people who have experience that taking this money out, as provided in the Senator's amendment, would cost about 2 years' time. So, when the Senator said he would not be for it if we just took the money out, I wanted to question him on that point because it does take the money out and there is no life left in it until there is a recommendation or congressional action, signed by the President.

Mr. CRANSTON. Mr. President, will the Senator yield?

Mr. EAGLETON. I shall yield, but first I wish to respond to the Senator from Mississippi because I think his point is an interesting one and goes to the heart of this matter. The amendment would strike from the bill \$30 million and another \$24.5 million. The Senator is correct that during that period there would be a discontinuation of expenditures on these projects.

The Senator is correct when he states—I take his word for it, and it makes commonsense to me—that by September 30 the money would run out from previous appropriations and many persons would be reassigned and some would lose their jobs. It is quite possible.

The GAO study would take 6 months, if it were the kind of green light the Senator from Mississippi would want to see. I know he has some lingering misgivings about this program, and he so stated. I think on the day he made his initial presentation on this measure, the manager of the bill said, "I have about lost patience with this situation." That is what he said in referring to the MBT-70. So I know he has some misgivings and would like to see a greater certainty in this situation.

Perhaps it would be less than 6 months because perhaps someone either at GAO or elsewhere with previous experience with tanks such as the Sheridan or the MBT-70 or with the Shillelagh weapon system could do it sooner. I would be glad to make it 3 months or 2 months. If they come back and give the green light, I would then join with the Senator from Mississippi and say I would support a new authorization and new appropriation.

I am not a perfectionist, nor do I belong to that group which is experienced

in the craftsmanship of legislation. Perhaps it might be wise to leave some money in, putting the brakes on it, until the GAO study comes in and perhaps gives it a green light and opens it up to let the money flow. I am not that good at drafting legislation. Maybe there is a way to draft it based on the experience of others.

I guess it was curious happenstance that this amendment came on the heels of the amendment agreed to yesterday, which had been introduced by the Senator from Pennsylvania (Mr. SCHWEIKER).

Mr. CRANSTON. Mr. President, will the Senator from Missouri yield?

Mr. EAGLETON. I have a great train of thought going and I do not want to get off it for the moment.

It was perhaps a curious happenstance that the sequence of events occurred that way, but to me this could be a magnificent sort of test case as to whether the amendment adopted yesterday was prudent. I know that the Senator from Mississippi had serious misgivings about it. My senior colleague, for whom I have the highest personal respect and who perhaps knows more about military matters than any man I have been privileged to know, also had serious misgivings about the Schweiker amendment. To me, this could be an important and impressive test case as to whether what was done yesterday by the Senate in agreeing to the Schweiker amendment calling upon the GAO to give Congress assistance, analysis, and recommendations, will work.

Perhaps the Senate made a mistake yesterday. I was paired in support of the Schweiker amendment because it made sense to me, although to Senators like Mr. STENNIS and Mr. SYMINGTON, and others—the amendment was adopted by a margin of only one vote—it did not make sense.

Let us test it out. Here is the best way I know to test it out. This is a case in point. This is a nonvital case in point. Time is not of the essence. Time is with us. This is one weapons system where 3 months, if the GAO can do it that quickly, or up to 6 months, it will not make us, break us, or defeat us.

I am now happy to yield to the Senator from California.

Mr. CRANSTON. I thank the Senator from Missouri for yielding to me. He referred to the amendment adopted yesterday relating to the GAO and I wanted to ask one or two questions in relation to it. Part of my concern about that amendment was its relationship to the need for the GAO to be independent and objective in evaluating the programs. I was convinced that the GAO might become too deeply involved in these programs and I wondered how objective its reports would be, and whether we would be able to rely upon them for the advice and counsel and the expertise that we want in relation to costs.

This leads me to wonder about another aspect of the Senator's amendment. He spoke in a very kindly way about my own background as a State comptroller. My background as a State comptroller, and that of most State comptrollers, I

am sure, deals with costs, with analyses of those costs, but not necessarily with the value of specific programs. Such judgments are left at least in California and elsewhere, I am sure, usually, to executive experts in those fields, where there is a legislative body, to the experts among the general membership in that legislative body. In relationship to the four things the Senator asks the GAO to do in his amendment, and specifically to item 1, "Why research and development cost estimates have had to be revised steadily upward since 1965," Am I correct in assuming that this relates specifically to the cost estimates relating to tanks?

Mr. EAGLETON. Relating not just to tanks, let me say to the Senator from California, but specifically, I mean, to the MBT-70—that particular and specific program.

Mr. CRANSTON. This tank?

Mr. EAGLETON. Yes.

Mr. CRANSTON. It seems to me that is obviously an appropriate task for the GAO to perform. I want to ask why, in the second, third, and fourth items, which the Senator wants the GAO to perform in his proposed amendment, why the GAO would be particularly qualified to report to us on the effectiveness of any particular weapon and on relating this to strategic projections and new strategies and to alternatives not in terms of cost but in terms of performance of the MBT-70?

Mr. EAGLETON. Again, to me, that is a very profound question. Perhaps it could only emanate from one who has had the experience of the Senator from California serving as a State comptroller. I think in his definition of duties and responsibilities in California he of course relates the facts as they apply to his office, and I dare say the vast majority of State comptrollers would as well. But I think he too narrowly assume or identifies his prior experience and the nature of the duties of his office precisely with that of the Comptroller General of the United States. He circumscribes the capability and performance potential of the Comptroller General.

The office of the Comptroller General, as I would understand it, is not one made up of personnel who are adroit only at figures and can balance a ledger, can tally a sheet with assets and liabilities and see whether something is in the black or in the red. That takes talent. That is not the limit of their talents, however. The best proof I can give to the Senator from California as to the capability of the GAO to work in this area, and specifically to work on tanks, and even more specifically to work on the MBT-70, is that they have already been doing that work. They did it for the Stratton Committee. They were a major portion of the investigative arm that supplied the Stratton Committee with its most persuasive and compelling findings of the \$1 billion in waste in connection with the operation and deployment of the Sheridan and Shillelagh systems. Proof of the pudding is that they have done it. If it is unwise for them to do it—yet this they did, and it was not done yesterday, it was passed on with authorization of

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the Senate, they have done this before—it would be the subject of new remedial legislation to circumscribe and prohibit the Comptroller General of the United States. I for one, would not support that. I think the Comptroller General can render to us and should render unto us that which the Bureau of the Budget renders unto the President of the United States and the executive branch.

Mr. Mayo is not just a bookkeeper. He is not there just with pencil and paper with lines on it and columns, adding up figures. He and his analysts go to the Pentagon—not enough, in my opinion, and in the opinion of the Senator from Ohio—to try to examine the efficacy and the legitimacy needed for weapons systems. They do that. The Budget Bureau does that for the executive. The Comptroller General has been doing that for the legislative branch—to wit, the Stratton report; and, in my judgment, should continue to do it. I know they are equipped to do it on the MBT-70 because they have already done part of the work on it.

Mr. CRANSTON. Did the Senator consult with or get the views of the GAO in regard to its ability to perform these particular functions?

Mr. EAGLETON. I will turn that question over to the Senator from Wisconsin to answer. That is in his specific area of expertise.

Mr. PROXMIRE. The Senator from California has asked the Senator from Missouri whether the GAO indicated its position on whether it could make this investigation?

Mr. CRANSTON. Yes, whether these particular duties, particularly 2, 3, and 4, in the amendment, are duties which the GAO is equipped to perform and is prepared to perform.

Mr. PROXMIRE. I will certainly find out the answer to that. I have staff or the Joint Economic Committee looking into that. They have not told me specifically whether the GAO feels it is qualified to do this, but I would be surprised, if they were not able to provide data on which Congress could decide. I think the record of the GAO indicates that they can do this kind of thing and that they have done this before.

Mr. CRANSTON. I thank the Senator from Wisconsin. I have two more questions I should like to ask the Senator from Missouri. Was one of the reasons for trying to alleviate the friction between the United States and Germany the balance of payments problem we face, due to our troops being in Germany and the desire to develop a cooperative project relating to NATO that could possibly contribute toward alleviation of those frictions?

Mr. EAGLETON. That would be rather speculative on my part. I do not know that the origin of the agreement back in 1963—the \$80 million, 50-50 agreement—has ever been pinned down precisely. I did ask, in an unclassified hearing, about this matter. I do not want to put words in the mouth of any particular officer. There were three or four officers present, a general, a colonel, a major, and a civilian. One of the men in uniform put it this way: Back in 1963, the Federal

Republic of Germany had shown technological expertise. They are talented people. It was a two-heads-are-better-than-one approach. This was a novel idea. As one man put it—and I have nothing better to say on in—let Germany, with its scientists and contractors and its people, go full steam ahead on the engine work, especially, and otherwise, and let our people go full steam ahead. Two heads are better than one and perhaps we will come up with something better than if we did it all by ourselves or Germany did it all by herself. That is what I recall being said to me in that unclassified portion of the briefing.

Mr. CRANSTON. If this tank is something that some experts believe is needed to defend Western Europe, would it not be the better course for the Europeans to build it and pay for it?

Mr. EAGLETON. Earlier this day the Senator from Louisiana, chairman of the Senate Finance Committee (Mr. LONG), and I had a brief exchange on the agreement with respect to the Federal Republic of Germany, and he was at least on the border of answering the question asked by the Senator from California.

If it can be shown that it is an effective tank, the details of who will build it and the question of the importance of our balance of payments, have to be decided by other people. But we have to get over the hurdle of whether it is needed.

I know I for one, and I know the Senator from Louisiana, would be tremendously happy if West Germany or Belgium, or any of our other NATO allies would show greater interest in developing and beefing up and expanding their weaponry, whether it be land, sea, or air, and could take a greater burden of their own defense and thereby relieve us of the expenditures and the balance of payment problems that are caused by the maintaining of over 200,000 of our troops in Western Europe. I for one would applaud that. I would love to see it. I would like to see our troops brought home, and to let our allies take care of themselves. We would continue to pledge our aid to the NATO countries. When, as, and if needed, we would send help, under our NATO obligations.

Mr. CRANSTON. I thank the Senator from Missouri for his detailed and helpful and careful work on this matter.

Mr. PROXMIRE. Mr. President, will the Senator yield on the point the Senator from California has raised with the Senator from Missouri?

Mr. EAGLETON. I yield.

Mr. PROXMIRE. I first want to say that we recognize that the General Accounting Office has over 2,000 professional auditors and accountants and staff people who have devoted their lives to inquiring into Government agency practices. Second, 42 percent of them, according to Mr. Staats, have been working on defense analysis.

So these are the experts, these are the qualified professionals, in the best position to give us the kinds of answers the Senator from Missouri's amendment calls for.

As far as conclusions are concerned, however, we have to make them, and we

should. I do not think it would be proper, I do not think the GAO would presume, to tell us whether the MBT-70 is the most effective weapon to meet the contingency for which it was planned. That is not their job. Again and again they have been reluctant to do that. But they will give us facts and information and cost effectiveness, and we make up our own minds, as the Senator knows.

In all these questions there may be value judgments or strategic judgments of this kind. They cannot make up our minds for us, any more than the military men can make up our minds for us. The military men can give their recommendations in this area, but nobody pretends that they should make the final decision.

The distinguished Senator from California is a former comptroller of the State of California. He knows all an auditor or accountant can do is give us the facts and the data and the information; but that is not available now, and the Senator's amendment would make it so.

Mr. CRANSTON. I thank the Senator.

Mr. EAGLETON. Before yielding to other Senators, I wish to make this point to the Senator from California. I shall be brief. I know he must leave. I have some data, dated July 9, from the Comptroller General of the United States, addressed to "Dear Senator EAGLETON." It is a report prepared by the U.S. General Accounting Office, the statement of Harold H. Rubin, Associate Director, Defense Division, and so forth. And there is a brief report that that agency has already made what is admittedly a sketchy report on the MBT-70, the main battle tank.

I ask unanimous consent to have printed in the Record the last 2 pages, labeled B-1, and B-2 from the report of the Comptroller General of the United States.

There being no objection, the excerpts were ordered to be printed in the Record, as follows:

MAIN BATTLE TANK (MBT-70)

The Main Battle Tank (MBT-70), currently being developed under a Cooperative Tank Development Program between the United States and the Federal Republic of Germany, is designed to utilize the Shillelagh missile and the 152mm combustible cartridge case ammunition. Development of the MBT-70 was initiated under this program by an Executive Agreement signed between the governments on August 1, 1963. This agreement provides that the total costs of the program will be shared equally. In view of the development status of the MBT-70, and the considerable degree of slippage it has experienced, we considered it prudent to concentrate our efforts on the Sheridan and the M60A1E2 tank, deployment of which was more imminent.

RESPONSIBILITIES

The Office of the U.S. Program Manager and Project Manager, US/FRG Main Battle Tank, was established by Army Material Command General Order No. 52, effective August 15, 1963. As Project Manager, he reports to the Commanding General, AMC. As U.S. Program Manager, he is the U.S. member of the International US/FRG Main Battle Tank Program Management Board, and as such, reports to the Chief of Staff, United States Army, and is governed by policy and

program guidance issued by Headquarters, Department of the Army.

MBT-70 OBJECTIVES

The MBT-70, which is intended to replace the M60 and the M48 as the standard main battle tank, will be employed against armored formations and all other types of land warfare targets including infantry elements of a modern army. It is intended to provide a night firing capability with improved reliability and durability, reduced maintenance requirements, improved weapons, and a significant increase in ballistic protection.

MBT-70 COMMONALITY

The MBT-70 is designed to be armed with the Shillelagh missile and the 152mm combustible cartridge case ammunition common to the Sheridan and M60A1E2 tank, and is intended to use an automatic loading device which is the key to a three-man crew concept. However, the automatic loader is dependent upon the acceptability of the ammunition combustible cartridge case which will be discussed in detail subsequently.

CONCLUSION

Unless deficiencies in the combustible cartridge case ammunition are corrected, it is reasonable to assume that the MBT-70 will experience difficulties similar to those of the Sheridan and M60A1E2 tank.

Mr. STENNIS. Mr. President, will the Senator yield?

Mr. EAGLETON. I yield.

Mr. STENNIS. I appreciate the Senator's yielding to me. I want to make a very brief statement on this subject. I think the Senator is making a fine presentation. My remarks are not directed at him at all.

Mr. President, the question arises here about keeping the bill moving. I am a great believer in the proponent of a bill or of an amendment having a full chance to present his case. I want to go on record every day as being among those who want this bill to move along. I know tremendous amounts are contained in it. The bill involves our men in Vietnam and our future military program. It is highly important that this bill move beyond the Senate as soon as possible. The House will have to pass a bill. It will have to go to conference. All those matters take time. It has to come back here before the Appropriations Committee can move on it.

So I am ready to agree to a time limitation on this matter. Let us let other Senators who want to speak come in and say what they want to say and, if possible, get a vote on the amendment this afternoon. I hear a rumor going around that there is not going to be a vote this afternoon. This is an important matter, but, still, it is just one matter in the bill, and if we cannot get to a vote on it in a day, I think it is just tragic. I imagine the Senator would be willing to agree to something along that line.

Just one other thing. I appreciate the Senator's yielding to me. He yielded largely for questions. We just cannot go on and on letting any Senator who wants to walk in and make a speech on the matter by getting the Senator who has the floor to yield to him. The rules of the Senate provide that the Senator can yield only for a question. This is not directed to the Senator from Missouri. So, to make the bill move, the day may come when I shall have to object to

yielding except for real emergencies or for questions.

I thank the Senator for yielding to me. When he has finished, I will propose an agreement.

Mr. EAGLETON. In response to the distinguished Senator from Mississippi, may I say I am not prepared at this time—and I am not trying to foot-drag—to agree to any time limit. In addition to myself, there are cosponsors, the Senator from Oregon (Mr. HATFIELD), and five other cosponsors, who are mentioned on the amendment, including Senator MCGOVERN, Senator MOSS, and Senator YARBOROUGH. I do not want to unilaterally, on my own, foreclose them from the fullness of any participation they would like.

Mr. STENNIS. The Senator should not, and I would not quickly agree, either. I shall have to consult with other Senators.

Mr. YOUNG of Ohio. Mr. President, will the Senator yield?

Mr. EAGLETON. I yield to the Senator from Ohio.

Mr. YOUNG of Ohio. Mr. President, first, I desire to congratulate the distinguished junior Senator from Missouri on his excellent speech in support of the amendment he has offered, cosponsored by other Senators.

In answer to the question from the distinguished junior Senator from California, the Senator from Missouri adverted to the NATO Alliance and to our troops in Western Europe. Is it not a fact that of all the NATO powers, the United States is the only one which has entirely fulfilled its NATO commitments?

Mr. EAGLETON. I thank the Senator from Ohio. He has never been accused of being prone to understatement, but I must say with all deference that that is an understatement. We have not only fulfilled all our commitments, we have overfulfilled them. NATO is U.S.A.-NATO.

Mr. YOUNG of Ohio. That is correct. Now, regarding the MBT-70, that is supposedly a joint United States-West German project for a heavy tank, designed to operate sometime in the 1970's, in the event of a tactical nuclear war in Europe.

Supposedly, there is built-in protection for the crew against the contaminants of nuclear war. However, testimony has revealed that beyond limited protection against the hazards of nuclear radiation, the design is certainly not acceptable for operations in any nuclear war. We are in agreement on that, I am sure.

Mr. EAGLETON. I concur fully with the Senator from Ohio.

Mr. YOUNG of Ohio. The Armed Services Committee, as I recall, wisely recommended a reduction of \$14.9 million on that item, and I voted for that reduction in the committee, as I am certain did the distinguished senior Senator from Missouri, the colleague of the Senator who now has the floor.

Mr. EAGLETON. May I respond to the Senator's statement at that point?

Mr. YOUNG of Ohio. Yes.

Mr. EAGLETON. The Committee on Armed Services cut out that \$14.9 million with this comment, as the Senator

will recall, referring to the MBT-70. It said:

This program has been experiencing difficulty for some years, and the committee now believes that a reorientation of the program is in order.

Mr. YOUNG of Ohio. Yes.

Mr. EAGLETON. What I am trying to do is to help with that reorientation, to get our expert advisers in the GAO to help us with that reorientation.

Mr. YOUNG of Ohio. I am certain that the senior Senator from Missouri, the Senator's colleague, who is one of the senior members of the Committee on Armed Services and one of the most highly respected and most knowledgeable members of that committee, concurred in that reduction, and I know the junior Senator from Missouri is voicing the views of his distinguished senior colleague on that subject.

We did not feel, in the committee, that the results of early research and development justified the Pentagon's budget request. Nevertheless, more than \$54 million remains in the bill we are now considering for research and development, and for production base support, for this Main battle tank.

The fact is that the engine, the transmission, the suspension, and auxiliary equipment are being manufactured by West German companies. That is a fact, is it not?

Mr. EAGLETON. Significant numbers of the components, especially with respect to the engine, and I presume other components as well.

Mr. YOUNG of Ohio. This is almost a quarter of a century following the end of World War II, and still at this time, 300,000 men of our Army, Navy, Air Force, and Marines are stationed in Europe, and along with them are 255,000 dependents. Of course, as the Senator knows, those officers there, at least field grade officers and general officers, never had it as good as they have it now, with their dependents, their servants, their automobiles, and their travel throughout Europe. That is all a great expense to our taxpayers, and we are trying to curtail it.

Since April 1963, I have spoken out here in this Chamber urging withdrawal of most of our troops from Western Europe. If there is any real danger of aggression from the Soviet Union in Western Europe, it would be far better for our taxpayers if we would have our young draftees, say on a 13-month tour of duty, in Western Europe, instead of all those divisions made up mostly of professional soldiers stationed in Europe, living like squaw men with their families. Would it not be far better if those divisions were brought home, or sent on to the Pacific? If we have to be involved in a civil war in Vietnam, why should they not be sent there instead of draftees with only four months of training?

I am sure the Senator agrees with me that the threat of military aggression by the Communists against Western Europe is not as it was in the time of Stalin, and has in fact all but vanished. The present rulers of the Soviet Union are no longer rattling their missiles toward West Germany. The Soviet Union is no longer a

have-not nation; its leaders now appear principally dedicated to the objective of raising the standard of living of their own people.

It is the nuclear umbrella of the United States that provides the real protection for Western Europe and West Germany, and not our ground troops there, certainly. Does not the Senator agree with me that it is not the large number of our ground troops in Western Europe, or the MBT-70s, that are protecting Western Europe?

Mr. EAGLETON. I think that is correct.

Mr. YOUNG of Ohio. Of course, we have the capability of airlifting, as the Senator knows, a combat-ready division from the United States and having them in the field in Western Europe within 24 to 48 hours ready for action. We know that.

Mr. EAGLETON. Absolutely; and that would save vast amounts of money; and, as the Senator well knows, many learned observers on the military scene, both professional and civilian, seriously question our massive military presence in Western Europe—by massive I mean in terms of the enormity of the number of troops with, as the Senator says, their dependents, et cetera, and the great financial drain. They question, first, whether militarily it is needed; and economically, we know the drain it imposes upon us, not only taxwise but balance-of-payments wise.

Mr. YOUNG of Ohio. And does not the Senator from Missouri agree with me that having them there is nothing more than foreign aid to West Germany in disguise?

Mr. EAGLETON. It is foreign aid through the back door.

Mr. YOUNG of Ohio. Yes. And the West German Government and the West German people do not need that foreign aid from us, because they are prosperous now as never before; is not that a fact also?

Mr. EAGLETON. One of the most prosperous nations on earth, with the most solvent economy and the strongest monetary system.

Mr. YOUNG of Ohio. Is not the continued production in West Germany of the MBT-70, simply another form of foreign aid in disguise from the taxpayers of America?

Mr. EAGLETON. I perhaps would not adopt the full phraseology of the Senator; but it is certainly an economic shot in the arm to West Germany that they can do some work on this tank. The Daimler-Benz people and the others are certainly not going to be losing any money on it, and it is certainly highly questionable whether this country will get anything out of it that will be useful or needed.

Mr. YOUNG of Ohio. And it is only maintaining and building up their military-industrial complex?

Mr. EAGLETON. It is certainly helping their industrial complex.

Mr. YOUNG of Ohio. Should we not not delay the further development of the main battle tank until the Comptroller General of the United States has an opportunity to report to Congress on the

participability and cost effectiveness of this mighty complex system?

Mr. EAGLETON. I could not have put it better myself. Those are words from Heaven.

Mr. YOUNG of Ohio. Well, I sort of stuttered on that "cost effectiveness" and "participability"; but we are in agreement, are we not?

Mr. EAGLETON. Completely, on that point.

Mr. YOUNG of Ohio. Mr. President, I have a final question to ask of the distinguished Senator from Missouri. I ask whether the Senator agrees with me that there is only the most remote possibility that there would ever be a limited nuclear war long enough in duration, or any nuclear war long enough in duration, for these main battle tanks to be of any use whatever?

Mr. EAGLETON. It is highly questionable. If there were a limited nuclear war, I think the tanks would be among the first to go, and then next would be the aircraft carriers. I do not know how limited "limited" is in a nuclear war. I think it would be a matter of a few seconds, minutes, or hours. It would be a terribly short period of time with a limited nuclear exchange, if the Senator is talking about an exchange between the United States and the Soviet Union. The very essence of the situation escalates and is something horrendously gigantic.

Mr. YOUNG of Ohio. It would be a matter of moments.

Mr. EAGLETON. The Senator is correct.

Mr. YOUNG of Ohio. Mr. President, I again compliment the distinguished Senator from Missouri.

Mr. GOLDWATER. Mr. President, will the Senator yield?

Mr. EAGLETON. Mr. President, I ask unanimous consent that I may yield to the distinguished Senator from Arizona for a few moments without losing my right to the floor.

Mr. COTTON. Mr. President, reserving the right to object, and I certainly shall not object, the custom of having someone hold the floor and farm it out for speeches when other Senators are waiting to get the floor has gone about far enough, I am certainly not going to object at this time.

I want to serve notice that I shall be objecting and very sharply to any of these arrangements, and I shall call for the regular order. However, I would like to say while I am on my feet that some of us expected we were going to work last night and today. It was even intimated that we would work Saturday.

The people back home are not going to view with very much enthusiasm the Senate's recessing for 3 weeks in the middle of this crucial defense bill.

We were going to work. Nothing happened. Nothing will happen today. Quite obviously, we are not going to work Saturday. Everyone knows that on Wednesday half of the Senators will be going to Los Angeles to welcome the astronauts. When is the Senate going to work?

Mr. President, I do not object.

Mr. EAGLETON. Mr. President, I yield 5 minutes to the distinguished Senator

from Arizona without losing my right to the floor.

The PRESIDING OFFICER (Mr. CRANSTON in the chair). The Senator from Arizona is recognized.

Mr. GOLDWATER. Mr. President, yesterday evening figures were inserted in the RECORD by the distinguished Senator from Tennessee (Mr. GORE) and the distinguished Senator from Arkansas (Mr. FULBRIGHT) which I questioned and for which I promised I would have an answer today. I am sorry that neither gentleman is here. It is difficult to know when one can get the floor. So, one cannot make dates.

Mr. President, efforts are being made in some quarters to convince the American people that President Nixon is not living up to his commitment to bring 25,000 American fighting men home from Vietnam by August 31.

In doing so, those involved in this attack are deliberately mixing apples and oranges.

They are comparing current figures of manpower totals in Vietnam to those of last January, even though the President did not commit himself to troop reduction until June 8 at Midway. Let me read just what the President said on Midway regarding the withdrawal of American troops:

As a consequence of the recommendation by the President—

President Thieu, that is—

and the assessment of our own Commander in the field, I have decided to order the immediate redeployment from Vietnam of a division, equivalent of approximately 25,000 men.

This troop replacement will begin within the next 30 days and will be completed by the end of August.

Mr. President, my colleagues should note that the President was talking about about 25,000 men, not exactly 25,000.

I made some inquiries into that figure because I recognized it as being substantially more in number than the average American division.

So that my colleagues might have a better understanding, I point out that a figure of approximately 16,000 is generally used for an infantry division in Vietnam. However, a division force, which is a division plus supporting forces, is approximately 40,000. So, the 25,000 figure is more than a division, but less than a division force.

Mr. President, President Nixon was talking not about early August but about end of August. These are the facts.

But supposing the President were talking about troop figures of last January, there is still a valid explanation that applies.

The Pentagon uses two figures on troop strength in Vietnam. Actual strength and programed strength. Both are valid.

Programed strength is an absolute. It is the number of men the services can put into Vietnam. Actual strength is the number of men actually there. This varies as troops are rotated.

By the end of August the Defense Department expects to have a programed strength in Vietnam of 524,500 compared with the previous programed strength of

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549,500. This is a reduction of 25,000 in programmed troop strength.

Of course, actual troop numbers will fluctuate under this reduction in programmed strength just as it has before. But the approximate number will be around 515,000 by the end of August, compared to an average strength during fiscal 1969 of 540,500, again this is a decline of about 25,000 just as President Nixon promised.

Mr. President, in their eagerness to make hay out of any possible mistakes, or variances or changes, too many persons who should know better, are shooting from the hip.

I suggest that they at least wait until the end of August before they begin blasting away at those who are trying so desperately to rectify the costly errors of the last 8 years.

Mr. PEARSON. Mr. President, will the Senator yield?

Mr. EAGLETON. I yield.

Mr. PEARSON. Mr. President, I voted against the anti-ballistic-missile system. I did so because of the questions of the reliability costs, and the arms race, together with the question of necessity.

The question I put to my distinguished colleague and neighbor from Missouri today is whether he is convinced—I might say that I am—of the necessity for the construction and deployment of the main battle tanks, the necessity of the system, the necessity of a tank as part of the overall symmetry of power we need, measured together with the nuclear umbrella and the conventional forces and our guerrilla trainees.

Mr. EAGLETON. I have lingering, gnawing agonies and general doubt as to the need or necessity of tanks in general.

I do not have much doubt personally as to the need for the MBT-70. I do not think we need it.

I would say to the Senator from Kansas that if tanks are needed, if there is a massive threat of being outtanked by the Warsaw Pact, we have and are producing at a painfully slow pace, at a very minimal rate, the M60A1.

As I stated earlier in the debate, according to the Stratton subcommittee of the House Armed Services Committee, it is equal to or superior to any Russian tank that is part of the Warsaw group. So I have a general doubt, and I know the Senator from Arkansas does, as others do, about tanks in general. However, quite frankly I have not had the experience the Senator from Kansas has had in military matters. But I have very little doubt about the MBT-70. It is an Edsel.

Mr. PEARSON. I should like to respond to the Senator in this manner. I am not sure that I have any competency to make a judgment or a statement as to the necessity of this particular tank, but I have a conviction as to the necessity of tanks themselves.

This is a fairly sad and sorry story in relation to this particular tank system. The Senator seeks to correct it and seeks to attack it. We have a multiplicity of illustrations we can bring out from the Senator's mention of today in his very excellent presentation.

I doubt the wisdom, I might say to the Senator, of picking out system by system by system and seeking to correct it. I think perhaps the approach of the distinguished Senator from Pennsylvania yesterday was a better way to get at this problem.

Mr. EAGLETON. I agree somewhat with what the Senator says. By my amendment and that of the Senator from Oregon (Mr. HATFIELD) we are not trying to superimpose our judgment, our expertise, because I think both of us would be candidly to say that we are not as scientifically or militarily trained on that as are the Pentagon or Members of the Senate who have made their life the study of these matters, such as the distinguished Senator from Mississippi.

The very thing we are asking for in this amendment is what the Senator pointed out. We are asking for the first best case of the Schweiker amendment. What better way can we prove whether what was done here yesterday, by a narrow vote, over the strong objection of some very able people—including my own senior colleague, Senator SYMINGTON—was a wise move, than by saying to the GAO, "We give you 6 months." I am willing to cut that, if I can find out from the GAO that they can do it quicker—2 or 3 months. "Take a look at this thing, as you already have done in part for the Stratton committee, when you looked at the Sheridan and the Shillelagh, and you gave a look on the side at the MBT-70. Take a look at this thing and report back to us."

I think it was happy coincidence that the Eagleton-Hatfield amendment came in the wake of the Schweiker amendment, because this gives us a wonderful opportunity to test out the wisdom of that which was done yesterday.

We may find in a 2- or 3-month period, based on what the GAO does—if they do it sloppily or ineptly—that what was done here yesterday was a mistake—a mistake that is rectifiable either on the House side or in conference. Forty-six Senators yesterday thought it was a mistake; 47 did not. Perhaps the 46 were right. We have a perfect way to find out—a laboratory case. I keep hearkening back, because I think it is vital, to this one weapons system whose history proves that time is not of the essence. It is 5 year overdue now, and another 2 or 3 months, unlike the arguments advanced in the ABM debate, are not vital or potentially catastrophic.

Mr. PEARSON. I thank the Senator.

Mr. PROXMIRE. Mr. President, will the Senator yield?

Mr. EAGLETON. I yield.

Mr. PROXMIRE. I have some questions for the Senator, but first I should like to commend him on a remarkably fine speech. I especially commend him on his responses to the questions that have been asked him. He has been asked questions that have tested him from every angle, and I think his responses have been most convincing.

I think the Senate and the country are fortunate that in the last 2 days we have had a vision of the future. Yesterday, the distinguished, young, new

Senator from Pennsylvania did a marvelous job on his amendment, under difficult circumstances, with strong opposition, as we all know. Today, we have a followup by another new, young Senator. In the first case it was a Republican Senator and in this case a new, young, Democratic Senator who is also indicating his remarkable ability. The common thread here, of course, is that they are both aiming at the same thing, and that is to make the military accountable, to make it possible for us, as Senators, to know when we vote on the military budget what we are voting on.

I ask the distinguished Senator from Missouri if it is true that costs since 1963 on this tank have risen over 500 percent.

Mr. EAGLETON. According to the figures we have, that is the case—500-plus percent.

I must say that prior to the Senator from Wisconsin coming into the Chamber, the chairman of the Committee on Armed Services, the Senator from Mississippi, had figures supplied to him by the Defense Department that might be different. We are trying to verify it. My figures came from the Defense Department through a colonel whose name I supplied. We are trying to reconcile it. According to the figures in the chart, the Senator is correct.

Mr. PROXMIRE. The chart shows the increase in cost, which began at \$40 million, a total of \$80 million—\$40 million for the United States and \$40 million for Germany. Now they have gone to about \$230 million for the United States.

Mr. EAGLETON. It is \$227 million for the United States and \$80 million for Germany, or thereabouts.

Mr. PROXMIRE. Is it true that the purposes for which this tank was originally designed, originally conceived, have changed?

Mr. EAGLETON. They have changed immeasurably.

The chairman of the Committee on Armed Services, the Senator from Mississippi, pointed out that the purpose of the tank was unidentifiable almost at the beginning. It was an idea in 1963. I call it a dream. He calls it sort of an idea, a vague idea that was kicking around the Pentagon. So I do not know that in 1963 it had any purpose except to build a dream tank.

Mr. PROXMIRE. When the Senator says "a dream," does he mean the idea was to build a faster, stronger tank, with a lower silhouette, a tank that would be technologically superior to the tanks now but with no new strategic mission?

Mr. EAGLETON. If the Senator will bear with me, I should like to get a precise quotation from my speech. Either General Betts or General Burba, or somebody who had something to do with this tank in its growing stage and inception stage, said—I have it here. It was General Betts, the Army Director of Research and Development. He said:

For the first estimate we did not have a design. We did not have any really detailed idea of what would go into the tanks so the early estimates were very summary in nature.

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That is what he said, and I take him at his word.

Let me add to that, on the same line and consistent therewith, Maj. Gen. Edward J. Burba, who was formerly the head of the MBT-70, said in 1967 in the Armed Forces Management magazine:

For the first time in the history of modern tank design, the designers of the MBT were given carte blanche to optimize basic design configurations into which they put the best scientific engineering know-how.

They were given carte blanche to "go out boys and build us something, something dreamy." That is about the way I understand it.

Mr. PROXMIRE. What has been the expressed need for this tank? What has been the expressed purpose for it? What is it supposed to do?

Mr. EAGLETON. It is supposed to offset the growing tank threat of the Soviet Union and the Warsaw powers in Western Europe. That is the alleged purpose of it.

Mr. PROXMIRE. It is to be used in what kind of warfare?

Mr. EAGLETON. In a limited warfare.

Mr. PROXMIRE. Nonnuclear?

Mr. EAGLETON. Nonnuclear warfare. It presumably can be used in nuclear warfare. It might lend itself to that type of warfare. It is much faster, much more maneuverable. That is, if it would work, it would be all these things. But, basically, it would be used in a limited warfare; and if we got into a limited nuclear war—which is a concept with which I have always had difficulty. I do not feel that it would remain limited very long—I am talking about a matter of hours.

Mr. PROXMIRE. What evidence does the Senator have that tanks may be becoming less useful and perhaps obsolete because they can be hit? What is the cost difference between an offense and defense on tanks? In other words, what would be the cost to develop weapons that could knock out tanks?

Mr. EAGLETON. The cost effectiveness of this particular MBT-70 is priced between \$520,000 and \$750,000 per tank. That is not the cost for the entire group of them, but for one tank. The range depends on how many are produced. If more are produced, of course, the cost goes down.

The cost effectiveness of this particular item, I understand, is very close to the breaking point, and perhaps going over that point, where it will not be cost effective because of the development of other weaponry, including antitank weapons.

Here is a quotation from General Miley, talking about the Tow, which is an antitank weapon:

This is our new Tow antitank weapon. You can see the wires that guide it coming out the tubes and they will kill any known tank in the enemy inventory.

Mr. PROXMIRE. Does the Senator have the cost of that weapon?

Mr. EAGLETON. I do not have it, and I believe it has not been publicly disclosed. I shall try to get the information.

Mr. GOLDWATER. Mr. President, will the Senator yield?

Mr. EAGLETON. I yield.

Mr. GOLDWATER. It runs in the nature of \$7,000 to \$9,000.

Mr. EAGLETON. The Tow. The Senator from Arizona has said that the cost is \$7,000 to \$9,000 per weapon. I thank the Senator.

Mr. PROXMIRE. The Senator from Arizona is very helpful.

This means that a \$7,000 to \$9,000 weapon could knock out this one-half million dollar tank. Is that correct?

Mr. EAGLETON. That is my understanding.

Mr. PROXMIRE. I would like to ask the Senator another question.

Mr. EAGLETON. I wish to add there is another weapon called the Dragon. It is designed to fill the Army need for a certain type weapon. It is launched from a tube without recoil. This is a system which can be operated by one foot soldier. That system is not operable.

Mr. PROXMIRE. Is it not true there has been an investigation of this tank by a special investigating subcommittee of the House of Representatives; that the study recommended the MBT-70 program should be reappraised and a report finding made to Congress prior to any future steps being taken? Was not this recommendation made by the subcommittee of the Committee on Armed Services in the other body? Is this not what the amendment of the Senator would accomplish?

Mr. EAGLETON. Absolutely. And that is precisely a quotation from the report. I quoted earlier from the statement of Representative MENDEL RIVERS, of the House Armed Services Committee, in which he pointed out it was his recommendation that we stop on this thing now and take a long hard look at it. This comes from a man who obviously has enormous experience in weaponry.

Mr. PROXMIRE. A man who certainly has not been soft on providing adequate armed forces.

Mr. EAGLETON. Precisely.

Mr. PROXMIRE. Is it not true that Secretary of Defense Laird has raised some very serious questions about this particular tank and has classified it along with the *Pueblo* and the TFX as an area in which we may have dimly failed?

Mr. EAGLETON. The Secretary, to my knowledge, on two occasions publicly, and maybe on other occasions, has so classified the MBT-70. In one case he compared it with the *Pueblo* and the TFX as being an inherent millstone.

Later on, in an interview with the Washington Post, he expressed the opinion that delay in gadgetry would result in delay of the MBT-70. He wondered if we need all the MBT-70 devices when the Russians get along with simpler weapons.

I shall quote at this time from Representative RIVERS' office when he released the Stratton report.

It also recommended that no additional Sheridans be sent to Vietnam until all major defects had been eliminated and that the Main Battle Tank 70 program be reappraised before further funds are committed.

That statement comes from the chairman of the House Armed Services Committee. That is a pretty impressive sign to stop, look, and listen; not to discontinue or throw away or scrap but to take a look for a limited period of time with the GAO doing the looking and listen-

ing for us. They are people we can trust. They are ours. If we cannot trust the GAO to do the kind of job we want we are in terrible shape. They are beholden to no one but us. I would not be afraid to let them help make this decision. We hurt ourselves when we deny ourselves that opinion.

Mr. PROXMIRE. This impressed me more than any other quotation. General Betts is the head of Army Research and Development. Is that correct?

Mr. EAGLETON. The Senator is correct.

Mr. PROXMIRE. Is it true that General Betts said the problem is whether we put more into this vehicle than we require? The toughest question is whether we need everything that went into this tank.

Is it not true that this argument made by the most expert man we have in the Department of Defense in this area would suggest an investigation, a 6-month investigation by the General Accounting Office would be extremely helpful to us in resolving whether we should go ahead?

We have the Secretary of Defense, the people from the House Armed Services Committee, we have General Betts, all of whom raise very serious questions about this tank. Under these circumstances it seems to me logical that the amendment of the Senator from Missouri is sound, sensible, and necessary if we are going to really insist we know what we are doing when we authorize these large sums.

Mr. EAGLETON. We have not only General Betts, who is not certain what gadgetry should go into this, but we also have these other opinions. The GAO report would not only help us to decide but it might help General Betts. It would give him an analysis and help him decide as to the cost-effectiveness for some of these things, such as whether there is ventilation and whether then can close the lid on the Shillelagh, and all of these gadgetry items.

Not only do we have Representative RIVERS expressing misgivings, and the report linking it with the *Pueblo* and the TFX—and I am not trying to embarrass the distinguished Senator from Mississippi—but I go back to his statement, for when he presented this bill he said, "I have about lost patience with this situation," referring to the MBT-70.

We all know the Senator from Mississippi to be a patient man. Maybe he would like to have the report of the General Accounting Office to determine whether his patience has been warranted and justified or whether the continuing faith he has had in this program has been overextended.

Mr. PROXMIRE. Mr. President, will the Senator yield for one further point?

Mr. EAGLETON. I yield.

Mr. PROXMIRE. Mr. President, I would like to say to the Senator from New Hampshire (Mr. Cotton) and the Senator from Mississippi (Mr. Stennis) that I agree wholeheartedly with them that we should move this bill along as fast as we can. At the same time I feel very strongly it is imperative that we discuss this question in detail. I think Senators must agree that this debate has

been completely germane discussion. I have been around here a long time and I have heard a great deal of irrelevant, nongermane debate on many issues. In colloquy with the Senator from Missouri and other Senators, they have not been talking about irrelevant matters, even though it would be easy to tie other things in with this problem on tanks but, by and large, during the entire discussion, when other Senators were interrogating the Senator from Missouri, the subject has been germane and pertinent.

Mr. COTTON. Mr. President, in view of the fact that the Senator referred to the Senator from New Hampshire, will he yield to me?

The PRESIDING OFFICER (Mr. SPONG in the chair). Does the Senator from Missouri yield to the Senator from New Hampshire?

Mr. EAGLETON. I am pleased to yield to the Senator from New Hampshire.

Mr. COTTON. I wish to agree emphatically with the distinguished Senator from Wisconsin that the discussion to which we have been listening has been not only germane but also most enlightening and most helpful.

I wish to compliment the distinguished Senator from Missouri (Mr. EAGLETON) for the very able presentation he has made on an important subject, a subject on which he is well informed and about which he feels most deeply. I agree wholeheartedly that any point in this bill upon which the defense of this country depends should be explored and should be handled with care.

But, Mr. President, at some time, on my own time, I shall have a few observations to make and I would like to make them on my own time. They could not possibly take more than 8 minutes. I should like to inquire—and this is not in the way of being sarcastic—whether the distinguished Senator from Missouri could give us a general idea as to when the floor will again be open for Senators to address the Chair to seek recognition. Will it be 4 o'clock, 5 o'clock, 6 o'clock, or will it be on Monday? Or when?

Mr. EAGLETON. Relating to the pending amendment?

Mr. COTTON. I mean relating to the bill—again, this is not any reflection upon anyone.

Mr. EAGLETON. I understand.

Mr. COTTON. I am talking about the control of the floor by the Senator from Missouri. Does the Senator from Missouri have a general idea when he will be prepared to surrender the floor so that another Senator can seek recognition?

Mr. EAGLETON. I do not have a precise idea as to my time limitation. The Senator did indeed ask for a general idea of my limitation, but based on the fact that I have not yet given an opportunity today to yield to the distinguished cosponsor of the amendment, the Senator from Oregon (Mr. HATFIELD) who, I am sure, has some observations to make on this matter I cannot give him a precise idea. There are five other cosponsors, and I do not know whether any or all of them wish to speak. Besides, other Senators may wish to address themselves to the question and address me on the matter.

Mr. COTTON. May I say that under the rule—we all want to hear from every one of these Senators—but under the rule, they have no special privilege to address the Chair. Any Senator, when the floor is open, can address the Chair and if he is the first to address the Chair, he will be recognized and has a right to be heard.

The mere fact is, under the rule as I understand it, we cannot toss the ball from one cosponsor to another cosponsor, to another cosponsor and onto another cosponsor, and close the floor to Senators who have something to say.

The Senator from New Hampshire does have something to say and he would like to say it on his own time. I do not care whether it is 6 o'clock or 8 o'clock tonight, or whether it is Monday at 11 o'clock.

For the past 8 weeks, we have been talking about the ABM. Everything that could possibly be said about the ABM, pro and con, has been said not once, not twice, but 10 or even 15 times by every Senator on this floor.

If the Senator from Missouri will be patient for one moment longer, we have a tax bill coming up from the House. We are now in the month of August and talking about a recess next week. I do not expect that those who control the votes in the Senate are particularly solicitous about the present administration; but if Congress does not begin to get down to brass tacks—and I think the pending bill should be thoroughly explored—but if we do not get down to brass tacks, we will find ourselves here at Christmastime; and I feel great apprehension about that, because I do not believe that we can continue the first session of Congress simultaneously with the second session of Congress and draw double pay.

Personally, the Senator from New Hampshire wants to say right now that he does not believe the Senate has a right to recess at this time. I think that these matters that the Senator from Missouri and others are discussing, and other questions coming up on the pending bill, are of paramount importance. I do not want to see that discussion throttled. I also do not want to see it go into another marathon.

I want to say right here and now that if the Senate pursues its announced course of going home, or going somewhere else, next Wednesday night, or next Thursday, with this bill still in the midst of being considered and discussed, with the tax bill still to come, with appropriations bills way behind, and with the President going on the air tonight to talk about his major domestic program, I think that the people of this country are not going to feel that the Senate is doing its duty.

Mr. President, this is the speech I was going to make. The Senator from Missouri has been very kind. I have made my speech. Now the Senator can have the floor, so far as I am concerned, and I thank him very much for his courtesy.

Mr. EAGLETON. I thank the Senator from New Hampshire, with whom I am pleased to share a hall on the fourth floor. I am glad that the Senator from New Hampshire did have the opportunity

to make his 8-minute talk, so he has not been delayed.

Let me say this: As he well pointed out, the subject of the ABM was before the Senate for 8 weeks. I quit counting a long time ago. However, I have been in this Chamber today for 3 hours and 15 minutes, which is infinitely less than the 8 weeks we discussed the ABM. I admit that this matter is of less moment than the ABM. I am not here to say that it is of the same significance as the ABM. However, it is a \$55 million item, which I suppose is petty cash to the Pentagon. But, conceptually, in terms of future warfare—and we are planning for future warfare—I think it is very important, as it relates to the Schweiker amendment which the Senate adopted yesterday, for the GAO to help us. I strongly believe that it should. This will be a perfect test case for them.

So I, for one, if the Senate took 8 weeks to get to this hour, am not prepared in 3 hours and 15 minutes to stop consideration of the pending amendment. I do not know what the time price tag will be. I think it will be more than 3 hours.

Mr. COTTON. The Senator from New Hampshire was not reproaching the distinguished Senator from Missouri. The Senator from New Hampshire was not even insinuating that the Senator from Missouri was taking more time than he should. I was simply seeking to try to find out when I might be in the Chamber and have an opportunity to address the Chair to seek recognition. I think the 2 or 3 minutes that I used just now perhaps takes care of the situation, because I wanted to get my statement in, that I think we should stay here until this bill is disposed of, and not go home until it is disposed of.

Outside of that, I compliment the distinguished Senator from Missouri on his presentation, and that 8 weeks he referred to.

Mr. EAGLETON. I may well be subject to correction. It was an estimate. I think it was longer than that. I know it was a terribly long period of time, so long that I lost track.

I thank the Senator from New Hampshire.

Mr. STENNIS. Mr. President, will the Senator from Missouri yield?

Mr. EAGLETON. I yield to the Senator from Mississippi.

Mr. STENNIS. Let me make it clear that that my remarks are not addressed to the Senator from Missouri except to compliment him again on his very fine presentation here on the floor of the Senate. He is fulfilling an obligation to his sense of duty when he makes these explanations.

But I say to all Members of the Senate now, we all know this is an important bill. We want everything to be discussed freely and fully, but we all know it is a bill that must pass. It is not a question of having a bill or not having a bill. This bill must pass with something in it. I think we all want it to move along reasonably fast and with proper dispatch.

If there is going to be a disposition here for one Senator to just get the floor—the Senator from Missouri is entitled to all the time he has taken, and

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some more—or if there is going to be a disposition just to delay matters and not get to a vote, the Senator from Mississippi feels he has a duty to other Members of the Senate. I believe all Senators stand here on an even level. The floor is even here, as far as I am concerned, but, in legislative parlance and practice, the Senator who is handling the bill, as we use that term, has some obligation to other Members here to do what he can to push it along.

I do not ordinarily make a request when the leaders are absent—I am sure neither one would disagree, as far as I know; perhaps we could have a quorum call—but I would want them to propose or I will propose that on this amendment we have controlled time. We could have, say, 1 hour and a half to the side, or 2 hours to the side; and if that is not enough, 2½ hours to the side; and if that is not enough, 3 hours to the side. Then we will have some certainty, and then things will move along.

I think if we are just going to kill time, we ought to just come out and say so and let the public understand and let the membership understand so they can make other plans. But I do not want any Senator to agree to what he honestly thinks is too short a time.

I wish those in this Chamber will ask the majority and minority leaders to come to the Chamber, so we can get their advice and counsel after the Senator from Missouri has finished.

Mr. COTTON. Mr. President, will the Senator yield?

Mr. STENNIS. May I just finish? I am not trying to grab the floor. I told the Senator from Oregon this morning that if he wanted to follow the Senator from Missouri, I would not ask for the floor. But certainly the membership is entitled to some kind of statement from the committee that has passed on this measure. The membership is entitled to some kind of statement from us as to how it looks to those who had the responsibility of going into this subject and filing a report.

So I hope somewhere along the line I will have the chance in my own right, when I may have the floor, sometime this afternoon.

Mr. COTTON. Mr. President, will the Senator from Missouri yield so that I can ask the Senator from Mississippi a question?

Mr. EAGLETON. I am pleased to yield.
Mr. COTTON. I would like to ask the Senator from Mississippi—I know that he does not wish to assume the prerogatives of the leadership—

Mr. STENNIS. That is correct.

Mr. COTTON. But I would like to ask the Senator from Mississippi if he does not feel very strongly that the Senate ought to stay here until this bill is disposed of before we recess.

Mr. STENNIS. Mr. President, if the Senator will yield to me to respond—

Mr. EAGLETON. I yield to the Senator from Mississippi.

Mr. STENNIS. I think we ought to drive hard to finish this bill, working day and night and Saturday, before there is any recess. I know many Senators have made plans for the recess, involving their

families and their children, and I would bow to those plans; but if we are not going to try to finish, I think we forfeit those considerations.

Mr. COTTON. Mr. President, will the Senator yield?

The PRESIDING OFFICER. The Senator from Missouri has the floor.

Mr. COTTON. Mr. President, will the Senator yield to me for one more question?

Mr. EAGLETON. Mr. President, I yield for the limited purpose of this interrogation, without giving up my right to the floor.

The PRESIDING OFFICER. The Chair wishes to inform the Senator from Missouri that he has a right to do that. The Chair made the observation he did for the benefit of other Senators who seem to be seeking the floor from the Senator from Mississippi.

The Senator from Missouri.

Mr. COTTON. Mr. President, I distinctly asked the Senator from Missouri to yield to me.

Mr. EAGLETON. I nodded and yielded. I was chatting with another Senator. It is my fault.

Mr. COTTON. The Senator from New Hampshire understands that many of us have plans. The Senator from New Hampshire has plans. It would be most unfortunate if those plans, which have been mentioned for many months now, should be frustrated. On the other hand, the Senator from Mississippi has been here a considerable length of time, and so has the Senator from New Hampshire, and human nature being what it is, if the Senator resolved to say to the people of the United States, "Here is a bill that must be taken care of for the defense of this country and we are going to stay here until we do it," I think it would be amazing how succinct and to the point the debate would suddenly become, and I think we would have adequate debate and we could dispose of this bill.

Mr. STENNIS. I thank the Senator for his suggestion. I am certainly willing to stay.

I thank the Senator for yielding.

Mr. EAGLETON. Mr. President, I may say to the Senator from Mississippi that perhaps within this hour I shall be in a position, after conferring with Senators who are interested parties in this amendment, to discuss some potential agreement. It is not my desire, nor certainly that of the Senator from Oregon (Mr. HATFIELD) or other Senators, to engage in foot-dragging, slow-down tactics.

Mr. STENNIS. If the procedure is going to continue on the pattern of yielding 5 or 10 or 15 minutes to various Senators, I am going to request to come in on that pattern for 12 or 15 minutes, for the committee.

Mr. HATFIELD. Mr. President, will the Senator yield?

Mr. EAGLETON. Mr. President, I have had a request from the Senator from Vermont. I am going to make a unanimous-consent request that I may yield 2 minutes to the Senator from Vermont (Mr. PROUTY) without giving up my right to the floor, on a matter apparently extraneous to that under debate.

Mr. GRIFFIN. Mr. President, reserving the right to object—and I shall not object in this one instance—I believe that hereafter, unless the Senator from Missouri yields only for the limited purpose of a question, I shall be inclined to object. I have plans, as do other Senators, and I would like to get to a vote as soon as possible. I shall not object.

The PRESIDING OFFICER. Is there objection to the unanimous consent request of the Senator from Missouri? The Chair hears none, and the Senator from Vermont is recognized.

S. 2806—INTRODUCTION OF A BILL TO PROMOTE EQUAL EMPLOYMENT OPPORTUNITIES FOR AMERICAN WORKERS

Mr. PROUTY. Mr. President, on behalf of myself, the distinguished senior Senator from Pennsylvania (Mr. SCOTT), the distinguished junior Senator from Michigan (Mr. GRIFFIN), the distinguished junior Senator from Oklahoma (Mr. BELLMON), and the distinguished senior Senator from Pennsylvania (Mr. SCHWEIKER), I send to the desk a bill entitled the Equal Employment Opportunity Act of 1969 and ask that it be appropriately referred.

Mr. PROUTY. Mr. President, I ask unanimous consent that the bill be printed in the RECORD at the conclusion of my remarks.

The PRESIDING OFFICER. The bill will be received and appropriately referred; and, without objection, the bill will be printed in the RECORD.

Mr. PROUTY. Mr. President, this is the administration's bill proposed by the President to amend title VII of the Civil Rights Act of 1964 pertaining to discrimination in employment by employers, labor organizations, and employment agencies.

Five years ago title VII of the Civil Rights Act of 1964 ordained a national commitment to eliminate discrimination in all aspects of employment. Unfortunately, as a result of compromises necessitated by political considerations, Congress did not see fit to provide realistic enforcement procedures to support title VII's guarantees.

This bill corrects that deficiency, and does so in a way that breaks new ground in the continuing development of American law. Under the President's proposal, the Equal Employment Opportunity Commission will continue to seek voluntary compliance with title VII but if conciliatory efforts prove unsuccessful, it may bring lawsuits against recalcitrant violators.

The main thrust of this bill, Mr. President, is to provide for the trial of cases in the U.S. district courts where the Equal Opportunity Commission has found reasonable cause to believe that a violation has occurred.

Traditionally, advocates of fair employment legislation have sought enforcement by regulatory agencies through administrative processes. This proposal preserves the most attractive features of that approach—expertise and independence from shifting political

winds—while contemplating a vigorous policy of enforcement in the courts, where speedy redress can be obtained through due process. In addition, it has the advantage of being capable of easy accommodation within EEOC's existing structure.

Proceedings under this measure will be able to be commenced shortly after enactment. On the other hand, if we should instead enact legislation providing the EEOC with decisionmaking and enforcement authority through administrative processes, it will require 2 to 3 years of gearing up before results can begin to be realized, a further delay difficult to accept.

Under the administration's bill, Mr. President, charges of unlawful or discriminatory employment practices will continue to be filed with the EEOC. This agency will conduct investigations of these charges and, where the evidence establishes reasonable cause to believe a violation has occurred, the EEOC will attempt to conciliate the dispute as it does at present.

Should conciliation attempts fail, however, the EEOC will have complete freedom to file a complaint in an appropriate Federal district court, which will be the trial tribunal to hear the case on the merits.

Similarly, where the Commission dismisses a charge after investigation, the aggrieved person shall have the right to commence an action in Federal district court as he does under present law.

Decisions of the Federal district courts are appealable to the appropriate U.S. court of appeals and the U.S. Supreme Court in the usual manner, with one modification. This involves the situation where the EEOC loses a case in whole or in part in Federal district court litigation. In such circumstances, the Civil Rights Division of the Justice Department, after receiving recommendations from the Commission, will decide which cases to appeal to the court of appeals.

The alternative proposal to the procedures in the administration's bill, Mr. President, is to provide for administrative litigation in the first instance before a Federal trial examiner subject to the provisions of the Administrative Procedures Act. The trial examiner's findings and recommended order would then be subject to review by the Commission with ultimate judicial review in the U.S. court of appeals either as the result of an enforcement proceeding brought by the EEOC or by a petition for review filed by any party to the proceeding.

I have previously taken the position that the Commission should have the same decision making authority and authority to enforce its orders in the courts of appeals as do other independent Federal agencies such as the Federal Trade Commission and the National Labor Relations Board.

I have taken this position in the past, however, in the context of either granting the EEOC decision making and enforcement powers or leaving the law in its present posture. This latter alternative is completely unacceptable, as both the law and the Commission need to be strengthened and given additional tools

with which to accomplish the objectives set by Congress.

The bill which I introduce today, Mr. President, does contain the teeth of enforcement which are so badly needed. Enforcement comes much more quickly here, from the Federal district court initially, than it would under an administrative hearing type of bill.

In this regard, the entire proceeding will probably be substantially shortened by direct appeal to the court of appeals from the trial in Federal district court, rather than following the more circuitous route of administrative hearing before a trial examiner whose findings and order are appealable to the Commission before access to the courts of appeals may be obtained.

Furthermore, as I review this bill, I find no way in which it will hinder or tie the hands of the EEOC in performing its duties.

Thus, the Commission is free upon its own determination to litigate any or all cases it desires to in Federal district court with no person or agency being given the right to veto or reverse such EEOC action.

Moreover, in the exercise of its own expertise in this particular area, the Commission may urge upon the courts any proposed remedies which it might have ordered in its own right if it retained decisionmaking authority.

The propriety in granting, modifying, or denying such remedies will finally be determined by the court of appeals, and possibly the Supreme Court, under this bill in the same manner as would be the case if the Commission were granted the authority to issue its own orders subject to court review.

There is also the question of whether this bill will result in a backlog of cases awaiting trial in Federal district courts. This is a matter we must study closely, but my present feeling is that it will not approach the backlog which would be faced by the Commission if it were required to review every litigated case in the country before enforcement in the courts of appeals could be sought.

Moreover, as Federal court precedents are established under this bill, I envision a substantial number of respondents complying with court decisions or entering into meaningful conciliation agreements with the Commission, rather than appealing, after they lose cases in Federal district court. Not to mention the increase in pretrial conciliations by respondents who would take their chances in drawn out administrative proceedings before a Federal trial examiner and the Commission, but who would hesitate to go to trial directly in Federal district court when the precedents are clear.

I want to note, however, that I reserve the right to offer amendments in our committee which in my judgment can make this piece of legislation stronger and even more effective in removing the blot of discrimination in hiring and employment practices and to insure true equality of opportunity for all qualified persons in seeking, obtaining and retaining employment in both the public and private sectors of our economy.

Mr. President, laws protecting human

rights are as deserving of adequate implementation as any other declaration of national policy, and indeed, deserve priority. Congress has declared that certain discriminatory acts are unlawful and it is overdue in adding substance to its words. We must act now, to finally demonstrate that the law—all laws—apply to everyone equally, and that the comfortable as well as the disadvantaged are subject to its rule.

The bill (S. 2806) to further promote equal employment opportunities for American workers, introduced by Mr. PROUTY, for himself and other Senators, was received, read twice by its title, referred to the Committee on the Judiciary, and ordered to be printed in the RECORD, as follows:

S. 2806

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That this Act may be cited as the "Equal Employment Opportunity Act of 1969."

SEC. 2. Subsections (g) and (h) of Section 705 of the Civil Rights Act of 1964 (78 Stat. 253; 42 U.S.C. 2000e-4) are amended to read as follows:

"(g) The Commission shall have power . . . (6) to refer matters to the Attorney General with recommendations for intervention in a civil action brought by an aggrieved party under Section 706, or for the institution of a civil action by the Attorney General under Section 707, and to recommend institution of appellate proceedings in accordance with subsection (h) of this section, when in the opinion of the Commission such proceedings would be in the public interest, and to advise, consult, and assist the Attorney General in such matters."

"(h) Attorneys appointed under this section may, at the direction of the Commission, appear for and represent the Commission in any case in court, provided that the Attorney General shall conduct all litigation to which the Commission is a party in the Supreme Court or in the Courts of Appeals of the United States pursuant to this Title. All other litigation affecting the Commission, or to which it is a party, shall be conducted by the Commission."

SEC. 3. (a) Subsection (e) of Section 706 of the Civil Rights Act of 1964 (78 Stat. 259; 42 U.S.C. 2000e-5) is amended to read as follows:

"(e) If within thirty days after a charge is filed with the Commission or within thirty days after expiration of any period of reference under subsection (c), the Commission has been unable to obtain voluntary compliance with this Act, the Commission may bring a civil action against the respondent named in the charge: *Provided*, that if the Commission fails to obtain voluntary compliance and fails or refuses to institute a civil action against the respondent named in the charge within one hundred and eighty days from the date of the filing of the charge, a civil action may be brought after such failure or refusal within ninety days against the respondent named in the charge (1) by the person claiming to be aggrieved, or (2) if such charge was filed by a member of the Commission, by any person whom the charge alleges was aggrieved by the alleged unlawful employment practice. Upon application by the complainant and in such circumstances as the court may deem just, the court may appoint an attorney for such complainant and may authorize the commencement of the action without the payment of fees, costs, or security. Upon timely application, the court may, in its discretion, permit the Attorney General to intervene in such civil action if he

certifies that the case is of general public importance. Upon request, the court may, in its discretion, stay further proceedings for not more than sixty days pending the termination of State or local proceedings described in subsection (b) or further efforts of the Commission to obtain voluntary compliance."

(b) Subsections (f) through (k) of Section 706 of the Civil Rights Act of 1964 (78 Stat. 259; 42 U.S.C. 2000e-5) are redesignated as subsections (g) through (l) respectively, and the following new subsection is added:

"(f) Whenever a charge is filed with the Commission and the Commission concludes on the basis of a preliminary investigation that prompt judicial action is necessary to carry out the purposes of this Act, the Commission may bring an action for appropriate temporary or preliminary relief pending final disposition of such charge. It shall be the duty of a court having jurisdiction over proceedings under this section to assign cases for hearing at the earliest practicable date and to cause such cases to be in every way expedited."

(c) Subsection (h) of Section 706 of the Civil Rights Act of 1964 (78 Stat. 259; 42 U.S.C. 2000e-5), as redesignated by this section is amended to read as follows:

"(h) If the court finds that the respondent has engaged in or is engaging in an unlawful employment practice, the court may enjoin the respondent from engaging in such unlawful employment practice, and order affirmative action as may be appropriate, which may include, but is not limited to, reinstatement or hiring of employees, with or without back pay (payable by the employer, employment agency, or labor organization, as the case may be, responsible for the unlawful employment practice), or any other equitable relief as the court deems appropriate. Interim earnings or amounts earnable with reasonable diligence by the person or persons discriminated against shall operate to reduce the back pay otherwise allowable. No order of the court shall require the admission or reinstatement of an individual as a member of a union or the hiring, reinstatement, or promotion of an individual as an employee, or the payment to him of any back pay, if such individual was refused admission, suspended, or expelled or was refused employment or advancement or was suspended or discharged for any reason other than discrimination on account of race, color, religion, sex or national origin or in violation of Section 704(a)."

Mr. SCOTT. Mr. President, I am pleased to join with the Senator from Vermont (Mr. PROUTY) as a sponsor of this bill entitled the Equal Employment Opportunity Act of 1969.

I believe that the introduction of this legislation and the ensuing consideration given to it will greatly strengthen title VII of the Civil Rights Act of 1964 pertaining to discrimination in employment by employers.

While I personally favor the cease-and-desist approach, this well-reasoned alternative is worthy of consideration.

ABM

AUTHORIZATION OF APPROPRIATIONS FOR FISCAL YEAR 1970 FOR MILITARY PROCUREMENT, RESEARCH AND DEVELOPMENT, AND FOR THE CONSTRUCTION OF MISSILE TEST FACILITIES AT KWAJALEIN MISSILE RANGE, AND RESERVE COMPONENT STRENGTH

The Senate resumed the consideration of the bill (S. 2546) to authorize appropriations during the fiscal year

1970 for procurement of aircraft, missiles, naval vessels, and tracked combat vehicles and to authorize the construction of test facilities at Kwajalein Missile Range, and to prescribe the authorized personnel strength of the Selected Reserve of each Reserve component of the Armed Forces, and for other purposes.

Mr. EAGLETON. Mr. President, I yield to the distinguished Senator from Montana.

Mr. MANSFIELD. Mr. President, if I may have the attention of the Senate, and with the permission of the distinguished Senator from Missouri, who has the floor, and without him losing his right to the floor, I suggest the absence of a quorum.

The PRESIDING OFFICER (Mr. SPONG in the chair). The clerk will call the roll.

The bill clerk proceeded to call the roll. Mr. MANSFIELD. Mr. President, I ask unanimous consent that the order for the quorum call be rescinded.

The PRESIDING OFFICER. Without objection, it is so ordered.

Mr. EAGLETON. Mr. President, I yield for interrogation to the Senator from Oregon.

The PRESIDING OFFICER. The Senator from Oregon is recognized.

Mr. HATFIELD. Mr. President, I have some questions to ask of the Senator from Missouri. First, however, I would like to make one or two brief comments.

Mr. GRIFFIN. Regular order.

The PRESIDING OFFICER. The regular order is that the Senator from Missouri has the floor and has yielded to the Senator from Oregon for the purpose of asking questions.

Mr. HATFIELD. Mr. President, we were talking awhile ago about the questions that have been raised by various people as to the dependability of the research and the experiments we have had thus far on the tank.

I ask the Senator from Missouri if he has information which would support the reports we have read in the press about the growing concern of the Germans.

Mr. EAGLETON. Mr. President, may we have order? I am having difficulty hearing the Senator.

The PRESIDING OFFICER. The Senator will be in order.

Mr. HATFIELD. The questions relate to the attitudes of our partners, the Germans. According to the chart, we started out with the idea that we would share the cost 50-50 of research and development. That now has shifted to about an 80 to 20 percent differential. We support 80 percent and the Germans support 20 percent.

I have some information here that was reported in the New York Times of October 9 and 10, 1967, to the effect that there has been growing concern on the part of our partner about the tank, and dates back to October 1967.

It says:

Some military experts here—

Meaning in the German capital of Bonn—

have raised some very serious questions about the continuation of the joint program.

So, as I restate the question, does the Senator have information concerning the attitude and the thinking on the part of our so-called partner?

Mr. EAGLETON. Mr. President, I have no really precise or quotable information. I have rumors and speculation. I have been casting about for some accurate information as to the posture of the Federal Republic of Germany as to their desire to continue even at the advantageous 80-20 formula that is now the rule rather than the original 50-50 formula that obtained at the inception.

Mr. HATFIELD. Mr. President, why was the formula shifted from 50-50 down to 20 percent for the German contribution and up to 80 percent for the American contribution?

Mr. EAGLETON. This gets into the realm of the imprecise, but the original production estimates for the MBT-70 were such that in 1963 and in 1968 the Germans were willing to go along on the 50-50 basis. However, when the production estimates accelerated and more tanks were to be produced, apparently they did not want to sink so much of their public treasury into the production of more tanks than they had anticipated. So they wanted to hold it to a certain limit.

I call to the attention of the Senator from Oregon a report with which I know he is very familiar since he was the chairman of the committee that prepared the report on military spending, dated July 2, 1969.

The report had a chapter, so to speak, on the main battle tank. It had chapters, I might add, on many other items which will be the subject of other amendments that will be before the Senate. It refers to bacteriological warfare, CBW, and also to a study made on the manned orbital laboratory. However, the Pentagon beat them to the punch and withdrew it before Congress could get to it.

Be that as it may, it had a chapter on the main battle tank, and I will read this small portion thereof, which relates directly to the question of the Senator from Oregon:

Under the latest agreement—

Meaning the agreement between the United States and the Federal Republic of Germany—

the United States and Germany split evenly the first \$138 million—

That takes us to about 1968 on that chart—

with the cost above that to be prorated on the quantity of tanks purchased by each country.

Returning to what I said earlier, the Federal Republic of Germany apparently does not want to buy too many tanks, looking down the road. It is dubious as to why they want to buy any, based on what is now known about this item.

Mr. HATFIELD. I should like to ask a further question, also concerning the fundamental point of cost effectiveness and the involvements of our country along with Germany in the development of this tank.

When we talk about the cost effectiveness of a weapon which is developed by the Pentagon, supposedly the cost ef-

fectiveness is a criterion upon which we are to make judgment on whether we should move ahead or accept the proposals for such development. Can the Senator tell us what some of the components of that criterion might be? In other words, what is the definition of cost effectiveness as it relates to the MBT or any other weaponry, but particularly as it relates to the MBT. This knowledge would help us decide where we escalate, or where we move ahead, or where we cut off work on such a proposal?

Mr. EAGLETON. It is a very fine question, completely appropriate, and does not lend itself to a precise, computerized answer. There is no magical computer, totally self-sufficient, into which various indicia can be pumped and a "yea" or "nay" answer come out.

There is an element of subjectiveness in this cost-effectiveness business. As I gather it—and others who are more learned in this can certainly clarify any misconception I have—it goes something like this. No weapon system exists in a vacuum. No man is an island. Each weapon system or weapon interrelates with other systems and human beings who operate. But as costs escalate—in this instance, the enormous 500-plus percent on R. & D. alone, and now the per unit cost of the MBT-70 is between \$520,000 and \$750,000—you get to a breaking point, a point of no return, meaning that it is an imprudent and wasteful expenditure of public money to go ahead with it, because some other item, albeit another tank, an antitank weapon, aircraft, or what have you, can do the same job more cheaply. It is our information that, so far as the MBT-70 is concerned, it has just about reached the point of inefficiency, the point of no return, at which if it escalates much further, it is no longer cost effective; and other items, including the M60A1—anyway, the tank that we have now functioning and operational in Western Europe—and other configurations and other antitank weapons, including the Tow, the Dragon, and so forth, would better be able to do the job per dollar expended than would going ahead with the then expensive MBT-70, once it crosses that line.

Mr. HATFIELD. Would the cost effectiveness, then, be analogous to what we have as a cost-benefit ratio formula for the development of water and other such reclamation programs?

For example, we have in such programs the requirement to develop a cost-benefit ratio which often includes recreation benefits, flood control benefits, power benefits, wildlife, fisheries, conservation, and so forth. In the computation of these various components, a certain cost-benefit ratio develops to justify the building of the project. Would the cost-effectiveness ratio be analogous to this cost-benefit ratio, not only in terms of having the components that are cranked into this cost-effectiveness program in order to justify the building of such a tank in the original instance, but also that at times along the way, it could be reviewed and recomputed?

Mr. EAGLETON. Emphasizing the word "analogy," I think the analogy is indeed an apt one.

As the Senator knows, we have that in terms of some of our public works projects, perhaps all of them. The distinguished chairman of the Committee on Public Works is in the Chamber, and it is my pleasure to serve with him on that committee.

The Corps of Engineers, for example, studies a particular flood control project, from the standpoint of its conservation, water, power, and other criteria, and determines what the benefit-cost ratio is. If it meets the accepted criteria in terms of benefit-cost ratio, it can well meet with the approval of the Corps of Engineers and subsequently the Committee on Public Works and the entire Congress. If it falls short of that—despite the fact that it would be a desirable thing to have, despite the fact that people of a given area might like to have the dam and might like to have more water, despite the fact that the people might like to have more recreational facilities—if it does not reach this benefit-cost ratio, it is considered to be an imprudent and unwise expenditure of public money.

Thus, I think the analogy in the instant situation is apt. I do not fault, nor do I believe the Senator from Oregon faults, the right of people, whether they be in the Pentagon, on the floor of Congress, or in the ghetto, to dream. It is perfectly ethical, and it is a process of our orientation that we dream. We dream great dreams. Part of our trouble as human beings is that so often we leave those dreams unfulfilled and unmet.

So I quarrel not with the privilege of the Defense Department to dream up this tank when they dreamt it back in 1963.

In the words of the Senator from Mississippi, they dream an idea. They say, "We are going to build a tank," and they call in the contractors and say, "Go to it, boys. Build the greatest tank you fellows can guess might be made available." So then they dream and dream and dream and dream. Unfortunately, the dream gets more expensive. First it was an \$80 million dream; then \$183 million, then \$303 million. Up and away. Then the point of the benefit-cost ratio is reached, such as in public works projects. In military projects, it is the cost-effectiveness. The luxury of dreaming is one that this country can ill afford at the very time there are those with unmet dreams, those whom the Senator from South Dakota (Mr. McGOVERN) has referred to as individuals who dream of a decent meal, those who are left behind in the war on poverty. We talk about jobs, we talk about schools, we talk about neighborhood corps, we talk about neighborhood centers, but we leave out a pretty important dream, the dream of being able to eat.

So if we let the Pentagon keep dreaming the eternal dream, in this manner, of preserving the MBT-70, there will be some people in Portland, in St. Louis, in New York, and in Chicago who are still going to have their dream unfulfilled.

We cannot do it all. Yes, there was a time—I said this earlier—when, with our enormous wealth, the urgencies and exigencies of the age were not nearly so heavily upon us, and we could afford the luxury of this kind of project. We could let the Pentagon fool around with it, change it. They could put the Shillelagh in or take the Shillelagh out. They could put the environmental control unit in the tank, or take it out. They could install dual firepower or not. We could afford that kind of dream in a bygone day. For better or for worse, but realistically, that day has gone, and the dreams of the military and the dreams of Congress have to be realistic, attainable, predictable, and fulfillable dreams, or we will not be doing what we must do in terms of the desires of other Senators with respect to our economy. They will be short-changed.

It is not the \$54 million for the prototype that will feed all the hungry people. The \$54 million will not balance the budget, a budget which has long been out of balance. But it is symbolic. We cannot continue to condone a continuously haphazard, ill-performing weapons system that year after year is brought back to Congress. The Pentagon says, "Last year was a good year for us. We admit that, Members of Congress. The Shillelagh was not going too good. The Scavenger system is a little too goofy. We have not quite mastered the environmental control unit. We have 300 unused chassis sitting on a lot in Michigan and do not know what to do with them. Give us another year."

It has been that way since the beginning—1963—and has continued through 1964, 1965, and on until 1969. Not only patience, but human endurance is being exhausted. Still the gentlemen say, "One more year." It is like a broken record. We have had enough.

Although \$54 million will not make us or break us, it is important in terms of what it symbolizes. We say at this time—when the needs are so heavy upon us—we are not going to fritter away another \$54 million or 54 cents if we can help it.

Mr. HATFIELD. Are we to assume that each time we have seen an increment in the cost of this tank there has been a new cost-effectiveness study, or for that matter, as to the overall tank itself?

Mr. EAGLETON. Frankly, I must say to the Senator that I do not have the precise date when the last cost-effectiveness study was made by the Pentagon. I am not trying to play the old game of, "I know something you do not know." I have had a couple of classified briefings on this matter and I do not want to transgress because I am not as familiar in this area as many other Senators who have dealt with armed services-type matters for a long time. In order that I may stay on the side of conservatism, I will not directly answer the Senator's question. However, I will say what I have said again and again. It is my understanding that cost effectively, the MBT-70 is pretty close—and I shall leave it at that—to the point of no return in the sense of being imprudently cost effective.

I wish to add to and amplify the continued optimism of the Army in its presentation of this program year by year. Here is what General Burba stated in March of 1968, and that is about a year and a half ago. He was then in charge of the program. I believe General Betts is now in charge of the program. In March 1968 he said about this tank:

Skeptics and advocates alike have been impressed with the smoothness which has characterized the program's progress since its inception.

I do not know him. I know he is a fine career man. I think he has a bad ghost writer because as of March 1968 this project was floundering and it had been floundering from its first halting start. It is a dream, and it has floundered and stumbled since its inception.

I do not know how he could say in March 1968 that "smoothness which has characterized the program's progress since its inception". And then, when he takes over the Department of Defense, tells us the three millstones he inherited were the *Pueblo*, the TFX, and the BMT-70, the main battle tank. Is that not a delightful association? Here is a Secretary of Defense in 1969, after General Burba had said all is well, who said that his three millstones were the *Pueblo*, the TFX, and the MBT-70.

Mr. HATFIELD. Mr. President, will the Senator yield for a further question?

Mr. EAGLETON. I yield.

Mr. HATFIELD. What kind of judgment would we be making, if we could not base it on some sort of cost effectiveness? In other words, do we have enough data on cost effectiveness, or are we merely being asked to continue this project on the basis of these generalized remarks on the part of the gentlemen the Senator has quoted.

Mr. EAGLETON. To me it is entirely, and I will say exclusively, the latter. We are asked to buy another year in a long stream of years, with all these bugaboos and unworkable components. "Maybe we will make them better next time. Let it go a little longer, and so forth. It is a broken record upon which time has expired.

Mr. HATFIELD. Mr. President, will the Senator yield further?

Mr. EAGLETON. I yield.

Mr. HATFIELD. We have the report before us. I am talking about the report No. 91-290 of the Armed Services Committee, in which the only reference I can find to this tank is a statement which is rather general. It appears on page 53:

The committee also recommends a reduction of \$14.9 million in the joint US/FRG main battle tank program. This program has been experiencing difficulty for some years and the committee now believes that a reorientation of the program is in order.

I would like to ask the distinguished Senator from Missouri if he knows what the Armed Services Committee means or what they have in mind when they talk about a "reorientation" of the program. Does not the committee action in itself confirm what the Senator has been saying today on the floor of the Senate about the questionability and the unreliability of the program thus far? Is not the Senator merely asking for a post-

ponement on this tank project until the GAO can make some sort of evaluation? It is not to vote the tank up or down. It asks Members of Congress to take a hard look at a project that has cost millions of dollars and which the Senator eloquently has stated has created doubt in the minds of generals in the Pentagon, the Secretary of Defense, our German partners who have been involved in this project, members of the Committee on Armed Services of the Senate, and the House Armed Services Committee. The Senator has quoted many sources that indicate grave doubt.

Is it not true that all this amendment asks is that we continue to look into this matter through another set of eyes, through a study by the GAO, and then make a determination on the future of this tank following that kind of report? We ask this rather than going pellmell down this pathway which has brought little in the way of results with the expenditure of millions of dollars.

Is that not what the Senator is asking us today?

Mr. EAGLETON. In summary, that is what I am asking through the medium of this amendment. I am not sure what the word "reorientation" means. I know not if it is a word of art in the military field, or whether it means other than it means in the nonmilitary area. But when the Armed Services Committee says, as I have quoted, that the committee now believes the reorientation program is in order, to me, as a nonmember of that committee, it means: Let us take a look at it. Knowing that those who have a greater knowledge of the history of this subject, as I say, still stumble and bumble along, and knowing that they want to take a look at it, bear in mind that the original request to the Pentagon for research and development on this item was \$45 million. To be precise, it was \$44.9 million. The Armed Services Committee cut it \$14.9 million. So that means that the Armed Services Committee was about two-thirds as sold on it as was the Pentagon. The Pentagon wanted \$45 million and the Armed Services Committee said, "We will give you \$30 million."

Thus, in that frame of reference, in percentages, they are about two-thirds as happy with it as the Pentagon.

As to the Pentagon, I do not know who is happiest with it over there. I know that General Burba surely is. He says it is the smoothest thing since raw silk. He is happy with it. Secretary of Defense Laird is not happy with it. He said it was comparable to the *Pueblo* and the TFX.

Thus, I am asking for a reorientation. The Senator is correct on that, if I interpret that word correctly. I want someone to look at the program. The someone I want to look at it is the someone that the Senate yesterday declared by its vote on the Schweiker amendment should help us look into various armed services programs; namely, the General Accounting Office.

By a curious coincidence, today, I want to implement that amendment with my amendment. I want to implement it under a microscope, so to speak, and make it a laboratory case, as to whether

what the Senate did yesterday on the Schweiker amendment was right and proper.

In my amendment, we ask the GAO to get us the report in 6 months. Knowing what I know, and what the GAO knows about tanks, since it has been working on them for the Stratton committee, if they can get that report to us much quicker, it will serve two purposes and will be well worth the time.

Purpose No. 1 will tell us something about the tank. It will tell us a lot more than we know now.

Purpose No. 2 will serve the commendable objective of proving whether the Schweiker amendment was prudent. Forty-seven Senators thought it was prudent, and 46, including some of the most knowledgeable members of the Armed Services Committee, disagreed. We will know in 2 months whether, by this laboratory case, if we can get the GAO to give us a report in substance, in efficient form, with expertise, with thoroughness, whether what the Senate did yesterday was correct.

Maybe it was wrong, because the Schweiker amendment was adopted by a razor-thin majority. If it was wrong, then perhaps someone will want to undo it. It can be undone in the House, in conference, or what have you.

Thus, what we are asking for in the amendment are two commendable purposes, at a time when time itself is not of the essence. The MBT-70 cannot be shrouded in the argument that engulfed the ABM system, and apparently successfully so, that we cannot wait, that the survival of America is on the line if we do not deploy the ABM and perhaps it will be too late if we do not do so, and we will lose 2 years. I am not going to repeat the 8 weeks' argument. The die has been cast. The votes have been counted. The ABM will be deployed in Montana and South Dakota. But, time is not of the essence in this case. No one has ever said it was. It began in 1963 as a vague idea. The Senator from Mississippi said himself that they took their time trying to put some facts into the idea and narrow it down—I am paraphrasing here, and if I go beyond what the Senator from Mississippi intended, he can correct me—but it was a vague, amorphous idea, indeed, but that it would get less and less vague, and more identifiable and become a more precise idea. So that time was never of the essence in this program. It could not be.

At the outset, they said they would have the tank with us, manned and running around, by 1969, I think it was. Here it is 1969, and there is no tank. It is anyone's guess whether it will be in the mid-1970's, or 1974, 1975, 1976 perhaps, when it will be produced.

Thus, I say to the Senator from Oregon that this has the dual, double-faceted, commendable purpose of being illustrative of the Schweiker amendment, and at the same time giving us illuminating information that we all so desperately need on this particular project.

Mr. HATFIELD. I have only one more question in sequence. Is the Senator from Missouri aware of what criteria the Armed Services Committee used in re-

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ducing the Pentagon's request by \$14.9 million?

Mr. EAGLETON. I freely confess ignorance as to the precise rationale that the committee employed in making that reduction.

Mr. HATFIELD. So far as the phraseology is concerned of asking for a "re-orientation" of the program, the Senator has no further data as to what they meant, or has the Senator discussed that with the Armed Services Committee members?

Mr. EAGLETON. No, sir; I have not.

Mr. GOLDWATER. Mr. President, will the Senator from Missouri yield for a question?

Mr. EAGLETON. I am pleased to yield to the Senator from Arizona.

Mr. GOLDWATER. Mr. President, I want to ask the distinguished Senator from Missouri some questions relative to the language in his amendment that refers to the Comptroller General of the United States.

First, the Senator has referred very often to the amendment adopted yesterday by the Senate, as introduced by the distinguished junior Senator from Pennsylvania (Mr. SCHWEIKER). As I read that amendment, I see in it a charge that is in keeping with the general purpose of the GAO and the Comptroller General of the United States; namely, they are to report on contract items, the time they were entered into, subsequent estimates of cost completion, and the reason for any significant rise or decline in prior cost estimates. I do not see how that amendment compares with the language in the Senator's amendment which is now pending—if the Senator will give me his attention—

Mr. EAGLETON. I beg the Senator's pardon.

Mr. GOLDWATER. For example, on page 2 of the amendment, the Senator charges the Comptroller General of the United States, among other things to consider, first, why research and development cost estimates have had to be revised steadily upward since 1965. I will agree that that is a proper charge to give to the Comptroller General, but does not the Senator believe it is within the prerogative of the GAO to answer a question, for example, as in paragraph (2) whether the MBT-70, considering its revised estimated production costs will be the most effective weapon to meet the contingency for which was originally planned. Does the Senator feel that that would come under the proper function of the GAO?

Mr. EAGLETON. I think that the Senator from Arizona makes a valid point. I have today discussed it with the Senator from Wisconsin (Mr. PROXMIRE), who is not now in the Chamber, but who, in my judgment, is one of the Members of this body most knowledgeable on the GAO—not the only one, but he has had a great deal of contact with that agency, as a result of his chairmanship of the Joint Economic Committee. Although he is cosponsor of my amendment, I think he is a bit inclined to think that I have stretched paragraph (2) as to the general capability of the GAO.

He told me this much—if I am at liberty to quote him on a hearsay basis—he said, "They will fight like hell not to try to give you a precise answer under No. 2; that they do not like doing this kind of evaluation." I will concede, perhaps, to the Senator, that I may have overdrawn a bit on subparagraph (2).

Mr. GOLDWATER. I am not trying to be picayunish about this.

Mr. EAGLETON. No. It is an important point.

Mr. GOLDWATER. Because I think we need more information about contracts, and so on; but I do not think the GAO is competent to tell whether it is the most effective weapon; or, going to paragraph (3), to answer whether the strategic projections made in 1963 with regard to the use of the MBT-70 will still be valid when it finally becomes available for use; that is, will it be obsolete as a result of advanced technology and new strategy.

Does the Senator feel that that comes within the proper purview of the GAO?

Mr. EAGLETON. That is getting a little closer to what the Senator from Wisconsin (Mr. PROXMIRE) says may be a shade overdrawn.

If I may interrupt—it is right on the point—I have in my hand a letter from the Comptroller General of the United States to me, dated July 9, 1969. The letter itself is not greatly revealing, but it is a cover letter transmitting to me a report from the GAO, two pages of which I already put in the Record earlier on this day. It is on the main battle tank. I do not pretend, nor does the GAO, that the two pages are an exhaustive analysis. It is a very brief summary of a very complex subject.

Let me read a part of page 2. The report starts by discussing the Sheridan and the M60A1E2. Then it goes to, "MBT-70 objectives." I found, and the Senator from Arizona especially will find, that it is not terribly sophisticated; it is cursory. It continues:

The MBT-70, which is intended to replace the M60 and the M48 as the standard main battle tank, will be employed against armored formations and all other types of land warfare targets including infantry elements of a modern army.

Skipping to—

MBT-70 commonality. The MBT-70 is designed to be armed with the Shillelagh missile and the 152mm combustible cartridge case ammunition common to the Sheridan and M60A1E2 tank—

Skipping the recitation of certain facts—

However, the automatic loader is dependent upon the acceptability of the ammunition combustible cartridge case which will be discussed in detail subsequently.

I now come to the conclusion:

Conclusion. Unless deficiencies in the combustible cartridge case ammunition are corrected, it is reasonable to assume that the MBT-70 will experience difficulties similar to those of the Sheridan and M60A1E2 tank.

That is not a terribly profound conclusion. The point I am trying to make is that the GAO is more than just a book-keeper's office. It is more than an office where people take a bunch of figures, add

up the assets, add up the liabilities, and strike a balance. It is composed of talented people who are analysts, who have the expertise and talents to go beyond the printed word, beyond the diagrams, beyond the schedules, beyond the figures, and to get into what we may call the area of substance and the area of theory.

What I am trying to do by my amendment is ask for the services which Mr. Mayo renders now for some of the same agencies, military as well as nonmilitary. I am willing to cut the period to 6 months. I am asking that office to give us the benefit of their talent, which I know they have, because of the magnificent work they did in assisting Representative STRATTON in his report. The GAO is mentioned particularly in that Stratton report, specifically page 11, which I may put in the Record later. But we have these talented people there, we have this questionable program, and I do not see where it hurts a soul or a cause or in any way jeopardizes us to use our people in that way.

Mr. GOLDWATER. The point I am trying to make in these questions is that the General Accounting Officer is not charged in any way with making strategic projections. They do not sit in the meetings when they are made. They have no way of knowing whether a weapon will become obsolete, because of projections, within 6 months or any time. In fact, the conclusion the Senator just read is the conclusion written by the Army on the weapon.

We do not say this is a perfect weapon. We recognize that there are problems. But what I am trying to get at is the General Accounting Office would want to duck from something like that; that they would want to stay with their purpose of accounting, looking into contracts, and so forth.

For example, going to paragraph (4) of the amendment, the GAO would have to answer the question of whether there are more feasible and less expensive alternatives to the development of the MBT-70. If the Senate adopts the amendment, we will be getting into the area of having another agency do the job that the Defense Department, the strategic planners, are charged with doing. Even though I know the GAO is a very competent group, and I have great respect for their judgments, I do not believe anyone in that group is equipped to make the kind of judgment the Senator asks that office to make, outside of what is contained in paragraph (1) on cost.

I am afraid there might be a constitutional question here, although I am not an expert enough to put my finger on it, of mixing up the duties charged to the executive branch and the legislative branch. I think there is a grave question there. Others better equipped than I can discuss it.

I do not think it is wise to let the GAO consider the question of effectiveness of weapons or whether they are obsolete in the strategic projections. I do not think the GAO is equipped to do it any more than the Joint Chiefs of Staff would be

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equipped to go in and run an audit on the Department of Health, Education, and Welfare.

The amendment is in no way comparable to the Schweiker amendment, which confined itself to money matters, contracts and so forth.

Mr. EAGLETON. I thank the Senator from Arizona. As I said in answer to the previous question, I think at least in terms of subparagraph (2), based on the wise advice of the Senator from Wisconsin (Mr. PROXMIRE), some of that language may be a bit overdrawn. It is quite possible that there could be some bit of redrafting of the latter part of it.

We had an exchange earlier today with the Senator from California, who is a former Comptroller of his State. I do not want to so narrowly circumscribe that which I am requiring the GAO to do that we would merely make them bookkeepers, insofar as what I would ask them to look into with reference to the MBT-70.

I am not here to expound upon the Schweiker amendment one way or the other. It has had its day in the court of the Senate. I am here to expound on the MBT-70 and how we can get the ultimate information, advice, counsel, consultation, and expertise that we have not had as of now in trying to make the "nitty-gritty" decision on a program that has stumbled along, as I have said, for 6 years.

So far as the MBT-70 is concerned, knowing the GAO has systems analysts, knowing they have some personnel who did the enormously successful work for the Stratton committee, which went way beyond bookkeeping and went into the question of effectiveness, comparing it with the Shillelagh—

Mr. GOLDWATER. If the Senator will yield, he will find that this information is available from the Army. Our committee knows of all these aspects. The GAO or the Secretary of Transportation, if they want to, can call the Army and get a detailed description of everything that is wrong with the tank and the development of it. The Army has never said, to my knowledge, that it was a perfect and a perfected weapon.

The problem is that by this amendment we are setting up another agency to do precisely what is being done by the Joint Chiefs of Staff, strategic planning, and by the Senate Armed Services Committee and by the House Armed Services Committee.

I wish to recognize that the House of Representatives has made an exhaustive study of this question. The Senate committee has made a cursory study of the matter. But all of the material is available now from the Army. So I think we are getting into another situation where we are going to have too many cooks in the kitchen, and we are not going to get out of that kitchen what we would like to get, which is cost effectiveness, if that word still has any meaning, contract effectiveness, and so forth.

I think if the Senator would confine his charges to the GAO to those fields, he would be on very legitimate, safe grounds. But if I were the GAO myself, I would have to try to duck anything like

this, because I would not be equipped to do it.

Mr. EAGLETON. Well, as I have stated previously, the Senator from Wisconsin (Mr. PROXMIRE), who is an expert on the GAO function, doubts whether the GAO would be overly anxious to assume at least subparagraph (2), and perhaps it will have to be redrafted, I am ready to admit that.

The Senator from Arizona points out that maybe this would be a situation of too many cooks in the kitchen, therefore just making a muddle of the thing, and making a still greater muddle out of that which has been muddled pretty far already.

My answer to that, however inadequate, is that I do not know how anybody could make a greater muddle out of this MBT-70 program than has already been made. It has been badly confused thus far, and I think one further look at it will not muddle it up or confuse it any further.

I yield to the Senator from West Virginia.

Mr. RANDOLPH. During the colloquy this afternoon, the Senator from Missouri has referred to a dream—the dream of this tank. Would it be improper to imply that perhaps that dream might have become a nightmare?

Mr. EAGLETON. That is a very apt observation. I may say to the Senator from West Virginia that in some instances, dreams turn out advantageously, and bear fruit; but others turn 180 degrees into a nightmare, and this is of the latter type.

Mr. RANDOLPH. And a dream can destroy as well as build?

Mr. EAGLETON. Yes. And a dream can not only destroy, a dream can divert our attention and our interest from other more profitable pursuits, even in tanks. That is, the development of the M60A1 accelerated the development of the anti-tank weapons, the Hawk, the Dragon, and the Tow, which have been downgraded in priority, and the like.

Mr. RANDOLPH. I thank the Senator from Missouri. While listening this afternoon, I have made an assessment of the efficacy of the amendment proposed by my colleague. I have followed the questions and answers and I am inclined to support the amendment of the Senator who has now very kindly yielded to me.

Mr. EAGLETON. I am very grateful for the flattering comments of the Senator from West Virginia.

Mr. MANSFIELD. Mr. President, will the Senator yield the floor to me for about 10 minutes, with the advice that within that time, or at the end of it, he will get it back?

Mr. EAGLETON. With that proviso, I am happy to yield to the majority leader.

Mr. MANSFIELD. Mr. President, I yield 5 minutes to the Senator from West Virginia.

THE FUNDING OF MASS TRANSPORTATION

Mr. RANDOLPH. Mr. President, the President of the United States has forwarded to Congress an important message on public transportation. The mes-

sage quite appropriately focuses attention on the real problems facing the people and affecting the economy of our Nation. We must carefully consider the needs of our people for mobility and provide the transportation facilities which they require.

I have long realized, and have so stated, that highways, alone cannot provide the transportation needs of the American people. This is true for the metropolitan centers, with their great populations, and to a lesser degree for the smaller cities and communities of the United States as well.

It was, I think, necessary that the President forward such a message because it does lay down, as it were, a platform on which this Congress can constructively legislate. I do not think, however, that the recommendation of the President will provide the tools to meet the transportation needs of the next generation.

Mr. President, in my 25 years in the House of Representatives and in the Senate, I have come to believe that we cannot expect that the Congress will appropriate out of general funds sufficient amounts of money with which to continue to strengthen the highway system of the United States, or the airport and airway systems. Funds for airways facilities have not been forthcoming and we are in an air safety crisis.

I am delighted that Senator WARREN MAGNUSON, the very knowledgeable chairman of the Senate Committee on Commerce is present on the floor at this time. I commend him and the members of his committee who have joined together in exploring in detail the possibility of a trust fund for airports and airways, such as we have had for highway transportation in this country. The highway trust fund has enabled us to develop our system of highways to serve the needs of interstate commerce and defense. As our road system has progressed we realize that, in part, we are meeting the transportation needs of the Nation.

The message of the President of the United States directs our attention to a third major form of transport in this country, mass transit. This third element must definitely be given attention.

While I am delighted the President has spoken out on the need for action, I do not believe that general funds financing will provide sufficient moneys to do the job. The uncertainties attached to such funding prevents them from being a proper source of money for either highway development, airport-airways development, or now, as proposed, for mass transit development. Experience has shown that there will never be funds appropriated in sufficient sums from general revenues to do the job which must be done, not so much for this generation as for the next generation.

Mr. President, of course, the members of the Banking and Currency Committee and the members of other committees are more familiar, than I, as to the level of the authorization which should be provided, it is my impression, however, that the amount suggested by the President of the United States and

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McNamara explained the waste and inefficiency which took place under his regime as the fault of the U.S. Congress.

Mr. McNamara could not find the time to testify before the Proxmire Subcommittee because of his busy schedule in his present post as President of the World Bank. However, he was not too busy to grant an interview to a newspaper reporter from Boston. As a result of the interview, former Secretary McNamara is quoted as having said that he spent much of his time as Secretary of Defense in—and I use his exact words—“fighting a Congress that wanted to spend too much on useless military projects.”

Mr. McNamara, at another point in the interview, was quoted as saying “any number of times I was ordered to begin work on a project which was totally wasteful.”

Mr. President, when these remarks appeared in the newspapers, I wrote to Subcommittee Chairman Proxmire calling the quotes to his attention and suggesting that it had become even more imperative that Mr. McNamara be asked to testify in the defense spending investigation and to explain precisely what he was forced to do by the members of this body and our colleagues in the House.

Of course, things may have been different during the four years I was away; however, I do not recall any instances of the Congress twisting Secretary McNamara's arm and forcing him to spend money on useless projects. As it turned out, I am sure we all can agree that the TFX probably heads any and all lists that might be compiled on useless projects in the Department of Defense. But the arm twisting in this instance was all done by Mr. McNamara. It will be recalled that the TFX had its very beginning in the highly vaunted concept of “commonality” which was one of Mr. McNamara's prize innovations. From that point on, all the major decisions having to do with the TFX were apparently the work of Secretary McNamara and his immediate assistants in the Defense Department.

These points have not been contradicted or denied by the present critics of defense spending, such as Senator Proxmire. For example, in his July 29 remarks Senator Proxmire made reference to trouble encountered by the Joint Economic Committee in attempting to obtain an analysis of the defense budget and added “and frankly, this does apply to the previous administration.”

This, Mr. President, is one of the few places where I have been able to find acknowledgment of the fact that the things which are being complained about in connection with the military procurement authorization did not occur in the present administration under the leadership of Secretary Laird.

As I say, the critics of military spending have not denied the responsibility which is owned by former Secretary McNamara. But by the same token, it is not a matter that they very often make clear. Consequently, it has been my intention here today to clear up some of

the confusion and set the record straight.

Thousands of words have been printed in the RECORD and many thousands more have been printed in newspapers and magazines throughout the country since the beginning of the year—and all of them related directly to the high cost of waste and inefficiency and favoritism and cost-overruns in the Department of Defense. I merely want the record to show that these words are a sad and dangerous monument to previous national administrations and especially to the liberal hero, Robert S. McNamara.

Mr. PROXMIRE. Mr. President, will the Senator yield?

Mr. GOLDWATER. I yield.

Mr. PROXMIRE. Mr. President, unfortunately, I was not in the Chamber when the Senator was making his address. I have just returned. I understood the Senator from Arizona to say we had not invited former Secretary McNamara to appear before our committee. Is that correct?

Mr. GOLDWATER. No; I did not say the Senator did not invite him. I called attention to the fact that he could not appear. I gave the Senator full credit for the good job he is doing. I said I hope he would equally and as thoroughly go into HEW and some domestic problems, which I know he intends to do.

I know that on reading the RECORD the Senator will find that this Republican Senator has been very kind

ARM

AUTHORIZATION OF APPROPRIATIONS FOR FISCAL YEAR 1970 FOR MILITARY PROCUREMENT, RESEARCH AND DEVELOPMENT, AND FOR THE CONSTRUCTION OF MISSILE TEST FACILITIES AT KWAJALEIN MISSILE RANGE AND RESERVE COMPONENT STRENGTH

The Senate resumed the consideration of the bill (S. 2546) to authorize appropriations during the fiscal year 1970 for procurement of aircraft, missiles, naval vessels, and tracked combat vehicles and to authorize the construction of test facilities at Kwajalein Missile Range, and to prescribe the authorized personnel strength of the Selected Reserve of each Reserve component of the Armed Forces, and for other purposes.

Mr. MANSFIELD. Mr. President, if I may have the attention of the distinguished Senator from Missouri (Mr. EAGLETON), the distinguished Senator from Oregon (Mr. HATFIELD), and the distinguished chairman of the committee, the Senator from Mississippi (Mr. STENNIS), who is the manager of the bill, I would like most respectfully to suggest to my colleagues, the Senators from Missouri and Oregon, to consider the possibility of withdrawing the amendment now pending, with the proviso that if the action contemplated does not take place before the third reading of the bill they would be in a position to again reoffer the pending amendment.

Mr. STENNIS. Mr. President, will the Senator yield to me?

Mr. MANSFIELD. I yield. The Senator may have the floor.

Mr. STENNIS. Mr. President, and Members of the Senate, the sponsors of the amendment have urged greatly their need for an additional study covering certain points I will hereafter outline. We have had an around-the-table gentleman's understanding that the committee will ask the General Accounting Office for a study on these two points that I shall enumerate. If that study is made available before this bill leaves the floor of the Senate on final passage, then the committee will pass on the contents of the study. It is to be a study and not just a recommendation. It is to be a study on the points that I shall enumerate.

If the Committee on Armed Services still recommends that the funds be included in the bill as they are now, then this amendment will be withdrawn altogether and the funds will remain in the bill.

I am speaking to the sponsors of the amendment, the junior Senator from Missouri (Mr. EAGLETON) and the senior Senator from Oregon (Mr. HATFIELD). Do the Senators have others with them on this matter? I wish to ask the Senator from Missouri whether these two Senators, the Senator from Missouri and the Senator from Oregon, feel they represent others that have a special interest in this matter.

Mr. EAGLETON. The Senator is correct. There are five other cosponsors of the amendment, but I am permitted to represent them along with the Senator from Oregon (Mr. HATFIELD).

Mr. STENNIS. I wish to ask the Senator from Oregon (Mr. HATFIELD), if he feels that way, that he can speak for them under this arrangement, which is temporary.

Mr. HATFIELD. I think I can speak for the others.

Mr. STENNIS. I thank the Senator.

Mr. President, continuing with the next point, if this study for any reason is not available when the bill reaches final passage or near thereto, then the sponsors will be free, under this agreement, to recall their amendment or reassert the amendment and push for its adoption. That is all, except those two main points in the letter to the General Accounting Office.

Mr. President, and Members of the Senate, this report would be available for Members of the Senate and not just the Committee on Armed Services, but our committee would pass on it.

The first point this study would cover is why research and development cost estimates have had to be revised steadily upward since 1965; and, second, what other feasible alternatives to the development of the MBT-70 there are, if any, and the cost feasibility of each.

I judge that the last item is a kind of guideline the Senators mentioned want the opinion on.

This is a legislative matter now and continues to be a legislative matter and the Committee on Armed Services could, of course, confer with the Secretary of Defense or anyone else that it saw fit in considering this matter.

I hope I have stated the matter correctly.

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financed beneficial ownership of 10 percent of the voting securities to mean ownership of such amount of the carrier's outstanding voting securities as entitles the holder to cast 10 percent of the total number of votes which the holders of all outstanding voting securities are entitled to cast.

The House amendment created a presumption of control on the part of any person owning beneficially 10 percent or more of any class of the capital stock or capital of an air carrier.

The substitute agreed to in conference follows the Senate version. The managers on the part of the House agreed to the Senate language which had been worked out in conjunction with the Securities and Exchange Commission and the Civil Aeronautics Board.

EFFECTIVE DATE

The Senate bill had a retroactive effective date of March 7, 1969, but provided that no criminal penalties shall be applicable to anyone who acquired control of an air carrier between that date and the date of enactment of the Senate bill.

The House amendment provided that it take effect on the date of its enactment.

The substitute agreed to in conference provides that the amendments to existing law will take effect as of August 5, 1969, the date of the conference agreement. The language relating to retroactive criminal penalties was omitted as unnecessary.

HARLEY O. STAGGERS,
SAMUEL N. FRIEDERL,
JOHN D. DINGELL,
J. J. PICKLE,
WILLIAM L. SPRINGER,
SAMUEL L. DEVINE,
GLENN CUNNINGHAM,

Managers on the Part of the House.

The PRESIDING OFFICER. The question is on the adoption of the conference report.

The conference report was agreed to.

THE McNAMARA LEGACY

Mr. GOLDWATER. Mr. President, it is my purpose today to discuss in a general way many of the subjects that have been raised about this Nation's Defense Establishment and military preparedness during the prolonged debate on this Military Procurement Authorization.

Now that the issue of the ABM is temporarily out of the way, I believe it is time to place into a little better perspective many of the complaints about improvident military expenditures as well as the overall charges of gross waste and inefficiency in the Defense Department.

I believe it is well known in this body that I am a retired major general in the U.S. Air Force Reserve, that I am now and have been in previous sessions a member of the Senate Armed Services Committee, and that I have a great pride in and an admiration for the men and the record of our military services.

It is not my intention to here claim that because of this pride and admiration I am ready to blanket the entire Defense Establishment of this Government with a covering of total competence and efficiency. Because of my interest over a long period of years, I believe I am perhaps better able than many Members of Congress to understand the tremendous complexities as well as the frailties and deficiencies of our military system and especially that part of it which is charged with the procurement of new weapons systems and items of military hardware.

Waste and inefficiency? Yes. Without a doubt there is an enormous amount of waste and inefficiency, not only in the Department of Defense with its multi-billion-dollar budget, but throughout the entire Federal Government with its hundreds of departments, bureaus, commissions, boards, and agencies. Because of the enormous size and the incredibly complex nature of today's sophisticated weaponry, it is only natural that the largest percentage of waste and overlapping should be found in the Pentagon.

In this connection I have repeatedly expressed my appreciation for the thoroughgoing and exhaustive job of investigation performed by my colleague, the Senator from Wisconsin (Mr. PROXMIRE), and his Joint Subcommittee on Government Economy. I can find it in my heart, however, to fault the Senator from Wisconsin on a couple of grounds, the most important of which has to do with the fact that this very needful task was not undertaken years earlier.

I could possibly object also to the selectivity of the subcommittee's operations in that they seem to be concentrated solely on one department of our sprawling National Government. However, I shall forgo this objection in the earnest hope that Senator PROXMIRE and his subcommittee will next turn their attention to the waste and inefficiency which runs rampant through some of the nondefense departments of our Government. I would hope that he would look with particular emphasis into the multi-billion-dollar expenditures of the Department of Health, Education, and Welfare.

As I stated earlier, my main complaint, as an interested Member of the Senate who has been away for 4 years, is that this inquiry into abuses in the Defense Department was so late in coming. I say that because long before I left this body to become the Republican nominee for President, the fact was well established that some things were radically and expensively wrong in the Department of Defense and especially in the Department's procurement procedures—procedures, for example, which enabled a former Secretary of Defense to overrule his Department's evaluation boards and military experts to award a multi-billion-dollar contract for the TFX fighter-bomber plane to the highest bidder. As I have pointed out previously, that fiasco alone should have brought about a thorough-going examination of the Defense Department's handling of billions of dollars of the taxpayers' hard-earned money.

Had a proper investigation, such as Senator PROXMIRE has recently been engaged in, been undertaken at the time of the TFX controversy, I believe we could have saved the taxpayers many billions of dollars before such items as the ABM were even proposed.

I note that in Senator PROXMIRE's remarks on the Senate floor on July 29 that he does acknowledge the point I have just raised. He said:

The unhappy fact is, however, that while inefficiency and military policies are being questioned today, they have been allowed to develop in the past without serious challenge from those outside the military establishment.

A number of factors have enabled the military planners and the military spenders to claim their inordinate share of the public purse.

Thus, while the good Senator from Wisconsin acknowledges in one paragraph that the policies of waste and inefficiency which he is today exposing were allowed to develop in the past, in the next paragraph he leaves the impression—and I believe unintentionally—that these policies were the work of military men rather than civilians. But they were not. The fact is that the military planners and the military spenders, for 8 long, expensive years were former Secretary McNamara and his cadre of computer "whiz kids."

Mr. President, I do not wish to unnecessarily dwell on the tremendous multi-billion-dollar debt of waste and inefficiency in defense procurement which we owe to former Secretary McNamara. But so long as some critics are indulging in an orgy of protest against any and all things related to the defense of this Nation and the defense of the free world, I, for one, would like to have it known and made crystal clear in the Record that the major architect of the things about which the liberals in this country are now ranting was one of their very own.

What I am stating here is that the man who cause all this money to be spent was a political liberal by his own definition and by his own announcements. What is more, I think it is important to recall that the badge of membership in the elite corps of the New Frontier's liberal disarmament advocates was pinned on former Secretary McNamara by none other than Harvard's own Arthur M. Schlesinger, Jr.

Let me explain what I mean. As will be recalled, Mr. Schlesinger was a brain-truster and speech writer for the late President John F. Kennedy who wrote in great detail about his experiences at the White House and in the Kennedy administration in a book entitled "A Thousand Days," which was published in 1965. In his book, Mr. Schlesinger gives this first-hand observation of the former Secretary of Defense:

Next to the President, McNamara . . . probably did more than anyone else to sustain the disarmament drive. With his sense of the horror of nuclear conflict, his understanding of the adequacy of existing stockpiles, his fear of nuclear proliferation, his analytic command of the weapons problem and his managerial instinct to do something about an irrational situation, he forever sought new ways of controlling the arms race.

Mr. President, I find it nothing short of fascinating that we have here a situation whereby an assault on the Defense Establishment is being fueled by the excesses of a former Secretary of Defense who is described by his own friend as a man dedicated to disarmament as a policy. I find it interesting, too, that Mr. McNamara now—after all the damage has been done, after the hundreds of millions of dollars for the TFX—F-111—have gone down the drain, after one weapon system after another has been abolished, after we have been left with an inadequate nuclear powered Navy and an Air Force which has no carry-on manned bomber—that after all this, Mr.

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Mr. MANSFIELD. Mr. President, will the Senator yield?

Mr. STENNIS. I yield.

Mr. MANSFIELD. Mr. President, I wish to say that I thoroughly approve what the distinguished Senator has advocated and stated. I think it fits in with the spirit of the amendment which is now pending, and I would hope that this matter could be adjudicated and settled on this basis.

Mr. STENNIS. I have just one word more. I have conferred with as many members of the Committee on Armed Services as I could, under the circumstances. I think we are all in substantial agreement on this proposal. Other proposals were respectfully declined.

Mr. DIRKSEN. Mr. President, will the Senator yield?

Mr. STENNIS. I yield.

Mr. DIRKSEN. As I understand, this arrangement is pursuant to the colloquy we had in the Marble Room earlier this afternoon, and the Senator has outlined it pretty much in the same fashion.

Mr. STENNIS. Yes. It does not go as far as our discussion went, but the basis is the same, and no harmful precedent has been set, as I see it.

Mr. DIRKSEN. I am content to concur if the amendment is withdrawn.

Mr. STENNIS. I think Senators should have a chance to express themselves. I yield now to the Senator from Oregon.

Mr. HATFIELD. Mr. President, I should like to reiterate, as one of the sponsors of the amendment, what the distinguished Senator from Montana and the distinguished Senator from Mississippi have outlined as the agreement.

It ought to be pointed out that in the amendment as we presented it, we were asking for the elimination of of approximately \$54 million from both the item of research and development and the item of prototype production. In withdrawing the amendment at this time, we then agreed to the specific proposal for a letter requesting a study which is embodied, basically, in subsection (1) on page 2, an additional subsection, which has been agreed to, and alternatives to the tank and other weapons, and that upon the receipt of that particular report, provided it is received before the final passage, the committee will make an evaluation of the report, and that Senators who are not members of the committee will also have access to the same report. If the report is not received before the final passage of the bill, we will then have the privilege of reasserting our amendment without prejudice.

I believe, further, so far as our discussion is concerned, that if the report is not decisive—let us say it is a report that can be interpreted pro- or anti-tank—Senators of like mind with the Senator from Missouri (Mr. EAGLETON) and myself will not be foreclosed from proposing an amendment to the appropriation bill which will come later; but that that bridge will not be crossed until we come to it.

Of course, I am only indicating this as a part of the background of our discussion. It is our hope that the report will be decisive, so that we can all agree to it; and if it is negative, we hope that

we will then be able to reach some agreement as to what our next action should be; but it would not prejudice any of the sponsors of the amendment from taking future action on the appropriation bill. But it will not prejudice any of the sponsors of the amendment from taking future action as it relates to the appropriation bill; is that not correct?

Mr. STENNIS. Yes. The Senator is correct in all his statements, as I understand him. We will not undertake to bind—and should not—the Appropriations Committee. It is clear, though, that whatever the study reveals, or whatever the report is, so far as the bill now pending is concerned, the decision of the Armed Services Committee on it will be final, so far as the sponsors of the amendment are concerned. Is that correct?

Mr. HATFIELD. That is correct. Actually, that is all the amendment proposes to do, to ask for and receive a report. It did not attempt to precommit any Senators as to what that action would be following the report, I would accept the agreement as outlined, and I thank the Senator from Mississippi and the Senator from Montana for their assistance in this agreement.

Mrs. SMITH. Mr. President—

Mr. STENNIS. Let me say this. I have mentioned the two sponsors. I conferred with the Senator from Maine and I yield to her.

Mrs. SMITH. Mr. President, I did not hear all that the chairman of the Armed Services Committee said with respect to the agreement that was made. While I sat in on the discussions, does the plan agreed upon set the pattern for all other amendments or any other amendments to the bill?

Mr. STENNIS. Not at all, I say to the Senator from Maine. This I read from was the conference that we had in the Marble Room, with the Senator from Maine, the Senator from California, and the Senator from Wisconsin. This is the exact language that I used, otherwise I would have come to the Senator from Maine again. This does not set a precedent of any kind in that field. It is not agreeing to anything in the bill itself. This is a mere procedural matter.

Mrs. SMITH. Would other sponsors of amendments expect to call for the same review by the GAO on other amendments?

Mr. STENNIS. They might make that request, but I do not think we could agree. This is a peculiar case, in that this has gone on for several years and we are right down to the last mile, one might say, on research and development. I do not consider this to be a precedent. I believe it fully carries out the suggestion as made by the Senator from Maine. That is certainly my intention.

Mrs. SMITH. I thank the Senator from Mississippi very much.

Mr. THURMOND. Mr. President, will the Senator from Mississippi yield?

Mr. STENNIS. I yield.

Mr. THURMOND. Mr. President, as I understand the arrangement, it does not provide for any suspension of the program.

Mr. STENNIS. That is correct.

Mr. THURMOND. There are 2,000 personnel working on this project. There are more than 1,000 civilian Government employees working on the project.

Mr. STENNIS. Yes.

Mr. THURMOND. The Army is deeply concerned about it. The Army says that a year's deferral in funding could delay first production for as much as 3 to 4 years.

Mr. STENNIS. Yes.

Mr. THURMOND. I just want the Record to be clear and show that there is no delay, no deferral, and no suspension of this project.

Mr. STENNIS. That is right.

Mr. THURMOND. This is merely consideration being shown the sponsors of the amendment, to give the GAO an opportunity to make its study and then the Armed Services Committee, from that study, will determine whether funds should be appropriated.

Mr. STENNIS. That is right.

Mr. THURMOND. And that action by the Armed Services Committee will be final.

Mr. STENNIS. Yes. The Senator is entirely correct. I am certainly glad that the Senator brought up that point to be covered now. We have gone into that and it will not disturb the assembly line or the production line or the work going on now. This agreement will not interrupt it in any way. Things will proceed as usual. There is an agreement, too, in connection with the tank, with the Republic of Germany. What is happening here now will not disturb that in any way.

Mr. THURMOND. Mr. President, the recent Warsaw Pact occupation of Czechoslovakia displayed to the world that Communist military ground forces can serve as effective instruments in the attainment of Soviet political goals. Few of us here in the Congress, and certainly no one in Europe, will forget for many years to come the photographs of Russian tanks rolling into that country and hereby suppressing a Communist regime which was becoming too liberal for its masters in Moscow.

With this suppression of the Czech people still fresh in mind it is surprising to me that the distinguished junior Senator from Missouri (Mr. EAGLETON) has introduced an amendment which would halt the joint development program of Germany and the United States to build a main battle tank.

The Czech crisis showed indisputedly that the Russians have not abandoned their traditional reliance on large quantities of main battle tanks. In fact, our intelligence indicates the Soviets have already begun issuing to their armored units the T-62, a newer and much better tank than in use by their armies in the early 1960's. This move is contrasted by the fact that the United States has not developed a really new tank since the Korean war when we first issued the Mark 48 tank. Since that time we have relied upon production improvements of the M-48, the latest improvement known as the M-60A1. The tank under discussion today is not merely an increment improvement of the old M-48, but rather a totally new tank which is revolutionary

in nature and should serve our fighting men well in the next few decades.

The MBT-70 amendment offered by the Senator from Missouri, according to his press statement of July 18, 1969, is a follow through to a study on the Main Battle Tank done by himself and included in the recently released report by the Committee on Military Spending of the Members of Congress for Peace through Law. This, of course, is not a committee of the Congress, but a group formed by members of both House and Senate to promote their ideas on defense matters. The chairman of this committee is the distinguished Senator from Oregon (Mr. HATFIELD) who serves as a co-sponsor of the amendment by Senator EAGLETON.

Now, there are other parts of these reports which I wish to challenge. First of all, it should be clear the initial development cost agreed upon by the United States and German Governments was \$80 million. Further, it should be stated right here that a reading of the agreement indicates clearly neither Government expected this \$80 million to be sufficient to develop this tank but considered it merely the amount necessary to begin a reasonable development. Both Governments recognized the amount would be more and the agreement provided for these additional costs. It would be next to impossible to accurately estimate the development cost of a revolutionary vehicle such as these two countries hoped to build. Hardly any part of this tank compares with vehicles built in the past. Innovations have been undertaken which involve entire new concepts in tank warfare. Thankfully, the work is about done and we apparently have a weapon system which will serve our soldiers well for many, many years.

Therefore, it seems rather unfair to figure cost overruns based on this \$80 million figure when both countries established it is not as a target development cost but rather as a beginning point in the development costs of this important weapons system program.

Now, there is also this contention in these two reports issued by my distinguished colleagues that the MBT-70 has a nuclear capability as a part of its firepower. This is simply not so. The MBT-70 was not intended to have, does not have, and will not have nuclear firepower capability.

Perhaps my colleagues meant to say the MBT-70 is designed to operate on a nuclear battlefield. Now that is accurate, but later in the same paragraph of the Peace Committee report it is stated the MBT-70 does not provide any more protection on a nuclear battlefield than the M-60A1. This is an error. The M-60A1 tank design did not include particular features to overcome the hazards of a nuclear battlefield. On the other hand, the MBT-70 does possess specific features to reduce the hazards expected to occur in a nuclear war. The MBT-70 thus has a valuable increment of advantage on such a battlefield as compared to the M-60A1.

Let me proceed further to clarify another claim made by these reports, that

this tank was to roll off production lines in December 1969, but has been extended 4 years beyond that target date.

This misstates the actual facts of the agreement between the United States and Germany. The agreement called for a tank, and I quote: "ready for production in 1970." This does not mean tanks rolling out complete from a factory. What this does mean, is that all required development and a technical data package has been completed and ready for publication to industry. The industry must bid on it, a contract be negotiated, and finally a plant tooled up for production of the initial tank by about mid-1972 or later. Thus the target production date has not been extended for over 4 years. The present extension actually covers about 2 years.

Mr. President, sometimes it is puzzling to me just what technique the military should follow in trying to meet the objections of some Members of the Congress in providing weapons development at the lowest cost. Just recently the Defense Establishment was being sharply criticized because they had built weapons we needed and then had to abandon them in brief periods since they had served their usefulness and had been replaced by more advanced technology. Here we have a situation where a revolutionary new tank is being developed, one with a new turret, new suspension system, new gun, and it appears the criticism is based on a stretched out development program. As badly as we need a new tank today, is it not wise to spend a little extra money and take a little extra time in order to develop the best possible machine, one which will do the job in the next two decades as the M-48 has done in the past two decades?

Frankly, this development program has been going slow. We need this tank in 1970 not 1974 or 1975, but we will never get it if this amendment is approved and another delay takes place. We should not lose sight of the fact this tank, while designed to fight in various environments is mainly NATO oriented. Thus, it is to support our men in Europe who are eyeball to eyeball with the enemy. We must give our men there the best tank we are capable of building, and whenever we leave Europe it will be comforting to me to know the Germans have that same tank facing that same enemy.

Returning to the reports of my colleagues, through the Peace Committee and individually, it is stated the Army test and evaluations systems authorities admit a problem with the 152-millimeter ammunition. Such a problem did exist, but the same report in which this comment is made claims the ammunition and its gun operate suitably. Further, we have now passed through a period of testing of this ammunition and gun in Vietnam and hundreds of rounds have been fired with excellent results. In fact, the soldiers there have requested greater numbers of these weapons be sent there for their use.

Mr. President, the MBT-70 will not be merely an incremental improvement over a design first produced almost 20 years ago. In almost every feature, this tank will have revolutionary major increase in its capability. This will be true

in its engine, its suspension system, its protection system, its battlefield silhouette, its secondary armor, and its main armament. The main armament alone is unique in the world. It will be a combination guided missile launcher, and a conventional gun capable of firing a new and improved variety of projectiles. The present stage of development has already shown these revolutionary features to have an excellent prospect of meeting their intended design characteristics. The total design of the tank has a most favorable prognosis of being a successful revolutionary design when it appears and much more than, as the Hatfield report would say, temporarily superior to Soviet tanks. It should be superior for a good long time.

The Hatfield-Eagleton description would have us believe that the technological rationale for which this tank is designed may be obsolete by the nuclear battlefields if they occur in the mid-1970's, saying it will be a victim of technology or a new strategy. They say this is the central issue. This reasoning is incomplete.

If this is a central issue, then the question is raised whether we should have any tank at all. If the most modern tank we can make, including revolutionary features, is thought to be obsolete and not useful, then certainly the present tank, product improvements of a 1950 design, will be even more obsolete and less useful. Those who kill off the MBT-70 because of this issue should also be proposing that we kill off all tanks for use on any possible nuclear battlefield.

If the Hatfield-Eagleton statements are intended to question whether there can ever be a nuclear tactical war, then they clearly cannot be at the same time arguing that a great improvement over our present tanks would not be useful to our forces, in Europe or anywhere else. As I previously pointed out, if a non-nuclear war should suddenly become nuclear than the MBT-70 with specific features designed for nuclear war will obviously be of greater usefulness to our troops in such combat.

The Hatfield-Eagleton statements raise the question of whether the strategic projections made in 1963 will be valid in 1974. If they intend to convey the idea that they have conjured up a better projection of the 1963 strategic considerations than those which prevail now, they should make them known. It is already apparent that the tactical projections on which the design of the tank is actually based were quite valid.

The Army stated then that they would need a much better tank if they were to contend with the probable tank which they might find on the battlefield of the future. The Soviets have proved them correct. They have begun issuing to their units the T-62, a much newer and better tank than their units had in 1963.

In other words, the best answer to the question which is asked by Senators Hatfield and Eagleton is provided by the Russians. They are now reequipping their armored and mechanized units—of which they have far more than we do—with a tank of much later design than our present M-60A1. The Soviets clearly expect to

have a use for tanks on any future battlefield, nuclear or not.

The Hatfield-Eagleton discussion makes much of the length of time involved in developing the tank and getting it ready for production, and of what they described as the spiraling cost of development.

These statements ignore the available information pertaining to the sequence in development of this tank. In 1963, when the German-American agreement was signed, there was not then in existence any agreed concept as to what the tank would be, or what its specific features would be like. The hard, difficult discussions between the two countries' tank commanders over these details was not resolved until September 1965. These details of actual construction became the basis for the increase from the original \$80 million estimate of initial joint development cost, to the later estimate of \$138 million development cost. These estimates were in-house projections. Later actual bids by potential contractors for the various components intended to be in the tank indicated that this in-house estimate was too low and the development time previously forecast was too short.

The first prototypes, including in some cases alternative design features, commenced delivery with the first one in July 1967. Since then the development has proceeded in an orderly fashion, resolving the operational features of each of several revolutionary designs of mechanisms never before put together. This orderly, sequential, and severe testing of each of the components follows the general scheme of development which the General Accounting Office has recommended in such cases.

The statements of my colleagues are said to be based upon a study of the MBT-70 tank. The Armed Services Committee has recommended that the development of the MBT-70 be continued. This recommendation is based upon considerable study on the part of its staff which began shortly after the first prototype was issued for testing in July 1967. Its study has included numerous conferences with development officials of the Army, visits by members of the staff to observe the tank components in operation, including visits to Aberdeen Proving Ground, to test and production facilities of the contractors, to the Army Armored Center at Fort Knox, discussions with the Armored Board and Armored Agency of the Combat Development Command and the responsible experienced armor officers in the Armored School at Fort Knox. The considerations give here have been neither hasty nor perfunctory. The committee did believe that the orderly development procedure being followed would not be harmed if the requested funds for fiscal year 1970 were reduced from \$44.9 million to \$30 million in its overall consideration of reducing current expenditures. It likewise believes that there is every possibility that if there are no impediments thrown in the works, that the United States will succeed with putting in the field, for use by its fighting men, a tank that is far superior to any tank ever seen before. It further believes that nothing

can be gained by throwing away the money already spent in this orderly development procedure, and condemning our troops to the continued use of a tank much older in design than that possessed by the Soviets. Further, the arbitrary interruption of a joint development in which our partners, the Germans, are faithfully fulfilling their part of the bargain, is to place the United States in the position of a defaulter on a contract.

To stop this development and begin another is hardly likely to be any less costly than the one on which we have already spend considerable money in getting close to the intended outcome. The most sensible thing, the most honorable thing to do in our agreement with the Germans, and the most economical thing to do, is to continue the main tank program as the Armed Services Committee has recommended.

Mr. ALLOTT. Mr. President, will the Senator from Mississippi yield?

Mr. STENNIS. I yield.

Mr. ALLOTT. I wish to ask about the second point the Senator read from on his list, which is closely allied with some of the points in the amendment, particularly the second, third, and fourth. As I understand the agreement, the decision of the Armed Services Committee will be binding as to what is done in this matter. But I should like to say, as a member of the Defense Subcommittee on Appropriations, that I believe, in these areas, in asking the GAO to make determinations, that we are going outside their function. Frankly, I think those are decisions which should be made by committees of the Senate and by the Senate itself rather than by the GAO. They may or may not have the expertise to make such judgments. I doubt that they do, not have ready availability and constant availability to intelligence reports, strategic services, and things of that nature. But I did not want this to go by, being in the Chamber, as in any way placing my stamp of approval with respect to that second point because I think it is a matter of determination in which the GAO should not be involved.

Mr. STENNIS. If I may respond to that quite briefly, I think the Senator is entirely correct. I do not think they have the capability, but we will soon find out.

Mr. YOUNG of North Dakota. Mr. President, will the Senator yield?

Mr. STENNIS. I yield to the Senator from North Dakota, a member of our committee.

Mr. YOUNG of North Dakota. Mr. President, I want to associate myself with the views expressed by the Senator from Colorado. The General Accounting Office is a very efficient Office when it comes to accounting, but in the past I have found that whenever it delves into policy, it can be terribly wrong. Certainly I would not want to accept their views on military matters and policy decisions.

Mr. MANSFIELD. Mr. President, if the Senator will yield, that is not anticipated.

Mr. STENNIS. Mr. President, Members of the Senate, there has been a very good debate on this matter. It all came from the opposition to the tank. I hope we can conclude this colloquy soon and

that someone on the committee who is versed in this matter—I am not referring to myself—will have an opportunity to say a few words. Meanwhile, it would be better to have quiet.

Mr. CRANSTON. Mr. President, will the Senator yield?

Mr. STENNIS. I yield to the Senator from California.

Mr. CRANSTON. I just wanted very briefly to comment on the point the Senator from Arizona (Mr. GOLDWATER) raised earlier and that the Senator from Colorado (Mr. ALLOTT) and other Senators have raised. I referred to it earlier today. It referred to some questions I had about the pending amendment.

I think the proposal now made clears the point, but I would like briefly to express my concern about expecting the General Accounting Office to render value judgments about whether a program is good or bad. I think to get them to express such judgments is offensive to experts in that field, the specific field involved—military for example. In the same way, I would question their right to judge the wisdom or lack of wisdom of the war on poverty and other such programs.

It should confine itself to the question of cost effectiveness and leave decisions on the wisdom and value of any program to the House, the Senate, and the administration.

I was comptroller of the State of California for 8 years. Hence, I have some feelings on what is the proper field to assign to the Comptroller.

During this debate, I asked my staff to call the General Accounting Office and get their feelings on the four points, in the pending amendment, providing actions by GAO. Very briefly, the feeling on the four points referring to the GAO is as follows:

As to point 1, which is now covered by the agreement, subsection 1 is within the scope of the GAO investigatory responsibility.

As to point 2 under that subsection, conversations with GAO indicate that the Comptroller General could not make any determination as to the most effective weapons. The most they could do is present the pros and cons as developed by the Department of Defense, and GAO has no capability to conduct technical studies of technical capability.

As to subsection 3, the GAO would be limited to presenting the information developed by the Department of Defense or other agency engaged in technological or strategic study. It could perform no function before setting forth the considerations which originally influence the decision with respect to the MBT-70.

Finally, under section 4, the GAO inquiry would be limited to an analysis of the decisions by which the Department of Defense decided to develop the MBT-70.

I think the compromise proposal now offered is a wise one. I think it has narrowed the scope of whatever the GAO would report.

Mr. MANSFIELD. Mr. President, I would like to emphasize that sections 2 and 3 have been obliterated and section 4 has been changed, so I think what will be done by the GAO is what it is capable

of doing, and it is not capable of going into the military field or policy.

Mr. CRANSTON. Exactly.

Mr. STENNIS. Mr. President, I think it would be a fair test of the GAO's position. I think it will give them a chance to express themselves, too, about their capability.

Mr. EAGLETON. Mr. President, will the Senator yield?

Mr. STENNIS. Yes; I am glad to yield to the Senator from Missouri.

Mr. EAGLETON. Mr. President, first, I thank the Senator from Mississippi. He has been remarkably patient and indulgent throughout what to me has been a very long and tiring debate, and he has many days such as this to endure. I want to compliment him and thank him for his patience with me and with the Senator from Oregon on the subject.

Second, let me affirm in brevity the thought which the Senator from Oregon has suggested. The understanding spelled out by the Senator from Mississippi through the exchange with the Senator from Oregon is precisely my understanding.

Finally, let me say that, however inarticulately our amendment was drawn, as the Senator from Wisconsin (Mr. PROXMIRE) pointed out, especially in subclause 2, the main thrust of what we were trying to achieve was a study and a report from GAO; and I hope we will have such a report. I think the whole Senate and the Armed Services Committee will benefit thereby.

Mrs. SMITH. Mr. President, during our hearings on the proposed defense budget authorization, I seriously considered recommending to the committee that which the proposed amendment seeks to accomplish. I repeatedly expressed my concern on the Army's efforts in tank development and anyone who doubts my concern can turn to page 364 and page 405 elsewhere in part one of the printed hearings.

But, Mr. President, after considerable reflection I, along with my colleagues on the committee, faced up to the stark realities of our NATO commitment. I have always believed and I shall continue to believe that if we are to dispatch our men in uniform anywhere outside the continental limits to carry out our national policies, the very least we can do is provide them the best and most modern weapons possible.

Yes, I, too, have expressed my disappointment in the numerous delays and high costs associated with modernizing our ground combat vehicles but let me point out the effects of amendment No. 76.

First of all, the whole concept of logistical support cooperation between the United States and the Federal Republic of Germany will be placed in serious jeopardy. The main battle tank development represents a binding contract between the two governments in which Germany has invested considerable funds. It is a joint project that they alone cannot complete and one which the U.S. Government initiated. The proposed amendment, if adopted, represents a unilateral withdrawal from an international agreement without prior con-

sultation with one of our most dependable allies. I remind my colleagues that this is one of our few allies that not only believes in but does actually participate on a cost-sharing basis.

Second, the monthly cost for the next 6 months is approximately \$3 million to maintain the main battle tank program as a going program without procurement of significant hardware. Current funds in this program will permit it to continue at most until September 30, 1969. Thus, the effect of the amendment is to close down the program for an undetermined time. Development work will be suspended and termination costs will approximate \$9 million.

Third, should the amendment be adopted the Federal Republic of Germany may see fit to take a unilateral action and cancel another contract with the United States to purchase 88 F-4 aircraft.

Our forces in Korea today and those in Europe are now equipped with tanks which embody the technology of the 1950's and I can assure you that these will be obsolete by the mid-1970's.

Mr. President, if the U.S. Senate decides to adopt the proposed amendment which would have the effect of unilateral withdrawal from a contract, I wonder if we should entertain another amendment to withdraw from the North Atlantic Treaty Organization (NATO).

That treaty will have been in effect for 20 years in August 1969—this month. The treaty provides that after 20 years any member nation which desires to withdraw may do so by giving the other member nations 1 year's notice.

Mr. President, the principal weapon systems contained in this bill are directly associated with our foreign military commitments. I strongly urge that before we deprive our own forces of their weapons, we should first withdraw from our treaty military commitments.

Mr. STENNIS. Mr. President, I highly commend the speech of the Senator from Maine. It is realistic, I think it contains some highly practical suggestions, and this is a matter that has to be met by something other than just talk, Mr. President.

We have had a lot of arguments here on the floor of the Senate as to what our foreign policy should be and what it should not be as expressed in the military bill.

This bill represents the Armed Services Committee's judgment of what is necessary to back up our foreign policy as announced, and also directly protects us. I do not know of any other foreign policy there is. I do not think we have formulated anything else. We talk about these matters, but this is the real thing: to protect ourselves directly first, and then to be in some kind of position to carry out at least our share of these commitments. I hope that we can get on into the meat of this bill now, and consider this matter in that light.

I, too, would like to dwell in make-believe land, or wish-it-was land, but we are up against the realities with this amendment today. This is the first time we have got into the real hardware of the bill, outside the matter of the defen-

sive ABM and I think most of the other amendments, at least the sizable ones, will continue to deal with the necessary hardware to implement our present policy.

Let us not fool ourselves, now, in talking about whether or not we need a tank that will survive a nuclear war. I do not think we can make such a tank. We are talking about a ground war now, by conventional methods, and with reference to the tank, we are talking about the weapon in which Soviet Russia has been superior for a long time. The great preponderance of the evidence is that they still are superior.

So, if we do have this ground war—which God forbid we do not have—we could not plan a better way to be deficient than not to have plenty of good, effective tanks that would at least have a chance to cope with those on the other side.

I do not travel much, but last fall I did spend a little time in Western Europe, went right on over to the border of Czechoslovakia, went out in that mud and muck, and went up and over inside one of these tanks. I talked with those boys. I do not know anything about tanks, but that one did not look very much up to date to me.

I will tell you where that word "dream tank" came from. This is some of the roughest, toughest soldering that one can find anywhere, and the crew is a victim. I shall not emphasize this too much, but the crew, in a large way, is a victim of the position it is in, and the inaction or failure of that tank carries dire consequences for them.

This is planned to be a tank that will do so many things so effectively and efficiently that it gives the crew a much better chance. That is one reason they call it a dream tank.

If we mean business, now, about being over there, and if there is any kind of a threat, let this be the last weapon we neglect, for fighting a ground war, rather than the first. This is a doughboy weapon.

Mr. THURMOND. Mr. President, I wish to commend the distinguished Senator from Maine (Mrs. SMITH) for the excellent remarks she has made concerning the importance of the main battle tank. The Senator from Maine has quite properly stressed that a break in this joint development program with West Germany would be a unilateral action which could only have the most serious repercussions. My able colleague has also pointed out the critical need of our Army for a new tank since we have only had production improvements for the past 20 years. The remarks of the Senator from Maine should be heeded by all of us in this Chamber and I wish to associate myself with them.

Mr. MCINTYRE. Mr. President, the amendment offered by the distinguished Senator from Missouri would have the effect of withholding all R. & D. funds for fiscal year 1970 on the Main Battle Tank and, in addition, would withhold the funds for the procurement of 6 pre-production prototypes which were planned as the test vehicles to bring the tank to the point where full production could

be initiated. Although the amendment calls for an investigation and study by the Comptroller General to be completed in 6 months, the result of the amendment would be a complete cessation of U.S. participation in the joint project.

In my judgment, this would so completely disrupt the contractual development efforts being carried on, both in the United States and Germany, as to force either termination of the Main Battle Tank development completely or a further delay which would probably amount to several years.

Mr. President, this is a result which, in my judgment, should not be taken lightly. The Main Battle Tank is not intended just as a nice thing to have, but as an essential weapon system which must be put in the hands of our troops if they are to successfully cope with the threat which they will face in the 1970's. Our intelligence tells us that at the present time the Russians have tanks in the hands of their troops which are superior in some aspects to the tanks the U.S. Army has. It is estimated that the tanks which the Soviet forces are operating today reflect a technology which is approximately 10 years ahead of U.S. technology. In addition, the best Russian tanks outnumber the best U.S. tanks by more than 3 to 1. With a tank force that is currently inferior, both in quality and numbers, we should not take lightly any action to disrupt the efforts to upgrade our tank force. And, Mr. President, there can be no question that this amendment, if it becomes law, will seriously—perhaps irreparably—disrupt the Main Battle Tank program.

The main battle tank program has been criticized because the initial research and development cost estimates have been revised upward a number of times. Mr. President, I am as concerned as any Member of this body about the rising cost of research and development and about the consistent record of the Defense Department in underestimating the ultimate cost of weapon system development. I recognize the difficulty of making precise estimates when a weapon system is in the conceptual stage. It is clearly too early to make any kind of reliable estimate for an international program before the two countries even agree on the specific tank configuration, and this was the case in 1963 when a preliminary estimate of \$80 million was made by United States and German technical people. The 1965 estimates were somewhat more realistic but even these have grown—indeed, have doubled. I do not condone this growth any more than I condone the cost growth in the C-5 or other Defense programs, but in fairness I think we should recognize that the causes of this growth in development costs have, in large part, reasonable explanations. They do not necessarily reflect weaknesses in the program itself. For example, the estimates now include development of a joint heavy equipment transporter, a joint advanced component development program, and a gas turbine engine program which were not contemplated in the 1965 development estimate. In addition, technical difficulties have contributed to the increased costs. Many

developments are simply product improvements in which existing designs are improved component by component, resulting in evolutionary changes that do not represent major breakthroughs. However, the main battle tank is a revolutionary development in which higher development risks are accepted to produce an all new tank which capitalizes on advanced engineering techniques and results in a major increase in capability.

Again, I feel that the Defense Department has been guilty of over-optimistic planning is not allowing for additional costs and time to solve these difficult technical problems which are associated with the revolutionary design. But it is this revolutionary design which will insure that the MBT-70 not only will not be obsolete when it is introduced but will be superior to any tank then existing on either side of the iron curtain.

Congress has repeatedly criticized the Defense Department for rushing weapons systems into production before the development difficulties are completely resolved thereby incurring expensive retrofit after the production run has started. The Army has sought to minimize this kind of expense by applying conservative controls to place the development of the main battle tank, and this has contributed to both the delays in the development and to the increase in cost.

Mr. President, I think that although the program has had problems, technical difficulties, growth in development cost beyond the original estimates, those problems are not the vital question now. What is vital is that our troops are equipped with inferior armor, in inferior numbers.

This is a dangerous condition which decreases the deterrent value of our NATO forces in Europe and increases the possibility of a military adventure by the Communists which could have disastrous effects. The important thing at this point, Mr. President, is that we need a new tank. We need a new tank in numbers, and we need it as soon as it can become available. I think that the effect of this amendment would be to deny us the capability to produce an advanced tank before the late 1970's. In my judgment, this is an unacceptable risk which we must not take.

Mr. PROXMIRE. Mr. President, on June 13, 1969, Elmer Staats testified to the Subcommittee on Economy in Government about the scope of GAO's involvement in the defense area. Mr. Staats stated that of the GAO's total operating budget for fiscal year 1969, of \$59.6 million, over \$30.1 million, or 50.5 percent is related to defense programs and activities. He said that the allocation of GAO's resources in the accounting, auditing, legal and other related functions in connection with defense spending amounts to 43 percent. The proposed GAO budget for fiscal year 1970 provides for a total professional audit staff of 2,585. Mr. Staats said:

We continue to place heavy emphasis upon the major functional areas of defense activities, including procurement, supply management, manpower, research and development, facilities and construction, support services, and management control systems.

It is also well to remember that the Congress created the GAO to be its investigative arm. The annual report of the Comptroller General states:

The Congress established the General Accounting Office in the Legislative Branch to serve as an independent, nonpolitical and reliable source of assistance in carrying out its constitutional power over the public purse.

The GAO periodically makes reports to Congress on its audits, investigations and evaluation requested by individual Members or committees. It annually issues literally hundreds of reports dealing with expenditures by the executive branch. These reports are designed to aid the Congress with information helpful in reviewing the annual budget requests.

It should, therefore, be clear that the General Accounting Office was created to perform the kind of functions outlined in this amendment, that it is eminently equipped to do so with a large professional staff, and that it has the experience in the area of defense analysis that is called for.

The GAO is the appropriate agency to undertake the study required by the amendment rather than the Bureau of the Budget or the Defense Department. I would note the following:

First. GAO is independent and responsible to Congress.

Second. GAO is building a systems analytic capability and currently has at least as much of this capability as BOB.

Third. Neither BOB nor DOD could be expected to develop a report which would offend the President or the Secretary of Defense.

The main battle tank, MBT-70, was conceived in 1963. It is being developed jointly by the United States and West Germany. Its purpose is to operate in the environment of a tactical nuclear war in Western Europe. The development of the tank had been scheduled for production by 1969, but it has now been deferred until 1974. The R. & D. costs of this weapon have risen from \$86 million to over \$300 million since 1963. In the current military authorization bill, there is a total of \$55 million recommended by the Senate Armed Services Committee. This included \$30 million for R. & D. and \$24.5 million for production engineering. The Senate Armed Services Committee cut the R. & D. budget request of the Pentagon from \$43.3 million.

The Army intends to replace all of the M-60-A1 tanks which we now have deployed in Europe with the MBT-70. Currently, there are well over 1,000 of these tanks in Western Europe. At the current estimated cost of producing the MBT-70 of between \$600,000 and \$700,000, per unit, it is estimated that the total cost of this program over the decade of the 1970's would be in the neighborhood of \$1.5 billion.

The following points enumerate some of the circumstances surrounding the MBT-70 which are pertinent to a Congressional decision to continue the R. & D. on this weapon.

Developments in antitank warfare have far outdistanced tank warfare developments. It is now possible for an

infantryman to knock out a tank with a guided missile which he carries with him in bazooka style.

The MBT-70 is designed to be equipped with a Shillelagh missile. In this system, both the missile and 152-mm. cartridges are fired through the same tube mounted on the tank. This Shillelagh firing system is enormously complicated and has not yet been made to work. The Shillelagh was supposed to be installed on the Sheridan tank, but, because of inherent design defects, it could not be properly mounted. Even though it was produced and sent to Vietnam, where it became embroiled in a scandal because of serious firing failures in battle. The same Shillelagh missile was supposed to be attached to the M-60 tank, but again mounting problems as well as severe misfiring troubles occurred. Currently there are hundreds of M-60 tanks waiting in Detroit for the Shillelagh missile which, according to the Stratton report, "still cannot be deployed because of deficiencies."

Costs of the MBT-70 are now projected to be about \$600,000 to \$700,000 for each vehicle. This is two and a half to three times as much as the M-60 tank, which we now possess, and whose performance is only marginally below that of the MBT-70.

The Army intends to replace all of the M-60's which are now deployed in Western Europe with MBT-70's in the decade of the 1970's. It is known that there are currently well over 1,000 of the M-60 tanks now in Western Europe. If these are replaced by MBT-70's during the next decade, we are confronting a total budget cost of \$65 billion or more. If the Army receives the appropriation on the tank this year, the Congress will be very close to approving the production and deployment of this weapon.

The M-60-A1 tank now in Western Europe is at least equal to any tank now possessed by the Russians or in development by the Soviet Government. A number of people with whom I have spoken state that the M-60-A1 is superior to anything which the Soviets now have in development.

While the Army has argued that there is a potential tank threat from the Soviets in the Western European theater, it should be noted that in 1958, a decade ago, their principal rationale for developing a guided-missile capability on tanks was the alleged "possible superiority" of the Communist-bloc countries. In the recent report by the Stratton subcommittee of the House, it was noted that that Soviet capability never developed and now, some 10 years later, the M-60-A without the guided missile is "equal to or superior to Soviet-designed tanks."

The Army insists that we are outnumbered in tank forces in Western Europe. The Stratton Subcommittee noted that the reason we are outnumbered is because the Army failed to maintain an adequate production rate of M-60's during the 1960's and indeed, "they slowed down the production line and even closed it in 1967 to produce the M-60 with Shillelagh missile, which still

cannot be deployed because of deficiencies."

The MBT-70 is designed to fight a war in Western Europe similar to World War II, only with tactical nuclear weapons instead of conventional weapons. Many strategists believe that such a contingency is no more than a remote possibility. Moreover, the Congress to date has not fully considered the implications of tactical nuclear war on the European Continent.

The characteristic of the tank which stands out in the minds of most of the people, both in the Pentagon and out, who are knowledgeable about this program, is the highly sophisticated technology which is being built into it. I understand that there is built into every tank a computer for leveling and automatic loading and firing. Among these people, there is substantial skepticism concerning the ability of existing technology to produce a workable vehicle. In fact, there is some well-based expectation now that the Secretary of Defense judges the weapon to be an ultimately infeasible end and may well cancel it himself, if the Congress does not cancel it.

Many people knowledgeable in the details of this weapon have informed me that a major share of the high cost of this weapon is accounted for by the use of a special steel which is neutron absorbing. In point of fact, if this is true, the Nation is spending a substantial amount of money—into the billions—to provide covering for a limited number of personnel who will be engaged in some prospective tactical nuclear war in Germany, France, the Netherlands, and so on.

That there have been difficulties in designing the sophisticated equipment in this tank is evidenced by the cost growth in R. & D. In 1963, it was estimated that R. & D. would cost \$86 million and that the tank would roll off the production line in 1969. Now the R. & D. cost has escalated to well over \$300 million, and production target is now 1974.

So far, the U.S. Government has spent over \$30 million on the development of the 1500 horsepower turbine engine which, in the judgment of a number of people, may well not be technically feasible.

While the MBT-70 might have been analyzed to be cost effective prior to 1965, it is now doubtful, given the escalated R. & D. costs, and given the doubts about technical feasibility, that it would still be cost effective. It is essential that this question be studied.

Finally, I would make a number of other points which are pertinent to a decision on the MBT-70.

If this weapon is produced and deployed in Western Europe under a joint agreement with West Germany, we will be in the process of supplying tactical nuclear weapons to Germany. I do not believe that this fact is widely recognized for, if it were, the same kind of opposition to it would develop as did develop a few years ago on a similar issue.

By providing a tactical nuclear weapon to NATO countries, it seems to me that

the United States is directly undermining its claims concerning the effectiveness of its nuclear deterrence. If we are spending \$10 billion to fight a tactical nuclear war, it is difficult to convince our NATO allies that our nuclear deterrence is sufficiently potent to forestall any potential Soviet attack.

I would emphasize a point that I made earlier: namely, that Congress should not vote approval of a program such as MBT-70 without knowing the full budgetary implications of the system. This year, the Army requested \$70 million of funds. This was cut to about \$55 million by the Armed Services Committee. If this \$55 million comes close to committing the Nation to a \$15 billion expenditure, it should be known by all participants to the decision prior to final decision.

Mr. MAGNUSON. Mr. President, I have been listening to 2 days of debate here. I do not think it has been mentioned that at the other end of the spectrum is the Renegotiation Board, which has been operating for a long time. Of course, that Board passes on smaller amounts, but it passes on whether someone has made an excess profit on a military contract. The Senator from Colorado (Mr. ALLOTT) and I have handled the small appropriations for that office for years. That Board is collecting many millions of dollars, and it has responsibility over all military procurement contracts over, I think, \$25,000, or whatever the figure is.

So despite the procedure we have been talking about, at the other end of the spectrum there is the Renegotiation Board, which acts in a very nonpartisan manner. The Board has done a very good job.

Does the Senator from Colorado agree?

Mr. ALLOTT. I certainly do.

Mr. STENNIS. I thank the Senator for his comments.

Mr. EAGLETON. Mr. President, I withdraw my amendment, without prejudice.

STUDENT LOANS

Mr. JAVITS. Mr. President, certainly, sooner or later, the majority leader will make a statement on the program for today and next week. I would like to call attention to the fact that the Committee on Labor and Public Welfare has just reported a bill which deals with the ability of 200,000 college students to get student loans, and if we do not deal with that measure before we have a recess, very likely a large number of them may be denied the opportunity to spend the next year in college. I know the exigencies we are all under, and I only state it to submit it to the majority and minority leaders. I would hope they might find some way of accommodating the serious situation. Thirty members of the Senate are cosponsors of that bill. I may add that the measure takes no money, because the money has been appropriated. It is just a matter of using it for this particular purpose.

Mr. MANSFIELD. Mr. President, may I say that the joint leadership will do

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what it can. It certainly will not consider laying aside the present business unless we have the concurrence of the Senator from Mississippi (Mr. STENNIS) and the ranking Republican member, the senior Senator from Maine (Mrs. SMITH); but if something could be worked out on the basis of a time limitation, we would be glad to give it our consideration. But if it is going to be a "dog fight," as it could well develop into, I think we would have to consider that. But we will do what we can, without being too definite.

Mr. PELL. Mr. President, I would like to associate myself with the views expressed by the Senator from New York.

Mr. MANSFIELD. Probably it would help get the Senator from New York and the Senator from Rhode Island off my back if we could agree to it.

AARM
AUTHORIZATION OF APPROPRIATIONS FOR FISCAL YEAR 1970 FOR MILITARY PROCUREMENT, RESEARCH AND DEVELOPMENT, AND FOR THE CONSTRUCTION OF MISSILE TEST FACILITIES AT KWAJALEIN MISSILE RANGE, AND RESERVE COMPONENT STRENGTH

The Senate resumed the consideration of the bill (S. 2546) to authorize appropriations during the fiscal year 1970 for procurement of aircraft, missiles, naval vessels, and tracked combat vehicles and to authorize the construction of test facilities at Kwajalein Missile Range, and to prescribe the authorized personnel strength of the Selected Reserve of each Reserve component of the Armed Forces, and for other purposes.

Mr. NELSON. Mr. President, I call attention to the absence of a quorum.

Mr. MANSFIELD. A quorum call is agreeable, provided that the Senator does not lose his right to the floor.

The PRESIDING OFFICER. Without objection, it is so ordered. The clerk will call the roll.

The bill clerk proceeded to call the roll.

Mr. MANSFIELD. Mr. President, I ask unanimous consent that the order for the quorum call be rescinded.

The PRESIDING OFFICER. Without objection, it is so ordered.

Mr. MCINTYRE. Mr. President, will the Senator from Wisconsin yield?

Mr. NELSON. I yield.

AMENDMENT NO. 131

Mr. MCINTYRE. Mr. President, at this time I offer an amendment to S. 2546. The amendment concerns chemical and biological warfare.

Senators NELSON, GOODELL, HUGHES, PROXMIRE, YARBOROUGH, PELL, HARTKE, MONDALE, STEVENS, and I are listed as cosponsors of the amendment.

Mr. President, the amendment represents an effort to deal with amendments previously offered by these Senators. Those amendments are numbered 114, 116, 117, 118, 120, and 121.

Mr. President, these amendments offered by the Senators for the most part are concerned with various rules and regulations that they would like to see incorporated into the law to serve as ef-

fective guidelines and controls over the storage, transportation, disposal, and maintenance of chemical and biological agents—and includes also the Senator from Wisconsin's and the Senator from New York's amendment concerning open-air testing of lethal agents.

The staff of my Subcommittee on Research and Development of the Committee on Armed Services, together with the staffs of the various Senators involved, have worked to try to incorporate into the amendment I have just presented the essentials of the various amendments offered. I believe that has been done with satisfaction. In substance, a great deal of the ideas and the thrust of the amendments offered have been taken.

The PRESIDING OFFICER. Will the Senator send his amendment to the desk, so that it may be read?

Mr. MCINTYRE. Mr. President, I ask unanimous consent that reading of the amendment be dispensed with at this time.

The PRESIDING OFFICER. Without objection, it is so ordered.

Mr. ALLOTT addressed the chair.

Mr. NELSON. I yield to the Senator from Colorado.

Mr. ALLOTT. I wish to reserve the right to object to unanimous consent concerning dispensing with the reading.

Does the Senator plan to read it at a later time? I think the Senate should be informed of the contents of the amendment.

Mr. MCINTYRE. I think the point the Senator from Colorado raises is a good one. The usual procedure, as the Senator knows, is to dispense with the reading, in the interest of time.

Mr. ALLOTT. All I am doing is inquiring whether the Senator intends to read it or to make it available to us later. If he does, I shall not object.

Mr. MCINTYRE. I had not intended to read it because of the lateness of the hour, but I think the point is well taken. I do not want to give the appearance of rushing too fast on this important amendment. We have been in consultation with the chairman of the Committee on Armed Services and the ranking Republican member.

Mr. ALLOTT. If a copy is available to us, I will not object.

The PRESIDING OFFICER (Mr. CRANSTON in the chair). Without objection, reading of the amendment is dispensed with; and, without objection, the amendment will be printed in the RECORD.

The amendment is as follows:

At the end of the bill add a new section as follows:

"CHEMICAL AND BIOLOGICAL WARFARE

"SEC. 402. (a) The Secretary of Defense shall submit semiannual reports to the Congress on or before January 31 and on or before July 31 of each year setting forth the purposes of and the amounts spent during the preceding six-month period for research, development, test, evaluation, and procurement of lethal and nonlethal chemical and biological agents. The Secretary shall include in such reports an explanation of such expenditures including the necessity therefor.

"(b) None of the funds authorized to be appropriated by this or any other Act may be used for the procurement of delivery systems specifically designed to disseminate lethal chemical agents, disease-producing biological micro-organisms, or biological toxins, or for the procurement of any part or component of such delivery system.

"(c) None of the funds authorized to be appropriated by this or any other Act may be used for future deployment and storage of any lethal chemical agent or any disease-producing biological microorganism or any biological toxin at any place outside the United States, or for the deployment at any place outside the United States of delivery systems designed to disseminate any such agent or microorganism or toxin unless the country exercising jurisdiction over such place has prior notice of such action. In the case of any place outside the United States which is under the jurisdiction or control of the Government of the United States, no such action may be taken unless prior notice of such action has been given to the Committee on Armed Services, the Committee on Foreign Relations, the Committee on Appropriations and, when appropriate, the Committee on Interior and Insular Affairs of the Senate, and the Committee on Armed Services, the Committee on Foreign Affairs, the Committee on Appropriations and, when appropriate, the Committee on Interior and Insular Affairs of the House of Representatives. As used in this section the term 'United States' means the several States and the District of Columbia.

"(d) (1) None of the funds authorized to be appropriated by this Act or any other Act shall be used for the transportation of any lethal chemical or biological agents to or from any military installation in the United States, its territories or possessions unless the Surgeon General of the Public Health Service has determined that such transportation will not present a hazard to the public health.

"(d) (2) The Secretary of Defense, except during a war declared by Congress or during a national emergency declared by Congress or the President after the enactment of this legislation, shall provide written notification to the Congress, to the Secretary of Transportation, to the Secretary of Health, Education, and Welfare and to the Interstate Commerce Commission at least thirty days in advance of any operation involving the transportation of lethal chemical or biological agents to or from any military installation in the United States, its territories, or possessions. The Secretary of Defense shall provide appropriate notification to the Governor of any State through which such agents be transported.

"(d) (3) The Department of Defense shall detoxify all lethal chemical or biological agents before their transportation for disposal as provided for in subsection (e) (1) and (e) (2) of this section whenever it is practical to do so.

"(e) None of the funds authorized by this or any other Act shall be used for the testing, development, transportation, storage, or disposal of any chemical or biological weapon outside of the continental limits of the United States unless the Secretary of State determines that such testing, development, transportation, storage, or disposal will not violate international law and reports such determination to the Committee on Foreign Relations of the Senate and the Committee on Foreign Affairs of the House of Representatives, and to the appropriate international organizations, or organs thereof, whenever required by treaty or other international agreement.

"(f) None of the funds authorized to be appropriated by this or any other Act shall be used for the open air testing of lethal chemical agents, disease-producing biological microorganisms, or biological toxins except upon

a determination by the Secretary of Defense, under guidelines provided by the President of the United States, that an open air test is necessary for the national security, and then only after a separate determination by the Surgeon General, within thirty days of the determination of the President, that the test proposed will not present a hazard to the public health. The Secretary of Defense shall report his determination and that of the Surgeon General, to the Committee on Armed Services, the Committee on Labor and Public Welfare, and the Committee on Appropriations and Foreign Commerce and the Committee on Armed Services, the Committee on Interstate and Foreign Commerce and the Committee on Appropriations of the House of Representatives at least 30 days prior to any actual test. The Secretary of Defense shall set forth in his report the name of the agents, microorganisms, or toxins to be tested, the time and place of any test, and the reasons therefor."

Mr. NELSON. Mr. President, as the Senator from New Hampshire has stated, this amendment consolidates several amendments introduced by several Senators and was worked out with the staff of Senator McINTYRE's subcommittee and the staffs of Senators who are authors of the various amendments.

The consolidated amendment, as I have stated, contains several amendments by other Senators. I would be happy to explain the three amendments that were introduced by the Senator from New York (Mr. GOODELL) and myself.

Mr. ALLOTT. Mr. President, will the Senator yield?

Mr. NELSON. I yield.

Mr. ALLOTT. I assume the Senator is speaking to me—at least he is looking at me.

Mr. NELSON. No, Senator GOODELL co-sponsored three amendments that are now incorporated.

Mr. ALLOTT. I just want to say that I now have a copy of the amendment.

Mr. NELSON. Then, instead of reading the amendment, I might just summarize the three for which the Senator from New York and I were responsible. I assume that the other authors of the various parts of this consolidated amendment will in their remarks explain that aspect of the consolidated amendment which was introduced by them.

The first of the amendments jointly sponsored by the Senator from New York (Mr. GOODELL) and myself simply provides that none of the funds in this bill shall be used for the procurement of delivery systems to disseminate lethal chemical agents or disease-producing biological microorganisms.

The other amendment we jointly sponsored which is part of the consolidated amendment provides that none of the funds appropriated by this Act may be used for deployment or storage of any lethal chemical agent outside the United States—I am trying to consolidate this; I will not read all of it—without prior notice to the country involved where it is stored, and unless prior notice is given to the Committee on Foreign Relations, the Committee on Appropriations, the Committee on Interior and Insular Affairs, and the Committee on Armed Services.

The third amendment sponsored by Senator GOODELL and myself, as part of the consolidated amendment, provides that none of the funds appropriated by this act shall be used for the open-air testing of lethal chemical agents, disease producing biological microorganisms, or biological toxins except on determination by the Secretary of Defense, under guidelines provided by the President of the United States, that an open-air test is necessary for the national security; and then only after a separate determination by the Surgeon General, within 30 days of the determination of the President, that the test proposed will not present hazards to the public health. The Secretary of Defense shall report this determination and that of the Surgeon General to the Committee on Armed Services, the Committee on Labor and Public Welfare, and the Committee on Appropriations of the Senate, and to the Committee on Armed Services, the Committee on Interstate and Foreign Commerce, and the Committee on Appropriations of the House of Representatives at least 30 days prior to any actual test. The Secretary of Defense, pursuant to this amendment, shall set forth in his report the name of the agents, microorganisms, or toxins to be tested, the time and place of any test, and the reasons therefor.

Mr. MANSFIELD. Mr. President, is the Senator through with his explanation?

Mr. NELSON. Of the three amendments I have.

Mr. MANSFIELD. Mr. President, will the Senator yield to me briefly, before the other cosponsors of these amendments speak?

Mr. NELSON. I yield.

Mr. MANSFIELD. Mr. President, the joint leadership has discussed the question of a vote tonight on the amendment which was offered by the distinguished Senator from New Hampshire, the chairman of the subcommittee dealing with this matter in the Committee on Armed Services, and one of the authors of the proposal now before the Senate. We think we have reached agreement. We will find out shortly.

I ask unanimous consent that the vote on the pending amendment take place at 12 o'clock noon on Monday next.

Mr. FULBRIGHT. Reserving the right to object, what time is the Senate to meet on Monday?

Mr. MANSFIELD. Ten a.m.

Mr. FULBRIGHT. Has permission been granted for a meeting of the committee? I ask that for this reason: We would like very much the opportunity to act upon particularly the Peace Corps matter which is pending. There was an amendment to it, and we could not act. We did not have a quorum. All I want is to have an opportunity to act if I can get a quorum. Is that permissible?

Mr. MANSFIELD. Yes.

Mr. STENNIS. Mr. President, will the Senator speak a little louder?

Mr. MANSFIELD. The Senator from Arkansas wanted to know about committees meeting on Monday morning. That will be all right.

Mr. FULBRIGHT. If we can get a quorum, we would like to act on a matter.

Mr. MANSFIELD. The joint leadership will have no objection.

The PRESIDING OFFICER. How is the time to be divided?

UNANIMOUS-CONSENT AGREEMENT

Mr. MANSFIELD. First, I ask unanimous consent that the vote on the pending amendment take place at 12 o'clock noon on Monday next.

The PRESIDING OFFICER. Without objection, it is so ordered.

Mr. MANSFIELD. I ask unanimous consent that the time be equally divided between the minority and majority leaders or whomever they may designate.

The PRESIDING OFFICER. Without objection, it is so ordered.

Mr. MANSFIELD. Mr. President, there will be a rollcall vote at 12 o'clock noon on Monday, if I did not state it.

The unanimous-consent agreement, subsequently reduced to writing, is as follows:

Ordered, That the Senate proceed to vote at 12 noon Monday, August 11, 1969, on the amendment offered by Senator McINTYRE and others, relative to chemical and biological warfare (No. 131).

Provided further, That debate on the amendment, beginning at 11 o'clock be equally divided and controlled by the majority and minority leaders, or someone designated by them.

Mr. McINTYRE. Mr. President, will the Senator yield?

Mr. NELSON. I yield.

Mr. McINTYRE. Mr. President, I ask unanimous consent that various amendments, as originally introduced by the Senators I have referred to in my remarks, be placed in the RECORD at this time so there will be a comparison between these amendments and the amendment I introduced on behalf of all of them.

There being no objection, the amendments were ordered to be printed in the RECORD, as follows:

AMENDMENT 114

At the end of the bill add a new section as follows:

"Sec. 402. None of the funds authorized to be appropriated by this or any other Act may be used for open air tests of lethal chemical agents or pathogenic biological microorganisms or biological toxins."

AMENDMENT 115

At the end of the bill add a new section as follows:

"Sec. 402. None of the funds authorized to be appropriated by this or any other Act may be used for the procurement of delivery systems designed to disseminate lethal chemical agents, pathogenic biological microorganisms, or biological toxins, or for the procurement of any part or component of such delivery systems."

AMENDMENT 116

At the end of the bill add a new section as follows:

"Sec. 402. None of the funds authorized to be appropriated by this or any other Act may be used for the storage or deployment of any lethal chemical agent or any pathogenic biological micro-organism or any biological toxin at any place outside the United States, or for the deployment at any place outside the United States of delivery systems designed to disseminate any such agent or micro-organism or toxin unless the country exercising jurisdiction over such place has prior notice of such action. In the case of

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any place outside the United States which is under the jurisdiction or control of the Government of the United States, no such action may be taken unless prior notice of such action has been given to the Committee on Armed Services, the Committee on Foreign Relations, the Committee on Interior and Insular Affairs, and the Committee on Appropriations of the Senate and the Committee on Armed Services, the Committee on Foreign Affairs, the Committee on Interior and Insular Affairs, and the Committee on Appropriations of the House of Representatives. As used in this section the term "United States" means the several States, and the District of Columbia."

AMENDMENT 117

At the end of the bill add a new section as follows:

"SEC. 402. None of the funds authorized by this or any other Act shall be used for the testing, development, transportation, or disposal of any chemical or biological weapon unless the Surgeon General of the Public Health Service determines that such testing, development, transportation, or disposal will not present a hazard to the public health."

AMENDMENT 118

At the end of the bill add a new section as follows:

"SEC. 402. The Secretary of Defense shall submit semiannual reports to the Congress on or before January 31 and on or before July 31 of each year setting forth the amounts expended during the preceding six-month period for research, development, test, evaluation, and procurement of lethal chemical agents and for lethal biological agents, and amounts expended for such purposes during such six-month period on other major categories of chemical and biological agents of a nonlethal nature. The Secretary shall include in such reports an explanation of such expenditures including the necessity therefor."

AMENDMENT 120

At the end of the bill add a new section as follows:

"SEC. 402. (a) The Secretary of Defense shall provide written notification to the Congress, to the Secretary of Transportation, to the Secretary of Health, Education, and Welfare, and to the Chairman of the Interstate Commerce Commission at least thirty days in advance of any operation involving the transportation of any lethal chemical or biological agent to or from any military installation.

"(b) The Secretary of Defense shall give all due consideration to the public health and safety in operations involving the transportation of any lethal chemical or biological agent to or from any military installation, shall maintain strict adherence to all Federal safety regulations in every case, and shall detoxify lethal chemical and biological agents before transportation for disposal when practicable to do so."

AMENDMENT 121

At the end of the bill add the following new section:

"SEC. 402. None of the funds authorized by this or any other Act shall be used for the testing, development, transportation, storage, or disposal of any chemical or biological weapon outside of the continental limits of the United States unless the Secretary of State determines that such testing, development, transportation, storage, or disposal will not violate international law and reports such determination to the Committee on Foreign Relations of the Senate and the Committee on Foreign Affairs of the House of Representatives, and to the appropriate international organizations, or organs thereof, whenever required by treaty or other international agreement."

Mr. NELSON. Mr. President, I ask for the yeas and nays on the pending amendment.

The yeas and nays were ordered.

ORDER OF BUSINESS

Mr. DIRKSEN. Mr. President, I wish to query the distinguished majority leader for a moment about the business of the Senate before the midsummer recess, and that means Monday, Tuesday, and Wednesday, because I believe we agreed that the recess starts at the end of business on Wednesday, August 13. Therefore, we have until that time.

The question is whether Seantors will be on hand. There are invitations outstanding, such as invitations for the dinner for the astronauts in Los Angeles, and other affairs which could possibly take Senators away. I believe the leadership has to know. I would want to prevail on Senators to remain here under those circumstances if we are going to work right up to the end of that day. I would like to know if it is likely there will be rollcall votes.

Mr. MANSFIELD. Mr. President, in response to the question raised by the distinguished minority leader, it is true that a number of Senators have received invitations to attend the state dinner for the astronauts in Los Angeles on the evening of Wednesday, August 13.

There will be votes on Monday, Tuesday, and very likely Wednesday. I would hope, though, that those who intend to go to Los Angeles or those who have accepted the invitation would not enter their declinations yet, but that they would, if at all possible, be prepared to go to honor these men and their achievements.

The joint leadership will do its best to try to enable an early departure. I suppose the last plane would leave about 2 o'clock, 3 o'clock, or 4 o'clock. We will come in early on Wednesday to get as much business as possible out of the way.

It does not appear at this moment, however, that we would be able to finish the bill by Wednesday. We will make every effort to do so, but in view of statements which have been made and comments which I have heard as to the length of time to be spent on some of these amendments—and I know of 10 amendments at the moment and there may be more—it seems to be only a very long shot that we could finish by Wednesday.

Therefore, the best advice I can give is that those who are going to Los Angeles go at the last minute, and if events indicate we could finish at the last minute they might have to change their minds.

It is not very good advice but it is the best we have. My present guess is that this measure will be the pending business when we return on September 3, after going into recess at the conclusion of business on August 13.

Mr. DIRKSEN. Mr. President, will the Senator from Wisconsin yield further?

Mr. NELSON. I yield.

Mr. DIRKSEN. Mr. President, I would like to ask the distinguished majority leader one more question, and I assure

him it is asked in the utmost of good faith and it is done only as a precaution that I think I always have to exercise in matters of this kind.

Is there, in the judgment of the majority leader, a likelihood that an amendment in the nature of the Cooper-Hart proposal, or a similar proposal, is likely to be offered, and would such a proposal be offered on Wednesday if we just let Members go to this astronaut dinner and they would not be here to vote?

Mr. MANSFIELD. There is no such proposal that I know of and I note that the distinguished Senator from Kentucky (Mr. COOPER) and the distinguished Senator from Michigan (Mr. HART) are nodding in agreement with me.

If anyone tried to do something like that on Wednesday, with Members not present, I would object most strenuously.

Mr. DIRKSEN. I am quite satisfied with the assurances of the majority leader on that point because if it were done it would complicate the vote, and there would have to be a rollcall vote, and we would have to let it go until we returned.

Mr. MANSFIELD. If it did happen, the Senator from Montana would be prepared to start reading the Bible from the beginning.

Mr. COTTON. Mr. President, will the Senator yield?

Mr. NELSON. I yield.

Mr. COTTON. Mr. President, in view of the fact that the Senator from New Hampshire made some remarks on the floor of the Senate this afternoon in the absence of both the majority leader and the minority leader, I feel that in fairness I should repeat those remarks.

I think my record after 15 years in the Senate bears out the statement that I have never presumed to tell the leadership of the Senate what to do or to offer them unsolicited advice. But I did say in the absence of both the majority leader and the minority leader, and, therefore, I feel in honor I should repeat it while they are present, that I am compelled to say that I feel it is a distinct mistake on the part of the Senate to start the recess until this bill is disposed of.

We all know that when a matter is put over until we come back, the arguments and the contests start all over again ad infinitum. We all know, I think, that full expression and discussion of these very vital questions, are not necessarily promoted by extending them over days and days, because we have all seen lengthy arguments with only five Senators in this Chamber, go on hour after hour for 2 or 3 days. I do not know how many Senators faithfully read all those arguments, but I have grave doubts that they do. Actually, full consideration of a vital matter is more likely to take place if it is condensed to 2 or 3 hours than if it continues over 2 or 3 days, because that means there is going to be a vote, and Senators are present to hear the arguments on both sides.

I am one who has made plans and I do want to get away, but I think the Senate or the leadership should determine that this very important bill, which

August 8, 1969

is so vital to the defense of the United States, should be disposed of and should be disposed of even if we have to return on Thursday or Friday. I think everyone would be pleasantly surprised and amazed at how succinct and to the point arguments would become, and that this bill could be and would be disposed of before midnight on Wednesday.

I know it is presumptuous to make this suggestion, but I feel that I must register this sentiment, because I am convinced that the people of this country are not happy to see us go into recess with so much coming along, such as the tax bill and all the rest, without disposing of this matter.

Because I said all this earlier, I felt that I should say it now.

Mr. MANSFIELD. Mr. President, I appreciate the candor of the distinguished Senator from New Hampshire. As always, he is frank and straightforward. But a promise has been made to the membership and that promise will be kept.

Fortunately, there is not a great deal on the calendar at the present time. The Senate is reasonably current with its work. When we convene in September, I anticipate that the NASA authorization bill will be considered at the conclusion of the pending business.

At that time also, the appropriation bill on the Interior Department will be reported; and other measures will be passing out of committees. All committees, I might add, are working assiduously.

It is therefore my belief that this break will be a good thing for the Senate. It is my impression that the business of the Senate has become a 12-month operation. Unlike the judges of the Federal courts, including the Supreme Court, Senators do not have 3 or 4 months off. We have to go home to visit our constituents and take time off only when chance occurs. Especially it is the younger Members of the Senate who would like to spend a little time with their growing families during the year. Accordingly, I have no compunction at all—none at all—in stating that the promise made will be kept.

At the same time, I recognize the frankness and the feeling on the part of the distinguished Senator from New Hampshire. It would be my hope, and I think it would be a sound one, that practically all the amendments which will be offered to this bill are now at the desk, or will be submitted in the next day or so. So by the time we come back in September, this matter will have been pretty thoroughly discussed. The country will have a good idea of what the Senate has done. And I am not at all sure that the people will be unappreciative of what has been done in this body, even if it has taken weeks where formerly it took only days.

Mr. DIRKSEN. Mr. President, to amplify and fortify what the distinguished majority leader has just said, he and I got together the last week in January and we agreed on the recess period. They were announced. Cards were printed and delivered to every Member. Accordingly, Members made their plans months and months ago as to what they would do during this 3-week period.

It would therefore be something of a breach of faith if we undertook now to undo those plans in the interest of the pending legislation.

Lacking the gift of prophecy, and not having the divine power of piercing the veil of the future, we could not tell last January what was going to happen in the course of the legislative session, or know that at this time we would be working on a matter for a period of 5 weeks.

I believe that the majority leader is so eminently correct, that we should go through with our plans in the interest of our families.

I speak particularly of the younger Members of the Senate, who have substantial families of school age, who are taken out in June and taken home, and will be brought back here in September. What an awkward situation for a Senator that he cannot have some time to go home and be with his children before they have to go back to school.

Thus, that is the whole story. That is the reason behind it. It is the fruit of nearly 4 or 5 years of constant effort in this field before it was consummated.

Mr. COTTON. Mr. President, I hope I do not need to say that the remarks of the Senator from New Hampshire are in no way in disrespect to the majority and minority leaders. No Senator in this body has a higher regard for, or has enjoyed more kindness from them than the Senator from New Hampshire. I accept their verdict. I certainly want to be obedient and a good soldier.

I will say, however, that my opinion is unchanged.

AUTHORIZATION OF APPROPRIATIONS FOR FISCAL YEAR 1970 FOR MILITARY PROCUREMENT, RESEARCH AND DEVELOPMENT, AND FOR THE CONSTRUCTION OF MISSILE TEST FACILITIES AT KWAJALEIN MISSILE RANGE, AND RESERVE COMPONENT STRENGTH

The Senate resumed the consideration of the bill (S. 2546) to authorize appropriations during the fiscal year 1970 for procurement of aircraft, missiles, naval vessels, and tracked combat vehicles, and to authorize the construction of test facilities at Kwajalein Missile Range, and to prescribe the authorized personnel strength of the Selected Reserve of each reserve component of the Armed Forces, and for other purposes.

CHEMICAL AND BIOLOGICAL WARFARE

Mr. NELSON. Mr. President, in 1926, just 8 years after World War I, General of the Armies John J. Pershing sent a letter to the Senate Foreign Relations Committee to warn of the dangers of chemical warfare. Just 8 years before, he had led American troops in the first world war—the first war where deadly gases were extensively used. The effects of those gases so horrified him that the famous general was moved to warn the Senate:

Chemical warfare should be abolished among nations as abhorrent to civilization. It is a cruel, unfair, and improper use of

science. It is fraught with the gravest danger to noncombatants and demoralizes the better instincts of mankind.

Scientific research may discover a gas so deadly that it will produce instant death—

I might say, as an aside, that that has been accomplished—

To sanction the use of gas in any form would be to open the way for the use of the most deadly gases and the possible poisoning of whole populations of noncombatant men, women, and children. The contemplation of such a result is shocking to the senses.

And then to add emphasis, the general, who was the first and only general of the armies, who had seen years of combat and who was known for his toughness and valor, argued:

It is unthinkable that civilization would deliberately embark upon such a course.

Pershing's letter came nearly a year after the nations of the world gathered to draw up the "1925 Geneva Protocol for the Prohibition of the Use in War of Asphyxiating, Poisonous, or Other Gases and of Bacteriological Methods of War."

The Geneva Conference had been called because there was worldwide revulsion over the use of poisonous gases during the First World War, during which gases, that caused 1.3 million casualties including 91,000 deaths on both sides, were used. At that Conference, the United States stood in the forefront in moving to outlaw such gases. Although the United States signed the treaty, the Senate refused to ratify it. Eventually 42 nations ratified the agreement. The United States was not among them and is still not among them.

By the 1930's it became known that Russia, Japan, and Germany were actively researching and testing chemical and biological warfare devices. Even though there were accusations among the major powers that chemical warfare was being conducted, it was apparent that none of these agents was ever authorized for combat use during World War II.

In the closing days of the war, Hitler made a frightening decision to begin sending the newly developed nerve gases to his losing armies in the field as another in the line of last-ditch attempts to stop the Allied momentum.

In relating what happened after Hitler made that decision, Albert Speer, Hitler's Minister of Production, told a Nuremberg court in 1947 that rumors of the possible use of the gases reached the factories where the chemicals were being produced.

Speer testified:

When rumors reached us that gas might be used, I stopped its production in November 1944. All sensible army people turned gas warfare down as being utterly insane, since, in view of (America's) superiority in the air, it would not be long before it would bring the most terrible catastrophe upon German cities.

In the previous year, 1943, President Franklin D. Roosevelt had come forward with a major decision as the Commander in Chief concerning chemical-biological warfare. In unequivocal words he had made a pledge that has carried to this day and has been described as making

Senate

THURSDAY, AUGUST 7, 1969

(Legislative day of Tuesday, August 5, 1969)

The Senate met at 10:30 o'clock a.m., on the expiration of the recess, and was called to order by the Vice President.

Rabbi Chaim U. Lipschitz, D.D., managing editor, the Jewish Press, Brooklyn, N.Y., offered the following prayer:

Our G-d and the G-d of our fathers, be Thou with the mouths of the deputies of this worthy Senate of the United States of America who stand in Thy presence.

Teach them what they shall say. Instruct them what they shall speak. Grant their petitions and cause them to know how to glorify Thee. May they walk in the light of Thy countenance. May they bend their knees unto Thee, and with their mouths bless Thy people. Bless them altogether with the blessings of Thy mouth. Amen.

THE JOURNAL

Mr. MANSFIELD. Mr. President, I ask unanimous consent that the Journal of the proceedings of Wednesday, August 6, 1969, be approved.

The VICE PRESIDENT. Without objection, it is so ordered.

ABM

AUTHORIZATION OF APPROPRIATIONS FOR FISCAL YEAR 1970 FOR MILITARY PROCUREMENT, RESEARCH AND DEVELOPMENT, AND FOR THE CONSTRUCTION OF MISSILE TEST FACILITIES AT KWAJALEIN MISSILE RANGE, AND RESERVE COMPONENT STRENGTH

The VICE PRESIDENT. The Chair lays before the Senate the unfinished business, which will be stated.

The LEGISLATIVE CLERK. A bill (S. 2546) to authorize appropriations during the fiscal year 1970 for procurement of aircraft, missiles, naval vessels, and tracked combat vehicles, and to authorize the construction of test facilities at Kwajalein Missile Range, and to prescribe the authorized personnel strength of the Selected Reserve of each Reserve component of the Armed Forces, and for other purposes.

The Senate resumed the consideration of the bill.

Mr. McINTYRE. Mr. President, I ask unanimous consent that, during the consideration of the pending question, which I believe to be my amendment, the privilege of the floor may be granted to my administrative assistant, Larry K. Smith, and to my legislative assistant, Alan Novins.

The VICE PRESIDENT. Without objection, it is so ordered.

Mr. MANSFIELD. Mr. President, I suggest the absence of a quorum.

The VICE PRESIDENT. The clerk will call the roll.

The legislative clerk proceeded to call the roll.

Mr. HARTKE. Mr. President, I ask unanimous consent that the order for the quorum call be rescinded.

The VICE PRESIDENT. Without objection, it is so ordered.

ORDER OF BUSINESS

The VICE PRESIDENT. Under the previous order, the Chair recognizes the Senator from Indiana for a period of 30 minutes.

SENATE JOINT RESOLUTION 145—
APOLLO SUCCESS ILLUMINATES
EARTHY FAILURES—INTRODUCTION
OF A JOINT RESOLUTION

Mr. HARTKE. Mr. President, the successful flight of Apollo 11 ranks among the greatest technological achievements of all time. We are grateful to Almighty God that the astronauts have returned safely to us. The spirit of their dazzling adventure has touched all of us, reviving our own spirit, and restoring our own capacity for adventure. Adding to our sense of amazement and wonder is the almost equally spectacular achievement of our Mars probe—Mariner 6—with its closer-than-ever television pictures of that legendary planet.

In the exhilaration of this moment, Mr. President, it is instructive to remember that the Apollo project has not always been a cause for cheer and acclaim. Eight years have passed since a trip to the Moon in this decade became our national goal. We must never forget that those 8 years are marked with failure and tragedy as well as with success and reward. When President John F. Kennedy made the Apollo program a national priority in April 1961, few were prepared to look beyond the remote promise of his words—few were prepared to test themselves against the task at hand.

But vigorous leadership in Government helped to convince the American people that the goal could and should be met. The organization of NASA, the development of new, more powerful rocket boosters, the training of men and building of machines, the development of sophisticated computers, the millions of man-hours, the three lives lost, and the billions of dollars spent—none of this would have been possible without a profound sense of national dedication. Only the tireless efforts of business, labor, education, science, and technology could have made a trip to the moon possible. And only leadership in Government—provided by three successive administrations with the support and encouragement of the Congress—could

have guided and coordinated these efforts with the efficiency needed to reach our goal on schedule.

But the Moon shot is behind us, and our euphoria has already been interrupted by the urgent need to establish a new set of national goals. In our thoughts about the future, however, we will do well to learn from the success of our space program—that program was a success because the goal had been set with care. Some goals are better than others, and we must make our choice with strict standards in mind.

The best kind of national goal is something like a valuable prize dangling in front of us from the end of a stick. If the stick is too short, we will not have to move forward to reach the prize, and we will make no progress. If the stick is too long, we will not be able to see the prize, and we will make no effort to reach it. Only when the stick is just the right length will we move forward. Psychologists have an expression for the proper length of the stick—they call it "optimal stress." If the goals we set for ourselves place an optimal stress on our capabilities, we will make progress as a nation at the fastest rate possible. In 1961, the Moon was far enough away to inspire our imagination, but close enough to keep our spirit alive.

In addition to being just the right length, of course, the stick has to point us in the proper direction. Some national goals inspire dedication for the wrong purposes. The pyramids of Egypt, the Colosseum in Rome, the palace at Versailles—all mark the ruin of great nations which wasted vast resources on vanity and self-indulgence.

I do not believe that the space program represents such a waste. Contrary to what some appear to believe, the resources expended in the Apollo program could not have been simply transferred to other worthy endeavors. Like any goal that points us in the right direction, the Apollo program generated its own resources—the inspiration and the dedication that grew out of the Apollo program were not "taken" from any other project; they were unique to the goal they served so well.

But this is not to say that other goals cannot inspire similar dedication. Just as space exploration held a deserved priority in the 1960's, so should human needs on Earth be given special attention in the 1970's.

This need on Earth has been dramatized by our exploits in space. While the astronauts walked on the Moon, men on Earth felt unsafe walking on city streets. While the astronauts took special precautions to protect themselves in the vacuum of space, men on Earth sought better protection from a dangerously

polluted atmosphere. While the astronauts looked for signs of water on the Moon, men on Earth were discovering that their own clean water supply was jeopardized by contamination and careless disposal of industrial waste. As millions of dollars were being spent to develop and supply the astronauts with a perfect "space diet," men on Earth continued to suffer needlessly from malnutrition.

Clearly, the time has come to turn our attention to these human needs in some systematic fashion.

In his column of July 18, 1969, the distinguished journalist, James Reston, observed:

The American mind and the American political system seem to need great challenges and clear goals to work at their best.

Mr. Reston went on to suggest that an attempt to achieve "certain definite social and economic objectives" by the year 1976—the bicentennial of the Declaration of Independence—could provide just the kind of challenge that moves us as a people to our noblest and most creative efforts.

Reston did not try to elaborate the details of those objectives, but I think that any of us here could compose a list that would win general approval throughout the Nation. Taken together, it would depict an America in which at least these things would be possible:

Every man, woman, and child would have an adequate diet, decent housing, and essential health care;

Every young person would receive all the education and job training he can usefully absorb;

All of us could walk the streets of our cities, day or night, without fear;

The appalling pollution of our air and waters would be eliminated;

Economically gainful, socially useful employment would be available to all who want to work;

Dependable, high-speed public transportation would move people to their jobs and then home again in comfort and safety;

The ugly stain of racism would be well on its way to the status of an uncomfortable memory;

Our older citizens would be able to retire with the dignity and security to which they are entitled.

Our youth would once again see in America "the last, best hope of mankind," and see themselves as participants in their Nation's dreams, not commentators on a nation's failures.

Mr. President, this is one list of objectives we might set for ourselves to achieve within the next 7 years. It is neither definitive nor exhaustive. Others may wish to add to it or to arrange its items in some order or priority. But its most important features are obvious to all: it deals with human needs, it is specific, and it is attainable. In other words, the stick is just the right length, and it points us in the right direction.

Five years ago—perhaps even 5 months ago—such an ambitious program may have seemed visionary. But the flight of Apollo 11 has transformed

us into a nation of visionaries—hard-headed, practical visionaries of the kind our Founding Fathers must surely have been, when, to quote James Reston again,

The whole idea of America was to create a society nobody had ever created before.

The flight of Apollo 11 has shown us that the gift of vision is not simply appropriate in setting and meeting national goals—it is absolutely necessary. We have been shown how men can transform vision into reality through a combination of resources uniquely abundant in this uniquely blessed land—technology, wealth, and skilled labor.

Add to these the less tangible, but equally necessary, resources of imagination and will and you have the sum total of the ingredients needed to accomplish the objectives I have outlined here today.

Surely no one doubts that we have the imagination. But imagination by itself is not enough. Shall our children be forced to stand before the bar of history and confess that we, their forebears, lacked the will—only the will—to transform the dreams of 1776 into the reality of 1976?

Rhetoric can set goals, but only concentrated, purposeful action can achieve them. The rhetoric of President John F. Kennedy set the goal of landing men on the moon and bringing them home safely by 1970. The concentrated, purposeful action of tens of thousands of Americans—scientists, engineers, businessmen and workmen, the incomparably gallant astronauts themselves, and, yes, even Members of Congress and of the Executive—the actions of these tens of thousands of men and women made that extraordinary conquest of space a reality.

Mr. President, I should like now to urge the Congress to undertake one essential first step toward fulfilling the dreams of 1776 within the next 7 years. I introduce today a Senate joint resolution establishing a joint committee of the Congress to define specific national goals and to recommend means to implement them by not later than 1976. The Joint Committee on National Goals, as I suggest it be called, would be composed of 10 Members from the Senate and 10 from the House, appointed by the Presiding Officers of the two Chambers. It would be directed to prepare an interim report for submission to Congress not later than March 1, 1970, and to have its final report ready for preparation to the 92d Congress not later than January 15, 1971. That final report would include a statement of realistic, attainable national goals and recommendations as to the legislative and administrative means for achieving them by 1976.

The problems that American society faces are immense, but they can be solved. That is the greatest lesson we can learn from the saga of Apollo 11. Not only can we solve difficult problems; we can do so in a limited period of time. It is appropriate that future national goals be set by the guiding, beckoning star of our Nation's 200th birthday.

I say again, Mr. President, we possess every material and intellectual resource we need to set and to achieve our national goals. Absent only is a clear and realistic definition of those goals, and the will to dedicate ourselves to their realization.

Let us here, today, in the Congress of the United States, show that we indeed have the determination and the will to rededicate ourselves, through action, to the ancient, eternally youthful promise of America.

I ask unanimous consent, Mr. President, that the text of the joint resolution be printed in the RECORD immediately following my remarks.

The PRESIDING OFFICER (Mr. PACKWOOD in the chair). The joint resolution will be received and appropriately referred, and, without objection, the joint resolution will be printed in the RECORD in accordance with the Senator's request.

The joint resolution (S.J. Res. 145) to establish a joint congressional committee to define national goals and to recommend means to implement such goals not later than the bicentennial of the United States in 1976, introduced by Mr. HARTKE, was received, read twice by its title, referred to the Committee on Government Operations, and ordered to be printed in the RECORD, as follows:

S.J. RES. 145

Resolved by the Senate and House of Representatives of the United States of America in Congress assembled, That (a) in recognition of the approaching bicentennial of the founding of this Nation and the challenge to translate the vision of our founding fathers into specific national goals to be achieved by 1976, there is established a joint congressional committee to be known as the Joint Committee on National Goals (hereafter referred to as the "Committee"). The Committee shall be composed of ten Members of the Senate appointed by the President of the Senate, six of whom shall be members of the majority party and four of whom shall be members of the minority party, and ten Members of the House of Representatives appointed by the Speaker of the House of Representatives, six of whom shall be members of the majority party and four of whom shall be members of the minority party. No chairman of a joint, standing, special, or select committee of either House, or ranking minority member of any such committee, may serve on the Committee established by this joint resolution.

(b) The Committee shall select a chairman and vice chairman from among its members.

Sec. 2 (a) It shall be the duty of the Committee to make a complete study and determination of specific national goals for the United States and the means to achieve such goals by 1976.

(b) The Committee shall make an interim report to the Senate and House of Representatives not later than March 1, 1970.

(c) Not later than January 15, 1971, the Committee shall make its final report to the Senate and House of Representatives. The report shall include a statement of national goals and such recommendations, including proposed legislation and administrative measures, as the Committee considers appropriate in order to achieve such goals by 1976.

(d) The Committee shall cease to exist February 15, 1971.

Sec. 3. (a) In carrying out its duties under this joint resolution, the Committee, or any duly authorized subcommittee thereof, is au-

ESTIMATED REDUCTION IN TAX LIABILITY FROM APPLICATION OF PRESENT LAW JOINT RETURN TAX SCHEDULE TO SINGLE PERSON AND HEAD OF HOUSEHOLD RETURNS—WITHOUT TAX SURCHARGE, AT 1969 LEVELS OF INCOME

Adjusted gross income class (thousands)	Single persons		Head of household		Total	
	Number of returns (thousands)	Reduction in tax liability (millions)	Number of returns (thousands)	Reduction in tax liability (millions)	Number of returns (thousands)	Reduction in tax liability (millions)
0 to \$3.....	4, 827	\$38. 7	69	\$0. 3	4, 896	\$39. 0
\$3 to \$5.....	5, 086	203. 7	462	7. 0	5, 548	210. 7
\$5 to \$7.....	3, 211	260. 4	555	20. 9	3, 766	281. 3
\$7 to \$10.....	2, 258	344. 5	402	22. 8	2, 660	367. 3
\$10 to \$15.....	696	246. 5	166	22. 3	862	268. 8
\$15 to \$20.....	189	146. 5	37	11. 5	220	158. 0
\$20 to \$50.....	148	334. 8	25	32. 2	173	367. 0
\$50 to \$100.....	8	94. 6	7	17. 0	25	111. 6
\$100 and over.....	8	71. 9	1	6. 6	9	78. 5
Total.....	16, 435	1, 741. 6	1, 724	140. 6	18, 159	1, 882. 2

The source of the difficulty in the income splitting approach is that differentiation of family size is made through the rate structure rather than through the personal exemptions. It would be possible to differentiate among taxpayer units by varying the personal exemptions with the size of income as well as the number of persons in the unit, with both a minimum and maximum. This procedure could be used to achieve almost any desired degree of differentiation among families, while avoiding most of the problems and anomalies produced by income splitting. Excerpts taken from Chapter 4, The Individual Income Tax Structural Problems, The Family—pages 81-84.

Mr. McCARTHY. Mr. President, I ask unanimous consent that there also be printed in the Record a brief review and evaluation of the income-splitting provision in U.S. income tax law, by Joseph Pechman of the Brookings Institution. The excerpts are taken from his book, "Federal Tax Policy," published in 1966 by the Brookings Institution.

There being no objection, the material was ordered to be printed in the Record, as follows:

FEDERAL TAX POLICY

During most of the history of the income tax, differentiation for family responsibilities was made among taxpayers through the personal exemptions. More recently, there has been a trend toward different tax rates to provide additional differentiation, particularly in the middle and higher tax brackets. In the United States and West Germany this has been accomplished by adoption of the principle of "income splitting" between husband and wife. In France, income splitting is permitted among all family members. Other countries achieve a similar objective by providing separate rate schedules for families of different size.

The adoption of income splitting in the United States arose out of the historical accident that eight states had community property laws which treated income as if divided equally between husband and wife. By virtue of several Supreme Court decisions, married couples residing in these eight states had been splitting their incomes and filing separate federal returns. Shortly after World War II, a number of other states enacted community property laws for the express purpose of obtaining the same advantage for their residents, and other states were threatening to follow suit. In an effort to restore geographic tax equality and to prevent wholesale disruption of local property laws and procedures, the Congress universalized income splitting in 1948.

The effect of income splitting is to reduce progression for married couples. The tax rates nominally begin at 14, 15, 16, and 17 percent on the first four \$500 segments of taxable incomes and rise to 70 percent on the portion of taxable incomes above \$100,000. A married couple with taxable income of \$2,000 splits this income and applies the first two rates to each half; without income splitting, the first four rates would apply to this income. Thus, whereas the nominal rate brackets cover taxable incomes up to \$100,000, the actual rates for married couples extend to \$200,000. The tax advantage rises from \$5 for married couples with taxable income of \$1,000 to \$14,510 for couples with taxable incomes of \$200,000 or more. In percentage terms, the tax advantage reaches a maximum of almost 30 percent at the \$24,000 level.

The classic argument in favor of income splitting is that husbands and wives usually share their combined income equally. The

largest portion of the family budget goes for consumption, and savings are ordinarily set aside for the children or for the enjoyment of all members of the family. Two conclusions follow from this view. First, married couples with the same combined income should pay the same tax irrespective of the legal division of income between them; second, the tax liabilities of married couples should be computed as if they were two single persons with their total income divided equally between them. The first conclusion is now firmly rooted in our tax law and seems to be almost universally accepted. It is the second conclusion on which opinions still differ.

The case for the sharing argument is most applicable to the economic circumstances of taxpayers in the lower income classes, where incomes are used almost entirely for the consumption of the family unit. At the top of the income scale, the major rationale of income taxation is to cut down on the economic power of the family unit, and the use made of income in these levels for family purposes is irrelevant for this purpose. Obviously, these objectives cannot be reconciled if income splitting is extended to all income brackets.

The practical effect of income splitting is to produce large differences in the tax burdens of single persons and married couples, differences which depend on the rate of graduation and not on the level of rates. Such differences are difficult to rationalize on any theoretical grounds. Moreover, it is difficult to justify treating single persons with families more harshly than married persons in similar circumstances. As a remedy, widows and widowers are permitted to continue to split their incomes for two years after the death of the spouse, and half the advantage of income splitting is given (through a separate rate schedule) to single persons who maintain a household for children or other dependents or who maintain a separate household for their parents. This is, of course, a makeshift arrangement which hardly deals with the problem satisfactorily. For example, a single taxpayer who supports an aunt in a different household receives no income splitting benefit; if he supports an aged mother he receives these benefits. There are growing pressures on the Congress to treat single persons more liberally—by liberalizing the head of household provision, increasing their exemptions, and other devices.

One of the major reasons for acceptance of the consequences of income splitting may well be the fact that personal exemptions do not provide enough differentiation among taxpayers in the middle and top brackets. Single persons, it is felt, should be taxed more heavily than married couples because they do not bear the costs and responsibilities of raising children. But income splitting for husband and wife clearly does not differentiate among taxpayers in this respect since the benefit is the same whether or not there are children.

Mr. McCARTHY. Mr. President, I am certain the Committee on Finance will give careful consideration to this measure and I hope, in view of commitments made in the past in connection with the "Head of household" provision, will be prepared to support this most important modification of the present income tax code.

Mr. RIBICOFF. Mr. President, will the Senator yield?

Mr. McCARTHY. I yield to the Senator from Connecticut.

Mr. RIBICOFF. Mr. President, I wish to commend the distinguished Senator from Minnesota for taking up the fight in behalf of one of my constituents, Miss Vivien Kellems. The Senator from Minnesota has been in the forefront of this fight for many, many years. He has been a lone voice, receiving very little support from anyone else in the executive branch or in the legislative branch.

I will certainly be pleased, as a member of the Committee on Finance, to support the Senator's efforts to bring justice in this important field.

Mr. McCARTHY. I thank the Senator. I might note that Mr. Cohen, Assistant Secretary of the Treasury for fiscal policy showed interest in—not the bill I am introducing today—but in the other provisions we talked about relative to the tax burden on single persons. I hope he will support this measure. The Ways and Means Committee responded and I hope the Committee on Finance will respond.

ABM

AUTHORIZATION OF APPROPRIATIONS FOR FISCAL YEAR 1970 FOR MILITARY PROCUREMENT, RESEARCH AND DEVELOPMENT, AND FOR THE CONSTRUCTION OF MISSILE TEST FACILITIES AT KWAJALEIN MISSILE RANGE, AND RESERVE COMPONENT STRENGTH

The Senate resumed the consideration of the bill (S. 2546) to authorize appropriations during the fiscal year 1970 for procurement of aircraft, missiles, naval vessels, and tracked combat vehicles, and to authorize the construction of test facilities at Kwajalein Missile Range, and to prescribe the authorized personnel strength of the Selected Reserve of each reserve component of the Armed Forces, and for other purposes.

Mr. McINTYRE. Mr. President, the rejection of the Cooper-Hart amendment to the military authorization bill is a hollow victory, indeed, for the administration.

The closeness of the vote reflects a widespread disenchantment, not only

with the Safeguard ABM system itself, but also with the unwillingness of the administration to move to a common ground that could accommodate a great many more Members of this body.

I, too, pride myself on being a team player, and there is much to be said for supporting your own President when he needs that support.

But, my colleagues from across the aisle, your President, our President, should have received much more support than he got here yesterday.

And he would have had the support, if this body had not been forced to choose between two extremes in this highly controversial issue.

For more than 2 months now, I have urged the administration and the separate factions in this body to move to a middle ground, a middle ground that would not ask the comprising of principle, a middle ground that would meet the basic concerns of both sides.

I have not had much success. Indeed, I have not had much encouragement at all.

But I am still determined to try to bring about some degree of unanimity, as opposed to the 51-to-49 division vote yesterday. I should like to see more unanimity in this body on this subject.

Accordingly, I am proposing my own amendment for consideration at this time.

My amendment, like the Cooper-Hart amendment, withholds authority to deploy interceptor missiles and limits work to research, development, testing, and evaluation.

My amendment also precludes expenditure of the \$600,000 earmarked for long-lead-time items for operational missiles, that is actually for the guidance system, holds back expenditure of some \$15 million already appropriated for ABM missile silo and launch construction, and freezes money already authorized for land acquisition and construction under the Sentinel ABM proposal and previous authorization acts.

Mr. President, I want to emphasize the point that my amendment would specifically say to the Pentagon, "You shall not dig any hole. You shall not pour any concrete in those silos." Congress says, "You shall not." That \$15 million is hiding in the pipeline from a previous authorization act.

On these points, then, there should be little disagreement on the part of proponents of the Cooper-Hart amendment, who obviously feel that any move toward actual deployment of interceptor missiles could escalate the arms race, jeopardize strategic arms limitation talks, and commit us to massive expenditures for an untried system of questionable feasibility.

My amendment sharply differs from the Cooper-Hart amendment in one crucial aspect, and that crucial aspect is where the research and development is to take place.

The Cooper-Hart amendment specifically prohibits research and development "at any proposed anti-ballistic-missile site."

My amendment, on the other hand, calls for research and development of radar and computer prototypes at the

first two designated anti-ballistic-missile system sites—Grand Forks, N. Dak., and Malmstrom, Mont.

Furthermore, my amendment's call for R. & D. on site takes into consideration two other important factors in this issue—timelag in possible deployment, and ultimate cost.

By doing the research and development in place, we minimize loss of time in deployment of the system—if and when that deployment ever becomes necessary.

I have been assured by Defense Department spokesmen that my proposal for R. & D. in place would cost us no more than 5 months, and perhaps as little as 3 months, in deployment lag-time, whereas the Cooper-Hart amendment would cost from 12 to 18 months.

This feature of my amendment, it seems to me, should offer real assurance to those Senators who fear that the longer the deployment timelag the greater the danger to our national security.

This feature, I might point out, should not be considered as either hawkish or dovish. I would hope that it is considered simply prudent.

It has other practical aspects.

My proposal promises additional savings by precluding future duplication.

If research and development are to be conducted elsewhere than at designated ABM missile sites, it follows that should deployment at some time become necessary, much of the work already done would have to be duplicated on site.

By doing R. & D. in place, we automatically avoid duplication in time, in effort, and in money.

Moreover, R. & D. on site offers the military an opportunity to gain experience in handling the radar and computer equipment under field conditions, again saving time, effort and money.

Everything considered, Mr. President, I still feel as I did July 28 when I stood here and expressed my belief that the McIntyre amendment provided the common ground we needed to close the national chasm over the Safeguard anti-ballistic-missile system.

Let me repeat what I said then:

I am not asking either faction to compromise principles on this issue. I am merely asking them to seek areas of agreement, and I sincerely believe there is a common ground which satisfies the basic concerns of both sides...

On the one hand, my amendment makes it absolutely clear that Congress is withholding authority to deploy the system, and it therefore prohibits construction of any operational ABM missiles or parts thereof. And it freezes money and authority which the Pentagon now has to build missile sites and to acquire land other than the two locations needed to conduct research and development in place.

And on the other hand, it authorizes research and development in place at Grand Forks, N. Dak., and Malmstrom, Mont. By so doing, it retains the option of deploying the system with minimal delay and at minimal cost should Congress later decide to deploy on the strength of new evidence of a clear threat to our deterrent.

Mr. President, one of the principal reasons why I have been sold on this point is that I do not believe, from the

evidence submitted to me as a member of the Armed Services Committee, that the deterrent which Secretary Laird and those who are for the system say is threatened, is really anywhere near in as much danger as they make it out to be.

And so, Mr. President, again I say, there is common ground waiting for those who seek practical resolution—for those who want to avoid a direct rebuff to the President—for those who want unity instead of division—the division we saw here yesterday on the floor of the Senate. That common ground is to be found in my amendment. I ask my colleagues to support it.

Now, Mr. President, there may be those who say, in view of the defeat of all amendments offered yesterday, why bother? Why try yet another amendment?

I have already pointed out why I believe that the President, who is about to embark on talks with the Soviet Union on arms limitations needs more than a two-vote margin of support in the Senate. This morning's Washington Post carries a lead editorial entitled "The ABM: Winners and Losers." I ask unanimous consent that the editorial be printed in the RECORD at this point.

There being no objection, the editorial was ordered to be printed in the RECORD, as follows:

THE ABM: WINNERS AND LOSERS

Yesterday's series of votes in the Senate on the authorization for the Safeguard ABM had something for everyone, but not nearly enough. For each side made its point in a way so limited as to render it useless. The President "won" with a show of weakness (a two-vote margin); his opponents "lost" with a show of strength—but nonetheless they lost. Despite all the last minute drama and legislative high-jinks, it had been evident for a couple of weeks now that the crucial vote on the Hart-Cooper amendment (permitting Safeguard research and development, but forbidding deployment in the current fiscal year) would be inconclusive. That is not only because yesterday's action was just the first in a series of votes yet to come. Should the President get to the end of the line in the Senate with such "victories" as this all the way, the result would still be inconclusive. For he will not have won what he wants or even what he needs.

That this would be so was foreseen by Senator Aiken a few weeks back, when he announced that he was opposed to the Safeguard authorization in its present form (though not yet committed to the Hart-Cooper approach) and when he offered to be the agent of some reasonable compromise. His vote projection may have missed the mark slightly, but his argument was sound:

"May I point out that if the United States enters into a conference with Russia looking to the control of armament and aimed at developing a less tense relationship between the two countries, that even though the legislation as written could be approved by as many as 51 or 52 votes in this Senate, which I doubt, we would be in an extremely weak bargaining position. I believe it is absolutely necessary for President Nixon to have a much larger vote of this Senate supporting him when we enter into such a conference."

Although we considered the provisions of the Hart-Cooper amendment—to which Senator Aiken finally repaired—too sweeping in their restriction, we believed he was right in urging an accommodation. We still do. There was plenty of room in the alternative language put forth by Sen. Thomas McIntyre for an accommodation to have been worked

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out—one that would not deprive the President of his option to proceed with the ABM (which was what he originally asked for) and yet which also would not have incorporated so firm and hard-to-reverse a commitment to the deployment of the system for the future. At that time, it was estimated on the Hill that Mr. Nixon might pick up between a dozen and twenty votes in this fashion, while relinquishing little that was of genuine importance. But the efforts of Senator Alken, Senator Brooke and other ABM opponents to help bring about this result were rebuffed. The Administration determined to go for a close, rough victory in the Senate.

It could do worse than to ponder the small benefits it has gained. Even with a considerably larger favorable vote in the House, the Administration will not have achieved its principal aims. A sharply and closely split Senate vote on a question that has been made—as this one has been—a test of support of the President on a national security matter, can hardly be of much value in the international bargaining arena; it is not a lot to take to the arms talks. And its practical benefits are as limited as its diplomatic value. Mr. Nixon will continue to have the opposition of a huge portion of the Senate to this weapons system, and those legislators can be counted on to fight the Safeguard every step of the way via appropriations and other measures. So it is still by no means clear that his prevailing in the Senate on these early votes guarantees him the deployment option he so emphatically wants.

Now Senator McIntyre's measure is before the Senate. It is likely to enjoy the support of some Senators who voted for the Hart-Cooper amendment and who now are prepared to take this next step up toward the President's position. If Mr. Nixon could at this late date bring himself to endorse some version of this modified language and encourage his supporters to follow suit he could conceivably transform his narrow squeak into something more like a victory. Such a step could provide him the degree of Senate support he so evidently needs to move with confidence in the field of arms control—not to mention the field of national security and defense.

Mr. McINTYRE. Mr. President, there is yet another reason why I believe this effort to amend the bill before us should be made, and to those who yesterday supported the Cooper-Hart amendment, it is an important reason. It deals with the responsibilities of the Senate, and the Congress, under the Constitution.

Mr. President, section 8 of article 1 of the Constitution of the United States clearly and explicitly states where in the Government of the United States the responsibility is laid for raising and supporting armies, providing and maintaining navies, and making rules for the Government and regulation of the land and naval forces.

Section 8 places these responsibilities exclusively in the Congress.

One of the issues which has been raised in the consideration of the authorization for an anti-ballistic-missile system is how the constitutional responsibilities of section 8 should best be carried out.

Some Members of the Senate, with whom I respectfully disagree, believe that the Congress can meet its responsibilities under the Constitution by holding committee hearings, arriving at understandings covering broad, general areas with the Department of Defense, and enacting authorization bills under broad headings

which are specific only in the dollar amounts involved.

It is my opinion that this procedure, while possibly appropriate in wholly non-controversial areas, falls far short of the minimum constitutional requirements in those areas where controversy in the Senate would seem to require that congressional action be precise and specific.

Clearly, the voting which has taken place so far indicates that there is widespread disagreement in the Senate over the policy to be pursued by the military regarding any anti-ballistic-missile system. The Congress must exercise its control over this proposal.

I do not wish to get into a semantics argument about control. Certainly there is a measure of congressional control over the activities of the executive branch of the Federal Government in the setting of limits on the amount of money they spend, through guidelines contained in committee reports, and from legislative history as the legislation progresses through the Congress.

However, is this really control in the strictest meaning of the word? The Congress gives a great deal of latitude in what the various departments and agencies can do. The Congress allows, in most cases, the transfer of funds within the various departments and agencies at the discretion of the secretaries, administrators, and other agency heads. Of course, in most such cases, the transfers require either notification to or approval from the appropriate congressional committees. But even in such cases, the Congress as an institution is not required to make a decision.

Mr. President, the pending legislation in the Senate, the authorization bill for procurement and research and development for the Defense Department, contains authorizations amounting to more than \$20 billion. The bill is four pages in length.

At the same time, a typical housing authorization contains authorization for about \$4 billion, yet runs 65 pages in length. It spells out in great detail what can and cannot be done on housing.

So we in the Congress are quite familiar with the idea of exercising our constitutional controls through detailed legislation.

Mr. President, what I propose is that, particularly in this area where so much controversy exists, the Senate be more precise about its authorization than we are in the bill before us. I propose that we spell out, so that all of the American people can know, just what we are and are not permitting the Department of Defense to do.

The close vote by which the Cooper-Hart amendment was disposed of has implications in this regard which should be carefully noted. The fact is that the Senate is in great disagreement among itself about precisely what our policy should be. In such a case we have a greater responsibility than usual to spell out in detail just precisely what it is that we are approving.

Certainly the legislative history of this proposal is now unclear. Officials of the Department of Defense have stated that they are asking for little more than an

intensified research and development program. The Secretary, I believe, has said that approval of this bill means the decision has been made to proceed with the full Safeguard program. And various views in between have been stated.

What my amendment intends to do and what I propose is that the Congress tell the Department of Defense, in the explicit language of legislation, just what our decision is.

My proposal for congressional decision is to permit the research and development of the Safeguard system's radars and computers in place in the first two designated ABM sites, and at the same time, clearly and explicitly prohibit the Department of Defense from taking any steps to deploy an ABM system.

In short, I propose that we exercise our constitutional responsibility of control fully, and not exercise it in the typical manner—year after year I have seen it—of handling military authorizations, where all of the basic decisions are left to the military departments.

I reserve so much time as I may have left.

Mr. STENNIS. Mr. President, I ask the attention of all Senators here. I am going to make a brief outline of what I think is the issue. First, however, I want to say that the Senator from New Hampshire has rendered a truly wonderful service on this bill as a whole. He has been to the very heart of the research and development program, which is the largest item in one category in the entire bill, and has done an outstanding job, as reflected by the report and by the bill, and as will be shown in further arguments and debates on items in the bill. I not only compliment him, but I thank him for that.

Mr. President, this matter is relatively simple. One word, though, about what the Senator said about the form of the bill, the few pages in it. There is a long legislative pattern behind that. With reference to the military construction bill—and that is the bill in the House the Senator referred to—they spell out and we spell out what we call line items; even a runway being extended a few hundred feet would appear as a line item, with a definite authorization for that purpose. That is all right. That is the way they keep up with it.

Over here our system is nonetheless complete and nonetheless specific. The same rule applies in the House; and in the Senate, with reference to these procurement items, which are so numerous, and the research items, which are so numerous; we have the bill with a lump sum for each category before us now, and the appropriation bill carries on in the same way. Many of the items in this bill will still be in the abbreviated bill. This is important, Mr. President. Back in the hearings, the testimony, the exhibits, the files, there is a minute history and a specification of all these dollars, item by item.

That is brought forward in summary in the report, and it is just as definite, as specific as it can be made. That is true of the House bills on authorizations and appropriations, and I have never known of an instance where the Defense

Department, under any Secretary, has violated that reported record, the legislative history, the reports, in any way.

So Congress is being just as specific under one system as it is under the other. There is no doubt about it now; we know exactly what is authorized here in phase I. The Department of Defense cannot be misled. They cannot be in error. They cannot avoid knowing, and we know it; your committees know it, and we keep a surveillance over these things. That is more or less the law of necessity that we follow here, in having the bill abbreviated; but the record is totally complete.

The Senator from New Hampshire, as I have stated, has done fine work on this measure. He mentioned the fact that in his mind, the threat has not been proven to be so great, and that he did not have as strong a conviction on that as some of us do, and therefore did not feel this urgency for the deterrent which is believed necessary by some Senators. That is a clear-cut statement, and I commend him for bringing out exactly how he feels. But I think that explains why he wants to put these limitations on this program.

If I may have the attention of Senators, I have a key point here: Just a few hours ago, 51 Senators put their stamp of approval on phase I. That was the effect of the vote. Phase I is what is in the bill with reference to the ABM.

All the way through, my position and my belief has been—and it is shared by a majority of the committee—that we will stand on phase I, that that is what is needed. That is why there was no committee amendment to the House bill, and why no amendment by the committee was offered from the floor. We have stood on phase I; and that is the very thing that was approved yesterday in writing by the recorded vote of the Senate.

Phase I is limited, just as low as it can be limited if we are going to move at all beyond pure research and development. The McIntyre amendment comes along, though, and goes back behind what was done yesterday, and cuts some pieces out of phase I. That is a quick summary of what it does. It goes back into the matter and takes out a part. The main thing is no silos, under the McIntyre amendment, even for the two missile sites in phase I.

No silos for missiles in phase I; that is the major point involved in this amendment, as I see it. We had a very fine debate on this issue, with everyone stating his sincere convictions, and amendments in varying degrees proposed; and then the vote was taken, and the decision was made. My point is, let us not go back into the phase I. I stand on phase I and on phase I alone. That has been my position.

Mr. FULBRIGHT. Mr. President, will the Senator yield?

Mr. STENNIS. Yes; I yield to the Senator.

Mr. FULBRIGHT. Just to clarify for my information a little bit more the distinction, what is the difference between what the Senator calls phase I and what is allowed by the McIntyre amendment, or, to put it another way, how does the McIntyre amendment restrict or alter

phase I? Is it only as to the silos, did I understand the Senator to say?

Mr. STENNIS. Well, there may be other restrictions.

Mr. FULBRIGHT. I am very much interested as to what the distinction is.

Mr. STENNIS. I said that was the major one. According to my notes, the McIntyre amendment leaves in all the money except \$2 million. That \$345.5 million, it cuts down \$2 million, in round figures, but it leaves in \$343.5 million, which, by the way, the Cooper-Hart amendment would have taken out.

As to how that \$2 million would be spent, that is the \$600,000 that we have referred to here in the base about the long leadtime items with reference to the missile itself, which is a very small item, and the \$1.4 million to make up the remainder of that \$2 million was for the launch facilities. So that is the difference with reference to the money: the launch facilities and the \$600,000 item.

Leaving out the silos for the missiles for phase I, it seems to me that that is the most important item that could be affected.

Mr. FULBRIGHT. This is what confused me; perhaps I do not understand it: the missiles the Senator means are additional silos for Minuteman?

Mr. STENNIS. No, no.

Mr. FULBRIGHT. What are the silos for, that the Senator says will be prohibited?

Mr. STENNIS. These silos are for the Spartan missiles.

Mr. FULBRIGHT. Oh.

Mr. STENNIS. The Spantan missiles themselves. If I used the word "Minuteman," that was in error. I do not think I did.

Mr. FULBRIGHT. It is Spantan missiles?

Mr. STENNIS. It is Spantan missiles, yes. I said silos, but it is for the Spartan missiles.

Mr. FULBRIGHT. Then the restriction that the Senator objects to in the McIntyre amendment is no provision for silos for Sprint missiles or Spartan missiles, or both?

Mr. STENNIS. Yes, both of them.

Mr. FULBRIGHT. Both?

Mr. STENNIS. Some of both of them, yes.

Mr. FULBRIGHT. Otherwise, you get everything else phase I provides for?

Mr. STENNIS. It is the money I have talked about.

Mr. FULBRIGHT. Is that money to buy land, sites, and so on, build roads, and all that?

Mr. STENNIS. No, this money that I refer to is not to buy land or anything like that.

Mr. FULBRIGHT. Is there any money to buy land in the bill?

Mr. STENNIS. No, there is not any money in this bill to buy land. Not any.

Mr. FULBRIGHT. Well, then, I do not see any great difference between the McIntyre proposal and phase I of the administration's bill.

Mr. STENNIS. Well, there is a great big difference here with reference to these silos for the Spartan and Sprint missiles.

Mr. FULBRIGHT. The Senator thinks it is a very substantial difference?

Mr. STENNIS. Yes, I do. I think it is a tremendous difference.

Mr. FULBRIGHT. If it is that big a difference, I might be inclined to vote for the McIntyre amendment. I was not sure there was any difference. I was under the impression that it was about the same as what is in the bill. That is what I wanted to tie down.

Mr. STENNIS. I think there is an appreciable difference.

Mr. FULBRIGHT. I see. A big difference?

Mr. STENNIS. And I think the matter has really been passed on by the vote yesterday.

Mr. FULBRIGHT. It was hard for me to see what the difference is, but if it is a real restriction, I think I shall be inclined to vote for it.

Mr. ERVIN. Mr. President, will the Senator yield?

Mr. STENNIS. I yield to the Senator from North Carolina.

Mr. ERVIN. Mr. President, the McIntyre amendment, as I understand it, would allow us to proceed with the development and testing of the ABM and would allow us to acquire sites for the ABM. However, it says, "You cannot install them so they can be used."

It is like the old story of the colloquy between the mother and the daughter.

The daughter said, "Mother, may I go swimming?"

The mother said, "Yes, my darling daughter. Hang your clothes on the hickory limb, but do not go near the water."

That is what the McIntyre amendment proposes.

Mr. STENNIS. Mr. President, I think that the matter has been fully covered and that the items are very clear in the report and the analysis of the Senator's amendment.

I think the whole matter is before the Senate. If anyone wants some time, I will be glad to yield to him at this time.

Mr. THURMOND. Mr. President, will the Senator yield?

Mr. STENNIS. Mr. President, I yield 5 minutes to the Senator from South Carolina.

The PRESIDING OFFICER. The Senator from South Carolina is recognized for 5 minutes.

Mr. THURMOND. Mr. President, I have great respect for the distinguished Senator from New Hampshire. However, I think it would be a great mistake if the Senate were to adopt his amendment.

The approach adopted in the proposed amendment is such that it will cast a cloud of ambiguity over the entire Safeguard developmental effort. The body of the authorization bill authorizes certain expenditures for the Safeguard system in general terms; the proposed amendment purports to redefine and limit this authority by an enumeration of activities for which funds may be used. By implication, therefore, expenditure for anything that does not appear on the list of enumerated activities is unauthorized. The list contained, and the language used, in the amendment appears, on examination, to be so incomplete and ambiguous as to raise serious difficulties with implementation and to cast doubt on the authority to conduct certain nec-

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essary developmental and preproduction activities.

The following are examples of the practical problems of interpretation and ambiguity that would arise under the amendment:

First, S. 2546 in its title states that the authorization of test facilities at Kwajalein is a specific purpose of the bill and this is implemented by section 203. Yet the absence of language in subsection (a) of the amendment specifically authorizing funds to be spent for such facilities and R.D.T. & E. effort on radar and missiles at Kwajalein, coupled with the further limitation in subsection (b) forbidding the installation of "equipment described" in subsection (a) (1)—that is, radars, computers and related electronic equipment—at "any proposed anti-ballistic-missile site" other than Grand Forks and Malmstrom, could lead to the conclusion that construction and installation of facilities at Kwajalein is unauthorized. These additional facilities at Kwajalein are required for essential system tests with radars and missiles.

Second, Likewise, the provision in subsection (b) limiting the installation of "equipment described" to two specified sites may preclude the establishment of essential modifications to training facilities; it may also prohibit the modification of existing command and control facilities and the production and installation of the tactical software control site at Whippany, N.J., which is essential to the developmental testing program.

Third, Subsection (a) (2) raises even more serious ambiguities. This is the only portion of the amendment dealing with what is permitted in the way of preproduction and production type activity. It permits "preproduction expenses"—an ambiguous term—but only for missiles. Considering that subsection (a) (1) permits funds to be used only for research, development, testing, and evaluation of system components such as radars, computers, and related electronic equipment, but not for production of these items, it is unclear how funds, particularly PEMA—procurement equipment missiles, Army—funds, can be used to procure these items for the Grand Forks and Malmstrom tactical sites. The amendment is silent with respect to production engineering and preparation for manufacture of nonmissile items such as radars and computer. Absence of such authority would have a serious impact on timely future deployability of the system.

Fourth, There is no specific authorization for funds to be used for development or procurement of necessary and ancillary supporting facilities that are not "related electronic equipment."

Fifth, This amendment could be interpreted as preventing the accomplishment in fiscal year 1970 of survey, advanced engineering and site selection for phase II sites. If this site selection activity is not carried out in fiscal year 1970 on several of the phase II sites, there will be several months of delay in proceeding with these sites if their later deployment is approved.

Mr. President, I am convinced that there should be no further delay. As I have stated heretofore in debate in the

Senate, we have delayed now for longer than we should have.

The Soviets are at least 5 years ahead of us. They have an ABM system already built, developed, tested, evaluated, and deployed. Their system is in operation now.

Mr. President, again I repeat that this is a purely defensive weapon. If we build the ABM weapon and the enemy never sends a missile over here, we shall not have to use it. This would be well and good. We shall have protected our people. However, if we build the ABM missile and the enemy does send missiles here to destroy our people and our country, we shall then be most thankful and the people of America will be most grateful, that the United States had the foresight to build an ABM system.

Mr. President, I hope that the Senate will not delay longer moving forward to deploy this important weapon which will mean so much to the national security of our Nation.

Mr. McINTYRE. Mr. President, I yield myself 5 minutes.

The PRESIDING OFFICER. The Senator from New Hampshire is recognized for 5 minutes.

Mr. McINTYRE. Mr. President, first I thank the distinguished chairman of the committee, the Senator from Mississippi (Mr. STENNIS) for the kind remarks he has made concerning my efforts on this particular authorization bill.

It is no news to Members of the Senate that working with the Senator from Mississippi is an experience that helps any man become a better Senator. And it is an experience in which one always finds himself being handled fairly and squarely.

I find it a great honor to serve on his committee.

With reference to the remarks of the distinguished Senator from South Carolina, I feel that he has made a rather tortured criticism of the amendment as offered.

On page 2 of the amendment where we talk about restricting the use of anti-ballistic-missile sites, we are talking about the fact that the overall ABM proposal has many proposed antiballistic missile sites.

The amendment restricts the use of these sites specifically. And it says so clearly and unequivocally on page 2 that the equipment described in the first subsection—the radars and the computers—that eventually will be moved in there are restricted to only two proposed antiballistic missile sites at which they may be installed—one at Grand Forks Air Force Base, N. Dak., and the other at the Malmstrom Air Force Base, Mont. There are no restrictions on the use of sites such as Kwajalein for research and development, sites which are not intended to be part of a deployed system.

In his remarks, the distinguished Senator from North Carolina referred to a young lady who wanted to go swimming, and her mother advised her that she could hang her clothes on a hickory limb, but that she should not go near the water.

I suppose his criticism is that my amendment is restraining, that my

amendment is trying to control. But the experience we have had in the last 3 or 4 years indicates that once the Pentagon has hold of such a mammoth project as this anything can happen—as our distinguished chairman knows, we face overruns in the C-5A of over \$2 billion.

If Secretary Laird meant what he said when he said that a vote for the bill is a commitment to build this system, goodness, gracious, what may be the overrun on the ABM system.

So I am surely like the mother who says to her daughter:

Hang your clothes on a hickory limb.

My amendment is intended to be restrictive, by specifically mentioning in the amendment what can and cannot be done.

Mr. FULBRIGHT. Mr. President, will the Senator yield?

Mr. McINTYRE. I yield.

Mr. FULBRIGHT. The Senator has raised a very critical point. From one point of view, as the Senator from Mississippi and the Senator from New Hampshire have said, it is restrictive. From the other point of view, it authorizes two bases. I came to the Chamber expecting to vote against it, on the ground that I do not wish to be responsible for authorizing, specifically and affirmatively, two bases which are intended to be operative bases, evidently; otherwise, they would not be at these particular points. So I did not want to be responsible for someone saying to me next year, "Look, you voted for this silly system that is obsolete, and you wasted \$10 billion." Insofar as I can, I do not want to have to say, "Yes, I did." I have made enough mistakes without knowing it. Here is one that I know is a mistake—to throw \$6, \$10, or \$20 billion on two, five, or 10 bases. This is the point at issue.

If I could be convinced that the amendment truly is restrictive in a meaningful way, and I could justify that in the future, as I have said to the Senator from Mississippi, I would be inclined to support the Senator, because that is what I want to do. I tried that yesterday. We tried to restrict this whole system. Now the Senator has fallen back into a fallback position, and the Senator says he really restricts.

I wish the Senator would elaborate on that. What could I say 5 years from now, when this thing perhaps will have been proved to be a wholly ineffectual system and a waste of money? How could I then defend myself against the charge that I voted for the deployment in two bases and wasted \$5 billion?

Mr. McINTYRE. Let me respond to the Senator from Arkansas by saying that the amendment is in the nature of a compromise. It tries to give to those who feel as deeply as the Senator from Arkansas some of the restrictions they would like to see applied on this system, what we might consider the future mammoth sophisticated defensive weapon. At the same time, it turns to the proponents and says: "We recognize that you may be right about a threat we may have to meet in 1975. So"—if I may speak metaphorically—"while we, Congress, take the reins on this ABM—we give you a

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little leadtime now. Go ahead and install"—I prefer the word "install" rather than "deploy"—"at two sites"—and I prefer "sites" rather than "bases."

The PRESIDING OFFICER (Mr. Cotton in the chair). The time of the Senator has expired.

Mr. McINTYRE. I yield myself 5 additional minutes.

We say: "All right, go ahead. You say you have the technological base; you know what you are going to do to the MSR and R. & D. Start to put your footings in and start to plan, but keep it completely at computers and radars. Do not talk about any missilery or any weapons."

This resolves two things that bothered me with respect to this issue. The first is that I could not quite accept the severity of the threat. It gives me another year to examine the hard facts of what those SS-9's are all about. The second is that it gives us a chance to see if, somehow, the Soviet Union can sit down at Geneva with us and we can begin to talk sense about missile limitation.

So in the bill, in this amendment, we have tried to say—and I think we say it succinctly and explicitly—what the Pentagon can do.

As the Senator from Mississippi pointed out, there is a substantial difference so far as the proponents are concerned, because they do not like this control, and there is this \$15.6 million—it is a small saving in this day.

Mr. FULBRIGHT. It is very small in this bill.

Mr. McINTYRE. But if we examine the practical effects of this amendment in view of our experience this year, what do we see? If we examine where the opponents of the ABM were 2 or 3 months ago, with 20 or 30 votes, and where they crested yesterday at 49 or 50, my amendment gives those who oppose this mammoth system the opportunity to reaffirm, 1 year from today, when the same authorization bill is before the Senate again, that, No. 1, they have broken the precedent. We no longer have four pages with big numbers. We have in here specific language prohibiting deployment. It gives the opponents an opportunity to say: "Let us look again at the picture. Our intelligence says that the threat is no longer so obvious. The SALT talks are going well."

Why should not this area of the compromise be attractive to those who want to restrict, who want to hold back on this ABM system? I think it is illogical for those who do not want to see the ABM deployed, to turn around and vote "nay" on this amendment, when such a vote would in effect, approve of deployment, and give the Pentagon its usual ability to run the show.

Mr. FULBRIGHT. On the question of reevaluation next year, is there any way we can get an evaluation by anyone other than people who are directly interested in this deployment?

The Senator from New Hampshire will recall the suggestion made by Dr. Killian in one of our hearings, that there should be an independent, non-Pentagon board of scientists and qualified people to evaluate the effectiveness of this kind of system. Does the Senator recall that?

Mr. McINTYRE. Yes; I recall.

Mr. FULBRIGHT. Is there anything in the bill, or would it be inconsistent with the Senator's amendment, that, after this year, somebody other than Dr. Foster, for example—who is intimately concerned and committed to this—could evaluate whether or not this business is practicable?

Mr. McINTYRE. The Senator has in mind a forward-looking commission. I could not agree that we stop everything now and have a commission decide what we should do on this bill.

Mr. FULBRIGHT. The Senator is saying then that we should hold up nothing except what he specifies for a year, and take another look a year from now?

Mr. McINTYRE. That is what I propose.

Mr. FULBRIGHT. Will the same people be looking at it this time as have been looking for the past 25 years and have spent over a thousand billion dollars, or will it be some independent board of qualified people, such as Dr. Killian and his associates, people who are not in the employ of the Joint Chiefs of Staff? That kind of review would reassure me that we would at least have some kind of objective judgment upon this kind of system.

Mr. McINTYRE. I have no opposition to the use of a board of experts—perhaps a blue ribbon board—that could be an adjunct to our Defense Department.

I do not have the misgivings about our Joint Chiefs of Staff that the Senator does. I have found them, over the years, to be extremely able and capable. But that is really irrelevant to the amendment.

Mr. FULBRIGHT. I do not want to be misunderstood. In their performance of their functions, the Joint Chiefs of Staff are very able. I make no criticism whatever of the Joint Chiefs of Staff.

The PRESIDING OFFICER. The time of the Senator has expired.

Mr. FULBRIGHT. I was directing my remarks to the judgment on this missile system, which I do not think is the primary baby of the Joint Chiefs of Staff. It is primarily the baby of certain scientists, led by Dr. Foster, and they are people who are inordinately interested in research of all kinds. There are 12 different kinds of missiles in this bill aside from the ABM—perhaps more, but at least 12. Perhaps there are 24. There are four pages dealing with it. These are gimmicks in which they are interested.

It is similar to when I first flew a kite. An extremely interesting concept of aerodynamics is involved in what makes a kite fly.

I never did understand it. Maybe I do not understand it yet, but it was interesting.

Dr. Teller expressed it best of all in connection with the nuclear test ban treaty when he said that nothing should stand in the way of research and the pursuit of knowledge, not even 100 or 200 million Americans or anybody else. He was against any kind of restraint upon research and the pursuit of knowledge, and this is understandable.

I am not criticizing them for that. We should recognize that is their attitude;

that they are not responsible for the solvency of the United States or they are not responsible for judging this activity or the other. They have their responsibility and do it. I am not criticizing them. Our responsibility is different. The Senate should exercise its responsibility and make this kind of policy judgment.

If the Senator's amendment is a substantial restriction upon the deployment of a system which is very dubious, I am inclined to support it.

Mr. McINTYRE. The Senator should support it because, as the Senator from Mississippi said, there is a difference.

Mr. FULBRIGHT. This is where I came in. I thought the Senator was affirming this program and I was going to vote against the amendment. Now I am puzzled.

Mr. McINTYRE. This amendment moves in the direction the Senator is talking about, in the direction of restrictions; giving time for a blue ribbon committee or board to overlook the matter and give us advice.

Mr. FULBRIGHT. I wish that were possible.

The PRESIDING OFFICER. The time of the Senator has expired.

Mr. McINTYRE. Mr. President, how much time do I have remaining?

The PRESIDING OFFICER. The Senator from New Hampshire has 29 minutes remaining.

Mr. ERVIN. Mr. President, will the Senator yield for a question?

Mr. McINTYRE. I am happy to yield to the distinguished Senator from North Carolina.

Mr. ERVIN. Mr. President, I would like to ask the distinguished Senator from New Hampshire if the American people, acting under their Constitution, do not elect Members of the Senate and the House of Representatives to make decisions of the kind the Senator from Arkansas mentioned—not Dr. Killian or blue-ribbon commissions?

Mr. McINTYRE. I think that is an interesting question although, of course, the Constitution does so provide. However, I have to admit regarding questions which involve technology and scientific work, such as the ABM, that I need all the technical help and advice I can get. I have heard that same thought echoed in the discussions in this Chamber by others.

Mr. ERVIN. Cannot congressional committees obtain the testimony of Dr. Killian and others?

Mr. McINTYRE. That has been suggested.

Mr. ERVIN. I understood the Senator from Arkansas to suggest that the Senator from New Hampshire should amend his amendment to create a commission to safeguard the people of the United States against the Pentagon.

Mr. McINTYRE. If that is what the Senator from Arkansas meant I would have to disagree. I thought he was talking about a blue-ribbon committee that would be scientifically trained, which could objectively appraise this matter and report. I did not mean and I do not think the Senator from Arkansas meant to toss the decisionmaking process over to this blue-ribbon committee.

Mr. FULBRIGHT. The Senator is correct. During the hearings, Dr. Killian, who was an adviser in the Eisenhower administration, suggested this matter is dubious and questionable—and he took not nearly as strong a position as others. He said that certain aspects of this proposal, particularly the computers and radars, are not completed or designed and that before a decision is made it should be subjected to at least a year's study by qualified scientists as to feasibility, practicability, and operability.

This appealed to me as a very sound thing to do, but it has not been followed. The Senator will remember that last year I asked the chairman of the committee if his committee had hearings with any outside scientists before the committee. The only people brought before the committee last year were scientists on the payroll of the Pentagon, either direct or indirect. I say they cannot have an objective judgment. We were all looking for objectivity as to workability.

Mr. McINTYRE. I do want to say that this year in committee hearings, both public sessions and executive sessions, I really appreciated the appearance of the various experts in this field who testified pro and con. It was helpful to me in trying to decide this difficult question.

Mr. FULBRIGHT. I understand. The chairman of the committee said last year he was going to do it. I think this is a great step forward and it is much better to have a variety of opinion and not just opinions of employees of any organization, whether it be the Pentagon or any other organization.

Mr. CASE. Mr. President, will the Senator yield?

Mr. McINTYRE. I yield 2 minutes to the Senator from New Jersey.

Mr. CASE. I thank the Senator. I wish to approach the matter from a slightly different angle. I am impressed with the distinguished Senator from New Hampshire, and, to some extent, I think he has been joined by the Senator from Massachusetts in trying to work out something that more closely meets the feelings on all sides on this important matter.

But when the Senator put the emphasis on the radars and computers, and excluded the deployment of the missiles in this coming fiscal year, many of us got a uniformly adverse reaction on the ground that putting these computers and radars in place at a very great cost would be a deterrent to the kind of research for the design of a system which would be likely to work better than the Safeguard for the purpose of defending missile sites. The Senator from New Jersey has found that argument a very persuasive one, and up to now at least is disposed to vote against the amendment of the Senator.

I would be glad to have the Senator respond.

Mr. McINTYRE. Mr. President, I yield myself 2 minutes to respond.

I think the Senator has put his finger on a key point as far as my amendment is concerned. I recognize the difficulty many Senators had with what I would call the credibility of the radars, MSR and PAR. But I had to weigh in my mind

the threat, the possibility of facing something in the mid-1970's which America would have to react to, something the Soviets could do. I said to myself—and the Senator knows how much time is consumed on these projects—let them install the radars. It can't be completed this year. There will only be footings in there nine months from now. But give them authority to install radars and in the meantime carry on the research. I am trying to accommodate the possibility of a threat along with trying to restrict the unleashing of another gigantic weapon.

Mr. FULBRIGHT. Mr. President, will the Senator yield?

Mr. McINTYRE. I yield 1 minute to the Senator from Arkansas.

Mr. FULBRIGHT. The best authority, even the one recommended by the Under Secretary of Defense, Dr. Panovsky, said that the present radar, the radar as now designed, was designed for the old Sentinel and is utterly useless for the Safeguard. I think I am not overstating what he said. He said that it would be foolish to install the present MSR. He thought this was to be purely an experimental installation to see if a workable MSR could be designed, and that it was not intended to install one until it was developed.

Mr. McINTYRE. Actually, the one being developed is subject to change day by day as improvements are made. MSR's or radars are going to do this job. One is under test in Kwajalein.

Mr. FULBRIGHT. They were for the Sentinel. They were not designed for Safeguard. Is not that correct?

Mr. McINTYRE. The Senator is saying that there should not be any installation.

Mr. FULBRIGHT. It is purely a redesigning proposition. They should not be installed until they are redesigned.

Mr. McINTYRE. I understand. But this amendment is in the nature of a compromise. It tries to reach a common ground and tries to impose some of the restrictions the Senator would like to have.

Mr. President, does the Senator from Massachusetts desire to have me yield time to him?

Mr. BROOKE. Yes.

Mr. McINTYRE. I am happy to yield to the distinguished Senator from Massachusetts.

Mr. President, how much time remains to me?

The PRESIDING OFFICER. The Senator from New Hampshire has 19 minutes remaining.

Mr. McINTYRE. I yield 10 minutes to the distinguished Senator from Massachusetts.

Mr. BROOKE. Mr. President, we have now brooked the near-deadlock on the ABM issue which many have foreseen for weeks. So far as this issue itself is concerned, yesterday's decisions may well prove to be a pyrrhic victory for the proponents and a futile effort for the opponents of ABM. But however one describes the outcome, no one can feel satisfied that so grave a question, of such immense implications to this Nation and the world, has become the focus of such serious division in our ranks.

From the days of the Founding Fathers

on, a cardinal rule of American politics has stressed the importance of a strong domestic consensus on issues affecting the national security and foreign policy of the United States. The need to develop such a consensus has been well understood by virtually every generation of Americans. We all have known that the capacity of representative government to deal with other governments, particularly totalitarian regimes, may be badly impaired by internal dissension. We now have laid bare the full extent of disagreement within the Senate over the proposed deployment of the Safeguard system.

But, as I argued in yesterday's debate, there is neither necessity nor wisdom in leaving the issue where it now stands. The narrow verdict rendered yesterday should not be allowed to stand. It serves neither the administration's nor the Nation's interest to leave the issue at the point of maximum tension. Such an outcome can only damage the administration's authority and capacity to pursue a vigorous diplomacy in this realm. It is likely to portend repeated conflict and disagreement on successive issues related to the ABM. It has already been made clear that the struggle will continue through the appropriations process.

The lean majority that held sway in this body yesterday faces a dismal and draining prospect indeed: it will always have to have its troops at the ready for any later vote bearing on the ABM, for there is always the prospect that, if illness or absenteeism strikes their ranks, the balance will shift abruptly and decisively against the ABM. I ask the Members of the Senate who prevailed yesterday if that is really their preferred course.

If the present decision on the ABM is left intact and becomes the sole measure of Senate sentiment on this question, the entire tenor of legislative-executive relations may be adversely affected. A bloody, protracted, and maiming battle on the ABM cannot serve the goal of healing the domestic divisions which have so impaired our ability to meet our responsibilities at home and abroad.

In short, as Senator AIKEN and others have tried to make clear, there is a compelling need to seek a new basis on which the Senate can work its will by a substantial majority. To do this will require that the question before the Senate be altered. It will have to take account of the deep concern of those of us who urge restraint in order to explore further the possibility of meaningful strategic arms limitations, and the equally deep-seated concern of those of us who feel that a beginning on ABM deployment should be made now, either as a presumed spur to the negotiations or as a hedge against their failure.

Viewed in these terms, the question would become: How can we keep open the option of timely deployment of an ABM system without a premature commitment to deployment and without stimulating the arms race? That is the question that would chart the path to consensus; it is that question which outlines the potential accommodation which so many diligent Members of this body have sought for months. There can be no accommodation unless both sides display the

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flexibility essential to democratic decisionmaking.

That is the question which the distinguished Senator from New Hampshire is putting to the Senate. For many weeks, beginning in the Armed Services Subcommittee on Research and Development, Senator McINTYRE and I have explored the possibilities of devising a reasonable middle ground. My staff and I, as well as Senator McINTYRE and his staff, have conducted innumerable conversations with responsible authorities in the administration as well as Members of the Senate. The McIntyre formula is the only proposal yet advanced that meets the fundamental requirements of both sides to this intense dispute.

For the opponents of ABM it would explicitly reserve a decision on authorizing actual deployment of ABM weapons and would delay a decision on acquiring all the sites for the proposed Safeguard system. Thus, this formula would provide by statute that Congress is committing the Nation only to a test and evaluation of the radars, computers, and associated electronics. It would lay the groundwork for resolving or confirming many of the technological questions which have been raised against the system. At the same time it would go far toward meeting the political objectives of those who are worried that a start on Safeguard at this time could jeopardize or complicate the SALT talks on which many of us have placed so much hope. With this language in the bill the Soviet Union would have a clear signal that the United States is exercising restraint, that it prefers to await developments in the arms negotiations before proceeding beyond a test program for the ABM, and that Congress is definitely retaining its authority for subsequent decisions in this matter.

For the proponents of the Safeguard system, this proposal provides ample authority to take every necessary step the President has proposed for fiscal 1970. It would not disrupt the schedule he has proposed. Secretary Packard acknowledged after one Armed Services Committee meeting that the program could tolerate a delay in acquiring additional sites. Further conversations with Dr. John Foster have made clear that, so far as those other sites are concerned, the only authority required for fiscal 1970 is to do advance surveys.

The only argument for actually acquiring those additional sites is one of economy; it may be cheaper and more convenient to do so now rather than later, if need be. But if those sites are purchased in fiscal 1970, it significantly undermines the President's strong assurances that he contemplates a phased program, with a review every year in light of technological, political, and strategic developments. We should not erode the President's important political standards for this program by allowing relatively trivial economic considerations to cast doubt on the phased plan for the program.

It is also clear, as Dr. Foster has confirmed, that there is no necessity to

decide now whether an actual deployment of missiles should be undertaken.

Thus this proposal would meet every central concern on both sides of this great dividing line. It would make clear that Congress would decide later whether actually to deploy the weapons for the first phase of Safeguard.

But by leaving intact the President's authority to begin a full-scale test and evaluation of the radars, computers, and associated electronics at the first two proposed sites, it would keep open the option of having the Safeguard system deployed, if it proves necessary, on precisely the schedule proposed by the administration. Mr. Packard, Dr. Foster, and every knowledgeable proponent of the system will acknowledge that what they are in fact seeking is the right to test and evaluate the main elements of this system. If they do not prove out, the President would presumably not proceed further with it.

Surely it should be clear to both sides that this redefinition of the decision we are taking is a commonsense resolution of the great dispute we have seen develop on this issue. It would help remove for the coming months a point of the most severe contention in the Senate and the Nation. It would lubricate the relations between Congress and the administration. It would come closest to the maximum feasible consensus presently achievable in this body and would provide the basis for an active diplomacy in the impending arms negotiations.

Let us not blindly reject the resolution of our differences which Senator McINTYRE's recommendation offers us. Let us recognize the wisdom of his healing suggestion. Let us all—yesterday's losers and winners—move on to a greater victory for the Senate and the country by forging a consensus on this promising middle ground.

Mr. McINTYRE. Mr. President, I thank and commend the distinguished Senator from Massachusetts for his remarks. I may say that the Senator from Massachusetts and I have served on an ad hoc subcommittee named by our distinguished chairman to look into the research and development portions of the authorization bill. I believe that as a good share of our efforts and time were spent on this question, we came to think in terms of finding a compromise that might somehow heal what we felt to be a sharp division in the Senate. I have found the Senator from Massachusetts to be a great help and adviser and a mountain of strength as we tried, quietly, in our own way, to bring the two sides together.

I now yield 3 or 4 minutes to the distinguished Senator from South Dakota (Mr. McGOVERN).

The PRESIDING OFFICER. The Senator from South Dakota is recognized for 4 minutes.

Mr. McGOVERN. Mr. President, I intend to vote in favor of the amendment offered by the Senator from New Hampshire (Mr. McINTYRE).

The vote yesterday cannot be construed as a convincing decision on this important issue. The Congress and the

country remain deeply divided over the wisdom of moving ahead now with deployment of an antiballistic-missile system. There has been no resolution of the very serious questions raised during this debate over Safeguard's technical effectiveness, its vulnerability to any serious effort the Soviets might mount to neutralize our Minuteman force, and its potential for mischief in connection with the arms race and the forthcoming strategic arms limitation talks. For these reasons those who have supported deployment will, if they are prudent, support this modest congressional limitation suggested by Senator McINTYRE.

Those of us who supported the Hart-Cooper amendment should certainly support the Senator from New Hampshire who voted with us yesterday.

None of us has altered his views. I still regard the Safeguard system as a major national blunder, and I intend to continue fighting it at every opportunity. But if we cannot eliminate the authority to begin deployment of phase I, the next best step is to narrow that authority.

The McIntyre amendment is in line with this purpose. It is carefully drawn to allow only preparation of sites and deployment of long lead-time items, including missile site radars and perimeter acquisition radars. It specifically prohibits construction of any operational ABM missiles and it freezes existing authority to build missile sites and to acquire land other than at the two locations in North Dakota and Montana.

I regard that as significant. In the context of the arms talks, it assures the Soviet Union that this country will not have an operational anti-ballistic-missile system of any kind until the Congress authorizes it. We retain, during the critical period when discussions will be getting underway, the right to exercise our judgment again. It should convince both the Soviet Union and the Nixon administration that we are serious about turning another corner on the dangerous, and enormously expensive arms race of the past 25 years.

In addition it provides additional time for the technical problems to become apparent and for the case against deployment to be made again. I am fully confident that the growth in opposition to the ABM which has occurred during the past year will continue. The vote yesterday does not mean that Safeguard will be deployed; it means that more months must pass while we continue our critical examination.

I urge my colleagues on both sides of this issue to join in supporting Senator McINTYRE's amendment.

Mr. McINTYRE. I thank the the distinguished Senator from South Dakota. I know how deeply he has felt about the ABM and its possible deployment, and I am especially pleased that he can see his way clear to vote for what I consider to be a sound compromise on this important issue.

Mr. President, I am informed that the distinguished Senator from Mississippi is about ready to yield back his time. I believe I have about 3 or 4 minutes left. Is that correct?

The PRESIDING OFFICER. The Senator has 3½ minutes left.

Mr. McINTYRE. I would like to reserve those 3½ minutes at this time, and suggest the absence of a quorum, reserving those 3½ minutes for a final summation.

The PRESIDING OFFICER. From whose time would the time for the quorum call come?

Mr. McINTYRE. Mr. President, I ask unanimous consent that the time for the quorum call not be charged to either side.

The PRESIDING OFFICER. Is there objection?

Mr. TOWER. I object.

The PRESIDING OFFICER. Objection is heard.

Mr. STENNIS. Mr. President, I do not understand the purpose of a call for a quorum.

Mr. McINTYRE. A call for a quorum just before the vote. I have about 3 minutes left. I am about ready to yield my time back after a brief summary, just as the Senator from Mississippi is.

The PRESIDING OFFICER. The Chair is informed that, under the precedents of the Senate, the Senator has not time enough left to have a quorum call on his time.

Mr. McINTYRE. What about time on the bill?

Mr. STENNIS. Mr. President, frankly, I think it is in order to have a quorum call before the vote.

The PRESIDING OFFICER. After all time is yielded back, there will be a quorum call.

Mr. STENNIS. I am ready, then—

Mr. MANSFIELD. Mr. President, will the Senator yield?

Mr. STENNIS. I yield.

Mr. MANSFIELD. I think the Senator from New Hampshire was under a misunderstanding, perhaps due to what I told him, but if the Senator will be kind enough to allow a 2-minute quorum call, it would clear the situation and give a few Senators an opportunity to get here and the Senator can complete his remarks.

Mr. McINTYRE. Is that agreeable?

Mr. STENNIS. Yes. Does the Senator want to use a little more time?

Mr. McINTYRE. Yes. I would like to address a few more Senators than we have present.

Mr. STENNIS. Yes; I agree to take a few minutes for a quorum call.

The PRESIDING OFFICER. Just so the Chair may understand, the Senator from Mississippi is yielding 2 minutes out of his time in order that there may be a quorum call?

Mr. STENNIS. The Chair is correct. I yield 2 minutes for the purpose of a quorum call—the beginning of a quorum call—so the Senator from New Hampshire may have the advantage of it in using the rest of his time.

The PRESIDING OFFICER. The clerk will call the roll.

The bill clerk proceeded to call the roll.

Mr. MANSFIELD. Mr. President, I ask unanimous consent that the order for the quorum call be rescinded.

The PRESIDING OFFICER. Without objection, it is so ordered.

Mr. McINTYRE. Mr. President, how much time do I have remaining?

The PRESIDING OFFICER. The Senator from New Hampshire has 3 minutes.

Mr. McINTYRE. Mr. President, is my understanding correct that the Senator from Mississippi is about ready to yield back the remainder of his time, after a short closing summation?

Mr. STENNIS. Mr. President, I would not yield back my time as long as the Senator from New Hampshire is using his remaining time. If he wants to yield back his remaining time now, I will yield mine back now.

Mr. McINTYRE. Mr. President, I have presented this amendment for the consideration of the Senate primarily, and from the very beginning, in order that both sides on this sharply divided issue might have a chance to come together and give the President of the United States the sort of backing and authority that he needs in these critical times.

My amendment does restrict the Department of Defense in what they can do as they undertake to put together this highly sophisticated ABM system. It restricts them in such a fashion that those who tried so mightily yesterday to keep the matter entirely in research and development should find it possible to vote for my amendment.

However, my amendment also and very importantly recognizes the possible threat of the mid-1970's, and permits, under a restrained hand, the beginning of installation of the radars and computers at the two sites, Grand Forks and Malmstrom.

This amendment should meet the requirements of common ground on both sides, and do it without violating any of the principles that are in the minds of those who fought so valiantly yesterday.

Mr. President, a "no" vote on this amendment is a vote for deployment. It is a negative vote for deployment. It is giving up the fight. In its essence, a "no" vote is for taking away strict congressional supervision and control of this gigantic new weapon, and leaving it in the hands of the Pentagon.

I reserve the remainder of my time.

The PRESIDING OFFICER. The Senator has used all of his time.

Mr. McINTYRE. Mr. President, I ask for the yeas and nays on my amendment. The yeas and nays were ordered.

Mr. MONTROYA. Mr. President, most observers have been stating that today marks the ends of a historic unprecedented debate on American defense policy. It is my opinion that this marks only the beginning of the debate. Whatever the outcome of the vote on ABM yesterday and today, and all subsequent votes on defense programs, what we are deliberating is whether or not we take the historic step as the first nuclear power to have the wisdom and courage—to de-escalate the nuclear arms race.

What intelligent person would advocate an escalation of the arms race, further provoking the proliferation of nuclear weapons throughout the world? I know in my heart there is no one Senator who advocates this.

Secretary McNamara said the cornerstone of our strategic policy is assured

destruction. Is there any doubt in anyone's mind we have that assured destruction capability? Could the Soviet Union attack us and be assured we would not inflict a devastating retaliatory blow to their country? The answer is an unequivocal "No." Our immense offensive power, which is capable of retaliation despite a nuclear surprise attack, is the factor that has prevented a nuclear war from occurring. This power has not diminished and it promises to increase within the next few years.

In the next few years the intensity of debate will increase, not diminish. Gone are the days when defense programs received a carte blanche OK from Congress. Now we must work toward a positive world peace policy of conciliation and negotiation.

Mr. STENNIS. Mr. President, I think the issues are drawn on this amendment and that its substance and what it would do are well understood. I believe that to adopt this amendment would be contrary to the clear-cut vote that was taken yesterday, and would be in derogation of the position that the Senate took a few hours ago. I believe those matters are clear.

I yield back the remainder of my time.

The PRESIDING OFFICER. All time having been yielded back, the question is on agreeing to the amendment offered by the Senator from New Hampshire. On this question, the yeas and nays have been ordered, and the clerk will call the roll.

The legislative clerk called the roll.

Mr. FULBRIGHT (when his name was called). On this vote I have a pair with the senior Senator from Tennessee (Mr. GORE). If he were present, he would vote "yea." If I were at liberty to vote, I would vote "nay." I withhold my vote.

Mr. KENNEDY. I announce that the Senator from Tennessee (Mr. GORE), and the Senator from Louisiana (Mr. LONG) are necessarily absent.

The result was announced—yeas 27, nays 70, as follows:

[No. 68 Leg.]

YEAS—27

Aiken	Hughes	Moss
Bayh	Inouye	Pell
Brooke	Javits	Proxmire
Church	McCarthy	Ribicoff
Cranston	McGovern	Schweiker
Goodell	McIntyre	Tydings
Gravel	Metcalfe	Williams, N.J.
Harris	Mondale	Yarborough
Hartke	Montoya	Young, Ohio

NAYS—70

Allen	Ervin	Muskie
Allott	Fannin	Nelson
Anderson	Fong	Packwood
Baker	Goldwater	Pastore
Bellmon	Griffin	Pearson
Bennett	Gurney	Percy
Bible	Hansen	Proty
Boggs	Hart	Randolph
Burdick	Hatfield	Russell
Byrd, Va.	Holland	Saxbe
Byrd, W. Va.	Hollings	Scott
Cannon	Hruska	Smith
Case	Jackson	Sparkman
Cook	Jordan, N.C.	Spong
Cooper	Jordan, Idaho	Stennis
Cotton	Kennedy	Stevens
Curtis	Magnuson	Symington
Dirksen	Mansfield	Talmadge
Dodd	Mathias	Thurmond
Dole	McClellan	Tower
Dominick	McGee	Williams, Del.
Eagleton	Miller	Young, N. Dak.
Eastland	Mundt	
Ellender	Murphy	

PRESENT AND GIVING A LIVE PAIR
Fulbright, against.

NOT VOTING—2

Gore

Long

So Mr. McINTYRE's amendment was rejected.

Mr. STENNIS. Mr. President, I move to reconsider the vote by which the amendment was rejected.

Mr. DIRKSEN. I move to lay that motion on the table.

The motion to lay on the table was agreed to.

PROGRAM

Mr. DIRKSEN. Mr. President, I should like to ask the distinguished majority leader about the program for the remainder of the day and perhaps tomorrow, and also on Saturday, inasmuch as it was said that there could be a session on Saturday.

AUTHORIZATION FOR COMMITTEE TO MEET

Mr. MANSFIELD. Mr. President, in reply to my distinguished colleague, the minority leader, may I first ask unanimous consent that the Committee on Interior and Insular Affairs be allowed to meet during the session of the Senate today. I do that because I understand that the Governor of Alaska and many Alaskans are in Washington, and it is a pretty expensive proposition for them. In view of that circumstance, I hope it will be allowed.

The PRESIDING OFFICER (Mr. Cook in the chair). Without objection, it is so ordered.

ORDER FOR ADJOURNMENT UNTIL 11 A.M. TOMORROW

Mr. MANSFIELD. Mr. President, I ask unanimous consent that when the Senate completes its business today, it stand in adjournment until 11 a.m. tomorrow.

The PRESIDING OFFICER. Without objection, it is so ordered.

ORDER FOR ADJOURNMENT FROM TOMORROW, FRIDAY, UNTIL MONDAY, AUGUST 11, 1969

Mr. MANSFIELD. Mr. President, it is my understanding that there is a certain amount of opposition—legitimate opposition, may I say—to a Saturday session; and on that basis, I think it should be announced, with the concurrence of the minority leader, that, unfortunately—from our point of view, in an effort to speed up consideration of the pending bill—there will not be a Saturday session.

Mr. President, I ask unanimous consent that when the Senate completes its business on Friday, it adjourn until 10:30 on Monday morning next.

The PRESIDING OFFICER. Without objection, it is so ordered.

Mr. MANSFIELD. There are difficulties which preclude our meeting on Saturday, and those difficulties are not the fault of the majority leader or the minority leader.

ORDER FOR RECOGNITION OF SENATOR PEARSON ON MONDAY

Mr. MANSFIELD. Mr. President, I ask unanimous consent that, at the conclusion of the prayer on Monday morning next, the distinguished Senator from Kansas (Mr. PEARSON) be recognized for not to exceed 30 minutes.

The PRESIDING OFFICER. Without objection, it is so ordered.

AUTHORIZATION OF APPROPRIATIONS FOR FISCAL YEAR 1970 FOR MILITARY PROCUREMENT, RESEARCH AND DEVELOPMENT, AND FOR THE CONSTRUCTION OF MISSILE TEST FACILITIES AT KWAJALEIN MISSILE RANGE, AND RESERVE COMPONENT STRENGTH

The Senate resumed the consideration of the bill (S. 2546) to authorize appropriations during the fiscal year 1970 for procurement of aircraft, missiles, naval vessels, and tracked combat vehicles, and to authorize the construction of test facilities at Kwajalein Missile Range, and to prescribe the authorized personnel strength of the Selected Reserve of each Reserve component of the Armed Forces, and for other purposes.

Mr. MANSFIELD. Mr. President, it is my understanding that 15, 18, or 20 amendments are yet to be considered. I would hope for the continued cooperation of the Senators on both sides, to the end that, if at all possible, we might be able to complete action on this bill no later than Wednesday next, or sooner.

Mr. MAGNUSON. If we meet on Saturday, we can do it sooner.

Mr. STENNIS. Mr. President, will the Senator yield?

Mr. MANSFIELD. I yield.

Mr. STENNIS. Mr. President, the ABM is just one item of many major items that are in the pending bill, as is well known. Some major items in the bill have not been spoken about on the floor since January. Some of these amendments—I respect them all—go to the very vitals of our national defense program and cannot be discussed briefly. They go into fundamental policies over a period of years.

All members of the committee are willing to agree as early as we can to some reasonable limitation of time with reference to the disposition of these amendments. But at this time we could not make agreements on all of them. As soon as we can, we will make an agreement on all those that have been filed, when we know what they contain.

There will be considerable debate on these matters, and it is highly important that all Senators be present. We are prepared, and I am sure the proponents are, as are many members of the committee, to discuss the subject matter.

Mr. President, I certainly hope that we will work out a plan to pass this bill before the August recess. Many things depend upon the final version of this authorization bill. It is a detriment to the Defense Department and to Secretary Laird to string the matter out so long into the calendar year. Of course, the

appropriations cannot move on these matters.

I hope, and I believe, we will have the cooperation of all to drive through and finish this bill before the August recess.

Mr. GOLDWATER. Mr. President, I should like to back up what the distinguished chairman has said and to appeal, once again, for a Saturday session.

Seven amendments aimed at major portions of this bill already have been announced. All of them involve two or three times the amount of money about which we have debated 5 weeks. It will take time on the floor to answer the questions that will arise about the detail in highly technical military equipment. Frankly, I do not see a chance of completing action on this bill by next Wednesday, when we are supposed to start a vacation, unless we do work on next Saturday.

I like Saturdays off as well as anyone else. It gives me a chance to get home. But I think that disposing of this bill by the time we take a recess is more important than a day off on Saturday.

Some of these items, such as AMSA, are expensive and will require a great deal of explanation. When we get into the matter of the tank, that will take a great deal of explanation. Also to be contested is the F-14 of the Navy, a very expensive two-place interceptor, which will take a great deal of explanation before we hope we can convince Members of the Senate that it is worthwhile. We have the whole field of academic spending on research and development, in which the Senator from Arkansas (Mr. FULBRIGHT) and I are in complete agreement. It involves a vast amount of money, a field in which we can save hundreds of millions of dollars, but it cannot be done overnight nor in a half-hour's time.

With all due respect to what some of the Members may have to do on Saturday, I think we could better spend the time here, so that we make sure we will get the recess about which we have spoken.

Mr. PROXMIRE. Mr. President, I agree with the Senator from Mississippi and the Senator from Arizona that this bill will take a long, long time. The Senator from Arizona has just given us some of the reasons, and there are many other reasons that will delay us.

I think we all agree that this bill deserves debate and should get debate in detail. I cannot see any possibility of our finishing by Wednesday. Perhaps there is, but I cannot see it, even if we come in Saturday and Sunday, because we have so much to discuss. The C-5A has not been mentioned, nor has the aircraft carrier. All these things are extraordinarily complicated and require real discussion and debate. Many questions will require detailed answers. Some of them have not been answered satisfactorily in the hearings.

Under these circumstances, Mr. President, although I would agree with the Senator from Mississippi that it is important that we get the bill through as quickly as possible, we have a responsibility to discuss the bill in detail. This is only a 5-page bill covering \$20 billion.

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Many of these matters cover complex matters which are not clear in the bill. We would not really know what is in the bill if we were to discuss it for 3 or 4 days. Although none of us would like it, I feel strongly we will have to be working on this bill in September.

Mr. DIRKSEN. Mr. President, let me say first of all, out of experience—and the majority leader has had the same experience—keeping Members in the Chamber on Saturdays invites many quorum calls, including live quorum calls, and there is a lot of time lost. I would much rather respectfully suggest to the distinguished majority leader that we run late tonight and tomorrow night, because we will do better that way than if we were to come in on Saturday.

Mr. MANSFIELD. Mr. President, I appreciate what the distinguished minority leader said. I believe the distinguished Senator from Illinois has the answer to the question as to a Saturday session. So it is with reluctance that I emphasize there will be no Saturday session. This is not my personal wish, but we will be in late tonight and we will be in late tomorrow. I hope it will be possible to get a continued degree of cooperation among Senators as amendments are called up.

I understand the Senator from Pennsylvania (Mr. SCHWEIKER) is quite receptive to the possibility of a time limitation which would be in the best interests of all concerned. The Senator from Pennsylvania will shortly offer an amendment, and I would like to ask, with his approval—that there be a time limitation of 1 hour on the amendment of the distinguished Senator from Pennsylvania, the time to be equally divided between the author of the amendment (Mr. SCHWEIKER) and the manager of the bill, the Senator from Mississippi (Mr. STENNIS).

Mr. CASE. Mr. President, reserving the right to object, I wish to ask the majority leader if we could have a gentlemen's agreement that as far as a time limitation on other amendments is concerned, there would not be a request made, at least without some notice, except on the basis of successive amendments, and an agreement relating an individual amendment.

Mr. MANSFIELD. Yes, of course; I thought it was perfectly proper to ask at this time, because of the attendance.

Mr. CASE. Yes.

Mr. MANSFIELD. The amendment requires a new Department of Defense reporting system for major contractors and increases GAO responsibility as the watchdog.

Mr. FULBRIGHT. Mr. President, reserving the right to object—and I shall not object—first, I agree with what the majority leader said about running late at night. This has proved to be very effective in the past. I also wish to agree with the Senator from Wisconsin. If I understand some of the major items the Senator from Mississippi is talking about, I do not think we would be warranted to pass on items without understanding them.

The Senator from Missouri is not here at this moment, but he had much to say about an aircraft carrier. He pointed

out on numerous occasions the fact that we have 15 and no other country has them. And he raised a fundamental question of policy as to whether there should be one. This is so important that it should not be voted upon under a time limitation of 1 hour or whatever it is. We should have an opportunity to understand this matter, because it amounts to so much money.

I think the Senator from Wisconsin is probably correct, although I rather welcome the idea of running late tonight and tomorrow night, as long as we give Senators notice. We object to coming up to 6 o'clock in the evening and then being told. I welcome the idea of running late.

Mr. STENNIS. Mr. President, will the Senator yield?

The PRESIDING OFFICER. Is there objection to the unanimous-consent request?

Mr. MANSFIELD. Mr. President, I withdraw the request.

The PRESIDING OFFICER. The unanimous-consent request is withdrawn.

Mr. MANSFIELD. There will be no time limitation.

Mr. STENNIS. Mr. President, with respect to the amendment which is coming up, I do not think it will take long for debate. That amendment came up in committee and was explained by the author. Then, he did not ask for a vote on the amendment. I have not really gotten into it much since then. So I would have to get some material here and look into it. Then, I would be amenable to a limitation.

Mr. President, I wish to make a further observation. I want the bill to move along and I will make any reasonable agreement as far as the time is concerned. However, on these far-reaching policy matters that are complicated, it would be unreasonable to go into a time limitation. For instance, I refer to the matter mentioned by the Senator from Arkansas. Then, there is the matter dealing with biological warfare. We must get into that.

I would like to suggest informally that those who have amendments on biological and chemical warfare get together and agree on something among themselves, and then have an understanding with the Senator from New Hampshire who dealt with this in great detail in the hearings. It might be we could get together. It might be it would not take a long debate; otherwise, it would take a long debate.

Mr. President, that is all I have to say at this time.

Mr. MANSFIELD. Mr. President, I have withdrawn the unanimous-consent request.

The PRESIDING OFFICER. The unanimous-consent request has been withdrawn.

Mr. MANSFIELD. Mr. President, I do not know when it will be offered again or whether it will be offered again. It was made in an attempt to expedite consideration of the proposed legislation. I thought that was the desire of the chairman of the Committee on Armed Services.

Mr. STENNIS. Mr. President, I wish

to say that that is a matter covered by the amendment not in the bill. There have been no hearings on it. There has been some discussion by the committee. For that reason, I could not agree now.

Mr. MANSFIELD. That is all right.

Mr. President, I would appreciate it if the Senator from Wisconsin (Mr. NELSON), the Senator from Texas (Mr. YARBOROUGH), the Senator from Indiana (Mr. HARTKE), and the Senator from Rhode Island (Mr. PELL) would meet with the distinguished chairman of the Subcommittee on Scientific Research (Mr. MCINTYRE), and if possible, the manager of the bill, to discuss a number of amendments covering the same subject to see if some sort of agreement could not be reached as to what could or could not be done with respect to consolidation or coordination. If we could meet in the rear of the Chamber so that we might discuss the matter, I would appreciate it.

AMENDMENT NO 85

The PRESIDING OFFICER. The Chair recognizes the Senator from Pennsylvania.

The amendment offered by the Senator from Pennsylvania will be stated.

The assistant legislative clerk proceeded to read the amendment.

Mr. SCHWEIKER. Mr. President, I ask unanimous consent that further reading of the amendment be dispensed with.

The PRESIDING OFFICER. Without objection, it is so ordered, and the amendment will be printed in the RECORD.

The amendment, ordered to be printed in the RECORD, is as follows:

At the end of the bill, insert the following new title:

"TITLE V—QUARTERLY CONTRACT REPORTING AND GAO AUDITS

"Sec. 501. (a) The Secretary of Defense, in cooperation with the Comptroller General, shall develop a reporting system for major contracts entered into by the Department of Defense, any department or agency thereof, or any armed service of the United States, for the development or procurement of any weapons system or other need of the United States.

"(b) The Secretary of Defense shall cause a review to be made of each major contract as specified in subsection (a) during each period of three calendar months and shall make a finding with respect to each such contract as to—

"(1) the estimates at the time the contract was entered into of the contractor and the procuring agency as to the cost of the contract, with separate estimates for (a) research, development, testing, and engineering, and for (b) production;

"(2) the contractor's and agency's subsequent estimates of cost for completion of the contract up to the time of the review;

"(3) the reasons for any significant rise or decline from prior cost estimates;

"(4) the options available for additional procurement, whether the agency intends to exercise such options, and the expected cost of exercising such options;

"(5) the estimates of the contractor and the procuring agency, at the time the contract was entered into, of the time for completion of the contract, any subsequent estimates of both as to the time for completion, and the reasons for any significant increases therein;

"(6) the estimates of the contractor and procuring agency as to performance capabilities of the subject matter of the contract,

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and the reasons for any significant actual or estimated shortcomings therein compared to the performance capabilities called for under the original contract or subsequent estimates; and

"(7) such other information as the Secretary of Defense shall determine to be pertinent in the evaluation of costs incurred and expected to be incurred and the effectiveness of performance achieved and anticipated under the contract.

"(c) The Secretary of Defense after consultation with the Comptroller General and with the chairman of the Committees on Armed Services and the Committees on Appropriations of the Senate and the House of Representatives shall prescribe criteria for the determination of major contracts under subsection (a).

"(d) The Secretary of Defense shall transmit quarterly to the Congress and to the Committees on Armed Services and to the Committees on Appropriations of the Senate and the House of Representatives reports made pursuant to subsection (b), which shall include a full and complete statement of the findings made as a result of each contract review.

"(e) The Comptroller General shall, through test checks, and other means, make an independent audit of the reporting system developed by the Secretary of Defense and shall furnish to the Congress and to the Committees on Armed Services and the Committees on Appropriations not less than once each year a report as to the adequacy of the reporting system, and any recommended improvements.

"(f) The Comptroller General shall make independent audits of major contracts where in his opinion the costs incurred and to be incurred, the delivery schedules, and the effectiveness of performance achieved and anticipated are such as to warrant such audits and he shall report his findings to the Congress and to the Committees on Armed Services and the Committees on Appropriation of the Senate and of the House of Representatives.

"(g) Procuring agencies and contractors holding contracts selected by the Comptroller General for audit under subsection (f) shall file with the General Accounting Office such data, in such form and detail as may be prescribed by the Comptroller General, as the Comptroller General deems necessary or appropriate to assist him in carrying out his audits. The Comptroller General and any authorized representative of the General Accounting Office is entitled, until three years after final payment under the contract or subcontract as the case may be, by subpoena, inspection, authorization, or otherwise, to audit, obtain such information from, make such inspection and copies of, the books, records, and other writings of the procuring agency, the contractor, and subcontractors, and to take the sworn statement of any contractor or subcontractor or officer or employee of any contractor or subcontractor, as may be necessary or appropriate in the discretion of the Comptroller General, relating to contracts selected for audit.

"(h) The United States district court for any district in which the contractor or subcontractor or his officer or employee is found or resides or in which the contractor or subcontractor transacts business shall have jurisdiction to issue an order requiring such contractor, subcontractor, officer, or employee to furnish such information, or to permit the inspection and copying of such records, as may be requested by the Comptroller General under this section. Any failure to obey such order of the court may be punished by such court as a contempt thereof.

"(i) There are hereby authorized to be appropriated such sums as may be required to carry this section into effect."

Mr. SCHWEIKER. Mr. President, I ask for the yeas and nays on the amendment.

The yeas and nays were ordered.

Mr. SCHWEIKER. Mr. President, I ask unanimous consent that the names of the Senator from Missouri (Mr. EAGLETON) and the Senator from Utah (Mr. MOSS) be added as cosponsors of the amendment.

The PRESIDING OFFICER. Without objection, it is so ordered.

Mr. BYRD of West Virginia. Mr. President, may we have order in the Chamber?

Mr. President, I ask that the Chair clear the Chamber of all unauthorized persons.

The PRESIDING OFFICER. The Sergeant at Arms is instructed to clear the Chamber, as requested.

Mr. SCHWEIKER. Mr. President, in rising to call up this amendment today, I do so in the firm belief that we have a wonderful opportunity to strike a blow for the American taxpayer. There have, in my judgment, been far too many instances during recent months of cost overruns reported in the public media.

It seems to me that every taxpayer in this country, upon seeing these headlines, is entitled to ask "why?" It seems to me that that is a very legitimate question. It seems to me that Congress has not yet provided an adequate answer to that question. I believe we have a responsibility to do just that.

We have made a start. Early this year, the chairman of the Armed Services Committee obtained personnel from the General Accounting Office to help the Preparedness Subcommittee review approximately 30 of our major defense contracts. Reports have already been provided by the Defense Department on a number of these contracts. I know that the chairman and other members of the committee are as concerned with this problem as I am.

I feel strongly that we must do more. Congress has just approved the President's request for extension of the 10-percent surcharge for the next 6 months. The Defense budget continues to rise. The cost of living keeps going up. It seems to me that, for these and other interrelated reasons, the very least this body should do is to take steps, and I would hope the other body would agree, to put the Defense Department and its major contractors on notice that Congress is going to be looking over their shoulder much more closely than they have in the past, and is going to insist on real efficiency and best possible management of public money for our defense needs.

Mr. President as I said when I introduced this amendment some days ago, in referring to some of the cost overruns which have been so highly publicized:

The tragic fact of these excessive cost revelations was that the Congress was informed of them long after the fact, when there was nothing we could do about them. Instead of learning about them in an orderly fashion, when detailed analysis and recommendations could be made in time to correct them, we heard about them under the glare of tele-

vision lights in publicized hearings, when no amount of talk could return the waste of money.

The purpose of this amendment is to attempt to avoid such situations. It will put into statutory reform a requirement that the Defense Department make quarterly reports to Congress on all major weapons systems. It will also require the Comptroller General to audit this reporting system and provide an annual report to Congress including recommendations for improving the system. The Comptroller General may also conduct an audit, on his initiative, on any individual contract he feels warranted, and he will be given the authority to acquire such additional information as he feels he needs in order to make the audit.

It seems to me that the primary advantage of this sort of system is that Congress would receive accurate and current information before and not after the fact. We would know, as the public expects us to know, how the taxpayers' money is being spent, and if it is not being spent prudently, to do something about it.

I wish to make absolutely clear, Mr. President, that this amendment has been proposed in the firm belief that we have a problem which needs to be corrected. It is not an attempt to hamstring any one of the military services or the Defense Department as a whole. It is not directed at any defense contractor or any defense industry in general.

It is an attempt to deal with a very real problem and to let the taxpayers know that we are really on their side. Waste is inherent in any large spending program, and probably will continue to be so. But I believe that the Congress must take these steps in order to let those concerned know that it intends to exercise its full responsibilities in this area.

One of the problems that Congress faces in taking on the enormous job of reviewing defense procurement is that we simply do not have adequate resources. Capable as the Armed Services Committee and its staff are, we cannot do more than begin to review defense contracts in depth. Even Bureau of the Budget officials have admitted that with 50 personnel assigned to review of the defense budget, they have not been able to control defense procurement excesses. The Pentagon has not had a uniform accounting system, which the Comptroller General admitted to me in our conversations on this bill. I was astounded to find out that the Comptroller General could not even go to one place in the Pentagon to get the answers to what the costs were on the major contracts. He had to go to a dozen different departments to find out where the expenditures were being controlled or supervised. There was no one person, one office, or one central system available, even in the Defense Department, to find out where the costs were. Information and responsibility on major contracts are spread throughout dozens of offices. Better access to contract information is vitally important.

My amendment will begin to remedy this situation by putting into statutory form a requirement that the Defense Department make quarterly reports to Congress on all major weapons systems, including but not limited to several important factors. For example, the estimates at the time the contract was entered into, both the contractor and the procurement agency—both estimates.

Even on the C-5A situation, the contractor and the Defense Department were miles apart on their estimates. If we had looked into the trouble initially, or had known about it, we could, possibly, have averted the tragic cost overruns with which we are now presented as a fait accompli.

The fact that they could not agree, the contractor and the Defense Department, should have been a red flag to us, but we did not know about it until it was too late.

This system would make clear what the contractors' estimates are and what the Department of Defense estimates are, where the differences are, and if there is a difference, why the difference, and also why we might be in trouble. I read from the amendment:

(1) the estimates at the time the contract was entered into the contractor and the procuring agency as to the cost of the contract, with separate estimates for (a) research, development, testing, and engineering, and for (b) production;

(2) the contractor's and agency's subsequent estimates of cost for completion of the contract up to the time of the review;

(3) the reasons for any significant rise or decline from prior cost estimates;

(4) the options available for additional procurement; whether the agency intends to exercise such options, and the expected cost of exercising such options;

(5) the estimates of the contractor and the procuring agency, at the time the contract was entered into, of the time for completion of the contract, any subsequent estimates of both as to the time for completion, and the reasons for any significant increases therein;

(6) the estimates of the contractor and procuring agency as to performance capabilities of the subject matter of the contract, and the reasons for any significant actual or estimated shortcomings therein compared to the performance capabilities called for under the original contract or subsequent estimates; and

(7) such other information as the Secretary of Defense shall determine to be pertinent in the evaluation of costs incurred and expected to be incurred and the effectiveness of performance achieved and anticipated under the contract.

Mr. President, I think it is significant to point out that with this kind of information, we who are in a position of responsibility on the Armed Services Committee, the Appropriations Committee, and the respective committees in the other body, will then have some accurate, certified, accountable basis on which to make intelligent decisions with that kind of information.

The wasted money on the few projects which have been investigated recently is staggering. But I fear that it is just the tip of the iceberg which would be revealed if every major defense contract received this scrutiny. If my system is instituted immediately, maybe some of these unknown overruns can be avoided.

With our economy under such a severe expenditure strain, and with questions of tax reform, surtax, and spending priorities so important, it is imperative that we institute statutory reporting and auditing requirements, and not merely rely on informal data supplied by the Pentagon without anyone auditing the system.

Under my proposal, the Comptroller General would cooperate with the Department of Defense in setting up an understandable, accurate, up-to-date and current accounting system, and then the Comptroller General further would be responsible, under my amendment, for recommending any changes, improvements in the system on an annual basis. It can be refined as we go along. And further, the Comptroller General would have responsibility and authority to go in and actually audit any major contract whose costs were getting out of line.

Mr. President for the RECORD I would like to indicate again the names of those of my colleagues who have cosponsored this amendment with me. They are Senators CASE, COOK, EAGLETON, HART, HATFIELD, MATHIAS, MANSFIELD, MONDALE, MOSS, NELSON, PACKWOOD, PROXMIRE, SAXBE, SCOTT, STEVENS, YARBOROUGH, and YOUNG of Ohio. I am pleased that so many of my colleagues, on both sides of the aisle agree with me that this will be a useful step. I hope that others of my colleagues will be persuaded likewise.

Congress must face up to its responsibilities. We must put into statutory language methods by which we can receive accurate and detailed information on a regular basis so that our review of defense contracts can be in an orderly fashion, and so that mistakes and inefficiencies can be spotted in time to correct them before costs have already skyrocketed.

In short, congressional review, with GAO assistance and audits, should be a matter of law. This will serve the end of providing continual up-to-date status reports to the Congress and the respective committees working on these problems. It will give the agencies and private contractors involved clear notice of exactly what information will be received by the Congress, and should serve as an incentive to efficiency.

The seriousness of this issue goes far beyond the fact that money is being wasted under current procedures. We are living in a time of serious inflation. The taxpayers have every right to expect that elected and appointed officials of their Government are exercising the utmost care in allocating and spending the vast sums necessary to maintain our country's defense capabilities.

They also have the right to know, within the bounds of national security, the details of how this money is being spent, and what problems are being experienced with respect to the administration of these contracts.

Enactment of this amendment will be a significant step in bringing about these goals.

I yield 4 minutes to the Senator from Texas (Mr. YARBOROUGH).

The PRESIDING OFFICER. The Senator from Texas is recognized for 4 minutes.

Mr. YARBOROUGH. Mr. President, I am a cosponsor of the amendment. I shall not repeat the statement so ably made by the distinguished Senator from Pennsylvania. Instead, I shall talk about the collateral matter of budgeting for the Defense Department, which shows an utter recklessness.

This year, for the first time, I became chairman of the subcommittee of the Appropriations Committee which has jurisdiction over the Bureau of the Budget. I asked the officials about the budget procedures. I had heard about them. Some people had resigned in disgust, frankly, and came and told me about it.

There are 178 budget examiners. They are the ones who examine the whole budget of the United States for the President and make up the budget for the Government. Of those 178 examiners for the whole Bureau of the Budget, only 42 examine into the \$80 billion defense budget. 136 of them work at cutting down programs for health, education, agriculture, manpower training, poverty, medical, medicare. Everything that helps the American people internally, they chop to pieces, and they cut out whole programs.

They have cut out every penny for school libraries for elementary and secondary schools, and for books. The Under Secretary of HEW says this administration does not believe that books and libraries have a high priority. They practically would abolish reading. They cut out money for libraries for the towns and villages of America.

Further, with respect to the procedure, when officials for HEW, Agriculture, Commerce, Labor, or any other department disagree with the Bureau of the Budget, they have to go to the Bureau of the Budget and plead to restore the cuts. But if the Defense Department disagrees with the Bureau of the Budget, the only way the Bureau of the Budget can do anything about it is to appeal to the President. So I said to them: "You are just an adjunct of the Defense Department." They told me they did not have enough money. The recommendation was made that they have 30 or 40 more examiners. They assured me that if they had, they would look into the defense budget more carefully.

I have a letter from Mr. Mayo, Director of the Budget, dated July 7, in which he expresses appreciation for the fact that we are trying to get them more personnel. He says that if Congress approves the 1970 budget, as our committee has recommended, "several" of the new positions will be assigned to reviewing the defense budget. If 40 more examiners are allowed, "several" might mean 2, or 4, or 5 out of the extra 30 or 40. Thus, the defense budget would not receive adequate review. The Bureau of the Budget might as well be nonexistent or abolished as far as the Defense Department is concerned.

Fiscally, it is a tragic situation for our Government. Fiscally, it is indefensible. They comb every other program with a fine tooth comb, but this vast budget, which is costing this country so much, is not adequately examined. The Defense Department comes in with a request for the defense budget of \$80 billion, or \$85 billion, or \$82 billion, or \$79 billion. Small

wonder there is all this waste in defense. Nobody has a restraining hand on that budget. It has gotten to be bigger than the Government of the United States. No longer does the civilian government control the Defense Department.

I am honored to cosponsor the amendment offered by the distinguished Senator from Pennsylvania, which is cosponsored by many other Senators. It is a measure designed to get some fiscal responsibility in our Defense Department.

Mr. President, I am not a pacifist. I am for a strong defense. This Nation will not survive without a strong defense. But we will not keep a strong defense without fiscal responsibility. The people in the Department of Defense throw away money as if it were going out of style. They spend it by the billions of dollars. They have to know that the money comes from the taxpayers; that every time we vote another billion dollars for defense, we cut down on funds for schools and hospitals. The Hill-Burton funds for this year have been cut 60 percent.

The PRESIDING OFFICER. The time of the Senator has expired.

Mr. SCHWEIKER. I yield 1 additional minute to the Senator from Texas.

Mr. YARBOROUGH. They have cut to \$100 million the \$250 million request for hospitals in this country, when hospitals, because of the medicare and medicaid programs, are so crowded that people cannot get into them.

That to me is irresponsible; yet whenever somebody in the Department of Defense wants more money, the Bureau of the Budget accepts that request without question.

Recently, after protests, President Nixon announced he is going to bring the Defense Department back under genuine control of the Bureau. But, he cannot secure that control when only 42 examiners out of 178 examiners are used to look at the defense budget, and when the Defense Department asks for half of all the money in the budget.

Similarly, as the Senator from Pennsylvania pointed out, when we get over to accounting for the money, we find the money goes out like water through a drain. Even in the irrigation country we have gates on our irrigation canals, to save some of the water. We cannot afford to irrigate all the time. But the Defense Department keeps its valves open all the time, 24 hours a day. It does not even have a gage on to measure the output. This amendment puts that gage on.

I am hopeful the managers of the bill will accept the amendment, if they think we should have fiscal responsibility in the Department of Defense as we have in the rest of the Government. I hope the Senator from Mississippi will accept the amendment of the Senator from Pennsylvania.

Mr. STENNIS. Mr. President, if the Senator will yield?

The PRESIDING OFFICER. The Senator from Pennsylvania has the floor.

Mr. SCHWEIKER. Mr. President, I am pleased to yield to the distinguished chairman.

Mr. STENNIS. I thank the Senator. If the Senator from Texas will just remain and hear what is involved as I see it, I shall be flattered. I hope he will.

Mr. YARBOROUGH. I thank the Senator for inviting me. I must testify before the Appropriations Committee also. I will stay until the last possible minute.

Mr. SCHWEIKER. Mr. President, may I inquire of the Senator from Mississippi how much time he would like at this point?

Mr. STENNIS. Mr. President, are we under controlled time now?

The PRESIDING OFFICER (Mr. BYRD of Virginia in the chair). We are not under controlled time.

Mr. SCHWEIKER. I have completed my opening remarks; so, if the Senator would like to have the floor at this point, I am happy to yield it to him.

Mr. STENNIS. Mr. President, may we have a brief quorum call. I have a matter I must attend to.

Mr. SCHWEIKER. Mr. President, I suggest the absence of a quorum.

The PRESIDING OFFICER. The clerk will call the roll. The assistant legislative clerk proceeded to call the roll.

Mr. SCHWEIKER. Mr. President, I ask unanimous consent that the order for the quorum call be rescinded.

The PRESIDING OFFICER. Without objection, it is so ordered.

Mr. STENNIS. Mr. President, does the Senator from Pennsylvania wish to speak?

Mr. SCHWEIKER. No, Mr. President; I yield to the Senator from Mississippi.

The PRESIDING OFFICER. The Senator from Mississippi is recognized.

Mr. STENNIS. Mr. President, I call to the attention of Senators that the problem here is to get before the Senate what this amendment really means, and how it would operate. There have been no hearings on the subject matter. The Senator from Pennsylvania and I conferred about it to some extent, and discussed the substance of it, and I encouraged him to continue his work in this field. The hearings were going on; and as I recall it was the day before we closed the hearings, or the day before we finished the markup, one or the other, when he suggested that I ought to have Mr. Staats or some other major witness appear on the matter.

Of course, it was too late then. I appreciate very much the Senator's purposes, his intentions, and his work on the subject, but that is not enough to make one agree to a far-reaching measure such as this.

By way of background as to what is being done generally, before discussing the amendment itself, the Senate Armed Services Committee, in early January, instituted a program of surveillance over contracts by its own staff members, and obtained the services of men highly qualified in this field—some of the top men from the General Accounting Office—on a reimbursable basis, temporarily. The plan is ultimately to have a highly competent man in the field—more than just an auditor or a bookkeeper—with some assistants, to keep a continuing surveillance over these major contracts for the committee.

That is not just a little routine matter. We are now receiving quarterly reports on a number of major contracts, which represent, I think, about 75 percent of the amount in dollars involved in defense appropriations; and I am pledged—it is a part of my philosophy of life anyway—to follow those dollars. As to anything we authorize and then appropriate, I think it is the duty of this committee to do what it can to follow the dollars.

I have enlisted, earlier this year, the full cooperation of the General Accounting Office. The Comptroller General, Mr. Staats, is an unusually well-qualified man, and totally insistent on the idea of cooperating with the committee. He is subject to call, and makes a valiant effort to serve our needs and our purposes whenever called upon.

In addition, the Secretary of Defense, Mr. Laird, has put in motion his own surveillance plan. He is a very capable man, as we know, and is really going after this matter, and making reports on a quarterly basis. He has the assistance of men of very high competence.

Moreover, the President of the United States has appointed a special panel.

I hope that the Senator from Texas is in a position to give him his attention.

The President, at the instigation of the Secretary of Defense, has appointed a blue ribbon committee—it might be described as a commission, but I believe committee is more accurate—headed by one of the most prominent and capable industrialists in the Nation, with an outstanding group of members, which is to make a report within a year as to what most needs to be done.

Those things have some meaning, but there has not been time to find out just what the fruits of their effort will be, and where else the need may lie.

Then comes the Senator's amendment, which, as I say in great deference to my friend from Pennsylvania, has not had any hearings and has not been submitted to our committee, except that it was explained by the author. I told him I could not support it in that form, and he did not call for a vote by the committee. I especially invited him—and I am not complaining; I just want to bring out the facts pertinent to the hearing—and he said he did not care for a vote. As I recall, he asked if I was opposed to his amendment, and I said, "Forget that. Call for a vote if you desire." However, he did not do it. And I am not complaining. I emphasize that.

So we went on to mark up the bill. That was the last day for markup. Then here comes the proposal in the form of an amendment on the Senate floor with not one scintilla of evidence to support it—not one bit. The Senator's statement is in the record of the hearings, of course.

It is a highly important subject matter, as I indicated to the Senator when I encouraged him to go into the matter.

The first major point we considered in our talk was to get the Comptroller General into the matter of the estimates for the big weapons such as a submarine or a new plane. We found out that he did not have the machinery and did not have the staff to go in and check on those estimates. We found that it would take a

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large number of economists and a large number of other men versed in various fields.

Somewhere they got into the amendment this provision for the Comptroller General to have subpoena power to go into the records of all of the contractors that might be doing business with the Department of Defense just by applying to a district court, and so forth.

I read from the bottom of page 4:

The Comptroller General and any authorized representative of the General Accounting Office is entitled, until three years after the final payment under the contract or subcontract as the case may be, by subpoena, inspection, authorization, . . .

I put emphasis on the word "subpena." That is the very power that the committee has now, and that is where the responsibility ought to remain.

I do not favor voting here in any form for such far-reaching powers, powers as wide as the English language can make them, to authorize the General Accounting Office to go into every book and file of any business in the land merely by getting a subpoena. I do not approve of that form of government.

There are two reasons why I do not approve of it. It would totally change the concept and prerogatives and responsibilities of the entire General Accounting Office. It just is not right on its face. We have that responsibility. It is our obligation, and we must follow up on it.

That is part of my ticket, as I have already said. However, there is another reason. It just is not American to have a so-called bureaucrat—and I use that term in its best concept—with such unlimited power. More particularly, it may be necessary at some time. We may have to do this very thing, but only after the most minute, careful, and exhaustive hearings to determine where the deficiency is and what avenues it is necessary to take to give this power, how it will be exercised, and what restrictions will be placed on it. We should have all of that spelled out in very definite words, followed up by a carefully drawn report of the committee. The matter should then be brought to the Senate floor and passed on in accordance with the judgment of the Senate.

I warn the Senate now that we do not have much before us. We do not have anything before us except a piece of paper and the honest and high-minded statement of the Senator from Pennsylvania.

There is another reason why this should not be passed on in this way. I have had many conferences with Mr. Staats, the Comptroller General this year and before, but this year especially. He came in the other day and we had a conference, at his request. He talked with great earnestness about the bill and how it would change his whole office and the whole concept of his office. He was not happy with it at all. I did not call for him. He called for me.

I have talked with him some about the matter before. He just does not want to have the bald statement of that subpoena power. He does not want it under the circumstances of the amendment. So, I think it would be a dreadful mis-

take, and I told the Senator from Pennsylvania in the committee meeting that I would never agree to the granting of this subpoena power and the changing of the nature of the office without a hearing so that we would know exactly what we were doing.

I believe that if we go ahead and agree to the amendment with that power contained in it, as soon as the business fraternity—and I have no affiliation with them and I am not trying to protect them—realize what is contained in the bill, they would be up here turning things upside down for a chance for a hearing and a definition of the terms and the formulation of something specific and definite in that field.

I warn the Senate to go slow on the matter. High motives and purposes are not enough. I hope that the Senate will give our committee more of a chance than it has had to pass on such a far-reaching matter as this amendment which so materially affects the Department of Defense, or any other department involved.

I am not just trying to plead for the Department of Defense.

Mr. GOLDWATER. Mr. President, will the Senator yield?

Mr. STENNIS. Mr. President, I yield to the Senator from Arizona.

Mr. GOLDWATER. Mr. President, I should like to ask a question that I think is basic to the matter. I think we all must admit that, especially in view of the revelations this year by the Proxmire committee and the Armed Services Committee, we would all be inclined to want legislation to tighten up and control spending.

Am I not correct in thinking that, because the pending amendment would affect the General Accounting Office, the amendment should be heard not by our committee, but by the Committee on Government Operations?

Mr. STENNIS. Undoubtedly. It ought to be referred to the Committee on Government Operations. And then perhaps it ought to come to our committee later, if the matter just pertained to the Department of Defense. However, the pending amendment goes to the whole basic fundamentals of the General Accounting Office. And we certainly need the opinion of that committee. As it is, we do not have the opinion of the Armed Services Committee.

Mr. GOLDWATER. Mr. President, will the Senator yield further?

Mr. STENNIS. I yield.

Mr. GOLDWATER. Mr. President, if the idea is good as applied to the general area of military spending, would it not also be good to apply it to all areas of spending? We are not doing that in this case.

Mr. STENNIS. The Senator is correct. I want to catch up with waste, if there is any waste. I am anxious to do so. However, the concept of the amendment would not apply to other agencies. The Senator is correct. The provision ought to apply to many of these agencies, I will not say to all of them.

Mr. GOLDWATER. The idea is a very intriguing one. It is sort of being against mother love and wide roads and free

beer, if one wants to put it that way. It does sound good.

There was a time when I was inclined to support it. However, when I realized that this requires subpoena action and takes away the prerogative of the General Accounting Office without first having consulted them, I, too, joined my chairman in hoping that the amendment would be rejected.

The idea, however, should be kept alive and sent to the Government Operations Committee for hearings. There is no question that we have to have a closer observation of spending in the military and all through our Government.

But I do not like this approach, and I do not like taking such a great step without first having any hearings on it. I have been as critical of the financial reporting from the Pentagon as anyone. I have been opposed very violently to the idea that Mr. McNamara started doing his own auditing and finally acquiring an auditing department bigger than the General Accounting Office. I do not think that is right. Now that he is gone, perhaps we can get into some intelligent operation of that department, and I think we are. The idea is good. The suggestions in it, on the whole, with the exception of the power of subpoena, are good. But I have to agree with the chairman that this is not the place to decide such an important measure, and I hope it will be rejected.

Mr. STENNIS. I thank the Senator very much.

Mr. COOK. Mr. President, will the Senator yield?

Mr. STENNIS. I yield.

Mr. COOK. Mr. President, one of the things that bothers me, which the chairman of the committee and the Senator from Arizona have stated, is that they dislike in this amendment the power of subpoena.

Sell it to everybody in the country that somebody who has a defense contract does not have to be subjected to the power of subpoena, but that I do, because I filed my income tax return, and that every individual in America who files his income tax return is subject to the power of subpoena by the Department of Internal Revenue, to take his books, to ask for him to appear, to ask anybody else to appear, to go in and get his books; but that, somehow or other, if he has a defense contract, he does not have to do so.

I might suggest to the Senator from Mississippi and the Senator from Arizona that the power of subpoena, the power to secure records, has been given by law to the Civil Aeronautics Board, the Federal Communications Commission, the Federal Trade Commission, the Interstate Commerce Commission, the Securities and Exchange Commission, the Small Business Administration, the Department of Defense, the Department of Agriculture, the Department of Labor, the Federal Deposit Insurance Corporation, the National Labor Relations Board, and the Internal Revenue Service—to go in and look at any individual taxpayer's tax return, books, and records. But, somehow or other, a few contractors in the United States do not like this amendment be-

cause they have Federal contracts, they have defense contracts, and they do not want to give this body the privilege to extend the power of subpoena.

Is it not true that in this bill, on which we will vote either next week or next month, there is a figure in the vicinity of \$1½ billion of the overruns on defense contracts? Did Senators not read in the newspapers, not too long ago, that the Department of the Navy decided that it would give a contract for several more million dollars to a company that was under Federal indictment for the contracts that it previously had?

Then we say that we object to the power of subpoena. Yet, everybody in this Nation who files a tax return must subject himself to the same power of subpoena by the Internal Revenue Department. And we are saying here today that we object to sustaining the power of subpoena against a contractor in the United States who has a defense contract, if the General Accounting Office wants to look into that contract to see whether the taxpayers of this Nation or their Government got a fair deal.

Mr. STENNIS. Mr. President, will the Senator yield to me in order that I may respond on that point?

Mr. COOK. I yield.

Mr. STENNIS. As to the general charge about the contractors being against it, I do not know whether or not they are against it. I have not heard from any of them.

The present situation is that any time the General Accounting Office wants the power of subpoena or to use it, under arrangements with them on defense contracts, they can get it from the same committee, this committee, the Committee on Armed Services. We have that power, and we can let them use it, under our general supervision.

Second, I emphasize that it is not just the granting of the power of subpoena alone in this language. It is doing it without any hearing, without any measuring of the need or the guidelines and all that goes with it. It has been granted to some of the other agencies from time to time. Some of that is in a limited field of operation only. But I would think that was done after a microscopic examination.

I just cannot see the idea of jumping in here and granting this power, with no hearings, no recommendations of a committee, nothing—just somebody speaking on the floor.

Mr. COOK. Mr. President, I want the Record to show that the agencies that I enumerated have the power of subpoena authorized by law, not authorized by a committee that may want to give it to the agency or not give it to the agency, but authorized by this body, as a part of the statutory law of this Nation, to operate its will and perfect its wisdom, as it sees it, through the power of subpoena, in regard to books, records, and witnesses.

In essence, what we are saying today is that all these agencies have that right, including—I emphasize again—the Department of Internal Revenue, as to every individual and corporate taxpayer in this Nation. But, somehow or other, we do not want to give the same au-

thorization to the General Accounting Office in regard to a defense contractor.

Mr. STENNIS. Mr. President, I do not care to continue to hold the floor, if another Senator wants the floor in connection with this matter.

Mrs. SMITH. Mr. President, I want to take this opportunity to commend the distinguished junior Senator from Pennsylvania—he is an active and informed Member and colleague of mine on the Senate Armed Services Committee—for his effort in attempting to find a more efficient accounting system for the Defense Department. The Senator has made a very thorough study of this subject. His is a fine objective.

Mr. President, this is a very broad subject, as already has been said; and while I feel there is a need for a change, I have to agree with the able chairman of the Committee on Armed Services (Mr. STENNIS) that extensive hearings should be held. We should get testimony from the Defense Department, from the Comptroller General, and from others who would be involved in this undertaking.

This amendment merits a great deal of time, much more time than we are able to give it on the floor without the hearings to which I have referred. The many facets that must be explored would require extensive hearings.

I think it could have far-reaching consequences. The new bureaucracies in each of the services, the Defense Department, the General Accounting Office, and Congress would mushroom out of proportion.

Mr. President, again I applaud the distinguished Senator for his efforts toward better fiscal management. As our distinguished chairman already has stated, much of this work is now being carried out under the supervision of the Armed Services Committee. The committee is now getting quarterly reports on the costs, schedules, and performance characteristics of 31 major weapons systems. Already, reports on 26 have been received and are being examined. This closely parallels what the amendment seeks to accomplish.

I would be most reluctant to agree to the subpoena powers as provided in the amendment until the thorough hearings that I am asking for are reported on.

Mr. President, again I wish to commend the distinguished Senator for a job well done. It has brought this matter to our attention. I hope the chairman will find time to have some hearings.

Mr. STENNIS. Mr. President, I think the Senator from Maine has made a splendid suggestion. I would be delighted to set the matter up for hearings and have representatives from the General Accounting Office and the Department of Defense come in.

I really think that the committee which has jurisdiction over the General Accounting Office should have some consideration in this matter to hold hearings from their viewpoint and get estimates as to the cost of carrying out this program, and how many employees would be required. I know under the present situation the General Accounting Office is overlooked and that they do not have enough employees now.

There should be some kind of idea as to what we are authorizing in the way of manpower and additional cost.

For example, I will read the language which appears on page 5:

There are hereby authorized to be appropriated such sums as may be required to carry this section into effect.

That is just a blanket authorization, and not for 1 year but for years to come. I have no idea how many additional employees would be required. It may be a good investment but we are walking around in the dark.

Mr. MONTOYA. Mr. President, will the Senator yield?

Mr. STENNIS. I yield.

Mr. MONTOYA. Mr. President, during the last few weeks I have been conducting hearings with respect to the manpower requirements of the General Accounting Office. It has become crystal clear to us that the General Accounting Office really does not have enough manpower to perform surveillance under the law as an agent of Congress over expenditures in the Department of Defense and other agencies of the Government.

I am inclined to agree with the principle of the amendment and the objectives. However, I think it is of the utmost importance that hearings be conducted so that representatives of the General Accounting Office can come in and tell the Committee on Armed Services as well as the Legislative Appropriation Subcommittee what its manpower requirements might be in order to carry out the directives of this amendment. Until that is done I think the amendment would be premature, and I am inclined to agree with the Senator from Maine and the Senator from Mississippi that this amendment should go before the Committee on Armed Services for a thorough hearing.

Mr. STENNIS. I thank the Senator.

I wish to inquire of the Senator from Pennsylvania, if he is willing to answer, as to his estimate of how many additional employees would be required in the annual cost of carrying out the effect of the amendment.

Mr. SCHWEIKER. Mr. President, will the Senator yield?

Mr. STENNIS. I am glad to yield to the Senator from Pennsylvania.

Mr. SCHWEIKER. Mr. President, I went into quite a bit of discussion with the Comptroller General on this issue. So my colleagues will understand some of the legislative history of the amendment, I went to the Comptroller General with a suggestion on how to perform an audit and have an accounting for it. I suggested originally that the Comptroller General come in on some quarterly basis to look at these programs.

The Comptroller General said that this was not a practical way to proceed and that if I really liked this idea he would revise the language of the amendment, through his general counsel, in a way that they could live with it, to be compatible with the requirements of his office, and to meet their policies and procedures.

The Comptroller General and his attorney did exactly that. They, frankly, have suggested the language of this amendment. It was they who asked for

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the subpoena power because they believe if there is to be the responsibility there must also be the authority. They asked for the subpoena authority. If they are going to be held accountable they would like to have the authority.

As far as cost is concerned, they said, on the original suggestion I had, that it might involve a couple hundred employees; but then when we reversed the procedure so that they would only act as overseer and DOD would do the work and they would only come in and audit the system, if they saw fit to do so, they said it would be less than several hundred employees. However, they could not fix the number of employees. Who can foretell a matter such as the C-5A, or the submarine matter, or some iceberg revelation?

Therefore, they simply say it would be a couple hundred employees and they could not give an accurate estimate. I suggest it will cost only 10 percent of what we spend compared with the \$1.5 extra billion involved in the C-5A going down the drain before anything happened.

I thank the Senator.

Mr. STENNIS. I thank the Senator for his statement. The Senator has worked on this matter in a very splendid fashion, but there is illustrated the need for hearings. This matter must be pinned down. What are the facts? What are the effects of the provision and what will be the cost?

Mr. President, I have before me a letter dated August 1, 1969, from Elmer B. Staats. For the benefit of those who have just entered the Chamber, I wish to say that I have had a great deal of contact with him since January 1. I am interested in the subject matter of this amendment and the whole scheme of following these dollars. That is part of my philosophy of life. I pledge to the committee and to the Senate that we will have a program to that end.

In the course of all these discussions I asked him to review these matters. The Senator from Pennsylvania conferred with him and I know that members of his staff conferred with him. I wish to read portions of the letter of August 1, 1969, addressed to me as chairman of the committee. I shall not read all the letter but I shall put it in the RECORD in its entirety later. If anyone requests, I shall read all of it. The letter consists of three pages:

As you know from our recent discussions, the General Accounting Office is planning to give increased attention to Defense procurement, with particular reference to the procurement of major weapon systems. This area has long been an important one for the General Accounting Office, but I believe that it deserves increased attention in view of the fact that more than one-third of the Defense budget is devoted to procurement.

Passing on some of the more controlling parts, the letter continues:

Preliminary plans of the GAO contemplate that its reports on major weapon systems will include the following:

1. Currently estimated costs compared with the prior estimates separately for (a) research, development, and engineering, and (b) production.
2. The reasons for any significant increase or decrease from cost estimates at the time

of the original authorization and the original contract.

3. Options available under the contract for additional procurement and whether the agency intends to exercise any options, and the projected cost of exercising options.

4. Changes in the performance specifications or estimates made by the contractor or by the agency and the reasons for any major change in actual or estimated differences from that called for under the original contract specifications.

5. Significant slippages in time schedules and the reasons therefor.

We are aware that several legislative proposals have been advanced to provide for differing types of reports and reviews by the General Accounting Office relating to the Defense procurement, with particular reference to weapon systems.

Before legislation of this type is enacted, it would be our recommendation that the most careful consideration be given to it by the Congress. The type of reviews made by this Office and the needs of the interested committees of the Congress need further development and exploration.

Mr. President, I have not read from this letter until this time because it did not come to my personal attention because of other matters concerning the bill. But that is the very thing, I say, we are getting into. The President has ordered the Budget to get into it more. We will and we can bring a complete picture here. If the Senator introduces his bill, we will hold hearings on it to bring in a picture of it. But we do not have that today.

Continuing reading from the letter:

For these reasons we believe that legislation prescribing a particular form of reporting at this time would be unwise.

I repeat, "would be unwise."

That is not the committee talking, or its chairman. That is Mr. Staats, the Comptroller General of the United States.

Continuing reading from the letter:

In general, we believe that the basic authority of the General Accounting Office is adequate to carry out the program which we have outlined.

I am sending a similar letter to the Chairman of the House Armed Services Committee.

I have previously advised in testimony before the House and Senate Appropriations Committees of our general plans to increase our effort in the Defense procurement area.

Mr. President, I ask unanimous consent to have the entire letter from Mr. Staats printed in the RECORD.

There being no objection, the letter was ordered to be printed in the RECORD, as follows:

AUGUST 1, 1969.

HON. JOHN C. STENNIS,
 Chairman, Committee on Armed Services,
 U.S. Senate.

DEAR MR. CHAIRMAN: As you know from our recent discussions, the General Accounting Office is planning to give increased attention to Defense procurement, with particular reference to the procurement of major weapon systems. This area has long been an important one for the General Accounting Office, but I believe that it deserves increased attention in view of the fact that more than one-third of the Defense budget is devoted to procurement.

Assuming the Congress acts favorably upon the 1970 budget request for the General Accounting Office, we anticipate increasing the staff devoted to Defense procurement from an average of 250 to 425 employees.

This increase will be allocated principally to the acquisition of major weapon systems by the Department of Defense where we will give particular attention to the following:

1. Possible improvements in cost estimates at the time the authorization request is presented to the Congress.

2. Providing greater assistance to the Armed Services and Appropriations Committees in the timeliness and completeness of information on the status of major weapon systems.

3. Reviewing and presenting to the Congress on a selective basis major problems identified which may be of assistance to the Congress in acting on future appropriations and authorizations for major weapon systems.

As you know, the Department of Defense is improving its information reporting on major weapon systems through its Selected Acquisition Reporting System. We understand this information will contribute to and supplement the action of the Senate Armed Services Committee, already underway, to develop a reporting system to keep the Committee advised on the status of weapon system acquisitions. The GAO proposes to work with the Armed Services Committees, the Appropriations Committees, and the Department of Defense in developing a system which will assist in meeting the needs of the Congress. Subsequently, the GAO proposes to review from time to time the operation of the reporting system from the standpoint of improvements which may be needed to assure its timeliness, accuracy, and adequacy.

Tentatively, the GAO proposes to submit to the Congress at the beginning of the congressional session and at such later points in time as might be useful during the period when authorizations and appropriations are under consideration, status reports on major weapon systems, excluding those systems which are substantially completed. To the extent practicable, the GAO hopes to come into agreement with the Department of Defense on cost definitions. The General Accounting Office will advise the Department of Defense of the weapon systems to be included in the report for this purpose at an early date. It will also be necessary to reach agreement between the Department of Defense and the General Accounting Office on access to records. In addition, there should be discussions on the classification of data and the handling of such data in GAO reports which is classified in nature.

Detailed reviews of the problems involved in acquisition of weapon systems will give first priority to the requests of authorizing and appropriating committees. For example, the GAO has been requested by the Senate Armed Services Committee to provide information for the Committee with respect to the Cheyenne Helicopter, the Condor, and the SRAM. The GAO will advise the Department of Defense of future similar requests when received or if additional reviews initiated within the discretion of the GAO.

Preliminary plans of the GAO contemplate that its reports on major weapon systems will include the following:

1. Currently estimated costs compared with the prior estimates separately for (a) research, development, and engineering, and (b) production.
2. The reasons for any significant increase or decrease from cost estimates at the time of the original authorization and the original contract.
3. Options available under the contract for additional procurement and whether the agency intends to exercise any options, and the projected cost of exercising options.
4. Changes in the performance specifications or estimates made by the contractor or by the agency and the reasons for any major change in actual or estimated differences

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from that called for under the original contract specifications.

5. Significant slippages in time schedules and the reasons therefor.

We are aware that several legislative proposals have been advanced to provide for differing types of reports and reviews by the General Accounting Office relating to the Defense procurement, with particular reference to weapon systems. Before legislation of this type is enacted, it would be our recommendation that the most careful consideration be given to it by the Congress. The type of reviews made by this Office and the needs of the interested committees of the Congress need further development and exploration. For these reasons, we believe that legislation prescribing a particular form of reporting at this time would be unwise. In general, we believe that the basic authority of the General Accounting Office is adequate to carry out the program which we have outlined.

I am sending a similar letter to the Chairman of the House Armed Services Committee.

I have previously advised in testimony before the House and Senate Appropriations Committees of our general plans to increase our effort in the Defense procurement area.

Best wishes.

Sincerely,

ELMER B. STAATS.

Mr. SYMINGTON. Mr. President, will the Senator from Mississippi yield?

Mr. STENNIS. I yield.

Mr. SYMINGTON. I congratulate the able Senator from Pennsylvania for what he is aiming to do; namely, obtain more efficient management of our gigantic purchases in the military field.

May I say to him, with great respect, that I do not believe we should depart in broad and different fashion, without hearings. Hearings where the GAO people, including the Comptroller General himself, could be examined with respect to this matter.

Many years ago, as some of us will remember, there was an effort made to, in effect, cut the GAO into the procurement procedures. At that time, many of the problems I believed might come up under this kind of legislation, did come up.

The GAO in effect is the watchdog of Congress. It is the one agency totally independent of the executive branch. The Comptroller General is appointed for 15 years and cannot be dismissed from office, to the best of my knowledge, except through malfeasance.

If we utilize the GAO abnormally, then, in effect, we cut them into the functions of the executive branch.

I would hope this one agency would stay in a position where it could constantly check all operations and costing, because as soon as we give them authority, we automatically give them responsibility.

If I may say so, for the first time since I became a member of the committee, the distinguished chairman, the Senator from Mississippi (Mr. STENNIS) has made additional arrangements whereby he could further utilize the GAO in checking contracts.

The Comptroller General has told me personally that he is pleased with this present arrangement and looks forward to cooperating with the Armed Services Committee.

Mr. President, I could go on for some time on this subject, but based on experience in private business, in the ex-

ecutive branch, and as a member of the committee for some years, I would earnestly hope that the Senate would not pass this legislation today. The idea was presented to the committee, but not approved and to date there have been no hearings. As I understand the distinguished chairman, he is entirely willing to hold hearings; is that not correct?

Mr. STENNIS. Oh, yes; absolutely.

Mr. SYMINGTON. Under those circumstances, I believe it would be a mistake to cut the GAO to this extent into the responsibility of the executive branch.

Mr. STENNIS. I thank the Senator from Missouri very much for his fine remarks.

Mr. President, let me say as a general proposition that I have not had a chance to get into this matter before. I say that for the benefit of the Senator from Pennsylvania.

Mr. PERCY. Mr. President, will the Senator from Mississippi yield?

Mr. STENNIS. I yield.

Mr. PERCY. Mr. President, I have two questions, one pertaining strictly to military contracts. Would it not be logical to have it referred to the Armed Services Committee for hearings, but, as it involves the Comptroller General, would it not also be logical to refer it to the Committee on Government Operations for their investigation?

Mr. STENNIS. I agree heartily with the Senator. He is correct. I believe this could well be referred to each committee. Perhaps the one that has jurisdiction over the GAO, because otherwise it would change the whole concept of the GAO. If they were courteous enough to do so, if they referred it to us, we could hold additional hearings and look into it from the viewpoint of doing our duty.

Mr. PERCY. The workload in the Government Operations Committee is not so heavy as in the Armed Services Committee.

We might be able to take an objective view, and I think we could probably have early hearings. What would be the opinion of the distinguished chairman of the Committee on Armed Services as to how soon, if we had hearings, this arrangement might become law, if a committee approved it and the Senate approved it? Would enactment be possible this year?

Mr. STENNIS. It would be entirely possible. Probably it would not be possible to attach it to this bill, but I have no doubt that with all the probings and pushings that are going on during this calendar year, something will come of it.

I think the experience from those probings and from what we have learned in this debate and in other matters will make it possible to report a much better bill to the Senate, if it is decided to report one.

Mr. GOLDWATER. Mr. President, will the Senator yield?

Mr. STENNIS. I yield.

Mr. GOLDWATER. I have asked the Senator from Mississippi to yield so that I might ask a question of the distinguished Senator from Pennsylvania, in order to clear up a question that was

raised, in part, by his prior statement, when he referred to the Department of Defense system of reporting, or something like that.

Section 501(a) reads:

The Secretary of Defense, in cooperation with the Comptroller General, shall develop a reporting system for major contracts entered into by the Department of Defense, any department or agency thereof, or any armed service of the United States, for the development or procurement of any weapons system or other need of the United States.

Throughout that section there is reference to Department of Defense reporting. I invite attention to the top of page 4 of the amendment, paragraph (e):

(e) The Comptroller General shall, through test checks, and other means, make an independent audit of the reporting system developed by the Secretary of Defense and shall furnish to the Congress and to the Committees on Armed Services and the Committees on Appropriations not less than once each year a report as to the adequacy of the reporting system, and any recommended improvements.

The question that comes to my mind is raised because, if my understanding is correct, this is pretty much the system under which the Department of Defense has been operating for the last several years, namely, an auditing system of its own, which is occasionally audited by the General Accounting Office. Would the Senator's amendment call for a separate auditing besides the audits that have been done by the Department of Defense?

Mr. SCHWEIKER. First of all, Mr. President, they do not have a central auditing system now. That is one thing I mentioned a moment ago. The Comptroller General was shocked that, in order to get the figures on the larger contracts, he could not even go to one central office or one central person who was responsible. It was diversified through many branches of the Pentagon and many offices. There is no central office in the Pentagon where those figures are available. So this amendment would force such an office to be established.

Mr. GOLDWATER. In a way, I am glad to see that system done away with, which was partially due to the huge overruns on the C-5A, which was first reported as happening as early as December 1967. I was wondering whether it would not be a better idea to have the GAO itself directly responsible for setting up the system of audits in the Defense Department—in other words, not create a creature over there that could again be manipulated or controlled by someone who did not want the true figures coming out.

Mr. SCHWEIKER. That was my original suggestion, and the Comptroller General said it was not practical; that it would cost too much and demand too much of their energies; that he could accomplish the same thing—and that is why I accepted his wording on the amendment—if they would let the Department of Defense be basically responsible for setting up the system, but they would oversee it. It was as a matter of economy and not trying to throw their operations out of gear that I accepted his suggestion.

Mr. GOLDWATER. Did the Senator confer with the Department of Defense as to what their feelings might be to his suggestion?

Mr. SCHWEIKER. Frankly, I did not feel the Department of Defense would be very responsive to having any auditing in their system, so I did not. It would be something like asking the fox to watch the henhouse.

Mr. GOLDWATER. I could understand that had the Senator been faced with the prior administration in the Pentagon. I think this administration is very, very heavily in favor of its being done. That is why I thought the Senator might have asked them if they had any idea or had reached any idea from the committee appointed under Mr. Packard to study this whole program. If he has not, I can certainly understand why. I would hope, however, that, if the amendment is defeated and he desires to introduce it as a separate piece of legislation, officials of the Defense Department would come before us. I am sure, just as much as he does and just as much as the Senator from Arizona does, they would like to see a better watchdog setup over this whole matter. I thank the Senator from Pennsylvania for his indulgence.

Mr. YARBOROUGH. Mr. President, in recent months, it has become clear to me and I am certain to other Senators, that the present provisions for supervising contracts between the Department of Defense and private industry are not adequate to insure that the public interest and the public purse will be protected. I refer specifically to the shocking increase in the cost of the C-5A transport aircraft. On July 29, 1969, there appeared in the Washington Post, an article entitled, "AF Lists Cost Rise of C-5A." This article carefully explains the circumstances under which the cost of this plane has risen by nearly \$2 billion. I ask unanimous consent that this article entitled, "AF Lists Cost Rise of C-5A" be printed at this point in the RECORD.

Mr. President, Senator SCHWEIKER's amendment would empower the General Accounting Office, an arm of the Congress, to audit contracts entered into by the Department of Defense. I believe that this will be a major step toward preventing this type of waste that has been going on in the past. I support Senator SCHWEIKER's proposal.

There being no objection, the article was ordered to be printed in the RECORD, as follows:

AF LISTS COST RISE OF C-5A

(By James G. Phillips)

An Air Force study ordered by Defense Secretary Melvin R. Laird reported yesterday that costs of the giant C-5A transport aircraft have increased by \$1.7 billion and may go up even more.

The Pentagon added that some of the cost increases reflected its decision to modify the aircraft (increase its size) and add additional spare parts that had not been contemplated in the original purchase.

The expected final cost for the 120 planes built by Lockheed has been the subject of continuing controversy over the last few months. Critics of the C-5A have estimated the price tag at \$5.3 billion, an overrun of \$1.9 billion.

The Pentagon report, prepared by a task force under Assistant Air Force Secretary Philip N. Whittaker, revealed that the total

cost of the program had increased from \$3,369,000,000 at the time of the contract award in 1965 to a current total of \$5,125,000,000. This represents an overrun of more than \$1.7 billion.

In a Pentagon press conference unveiling the report, Air Force Secretary Robert C. Seamans Jr. criticized "ambiguities and deficiencies" in the original contract for the plane and hinted that the remaining 39 aircraft in the original 120-plane package may not be purchased unless contract revisions are made.

Asked whether the threat of curtailing the purchase amounted to a negotiating weapon, Seamans replied: "It certainly is."

But Seamans added that the Air Force was satisfied with the plane's performance and hopes it can follow through on the full original purchase.

The main feature of the contract that Seamans criticized was the plane's repricing formula—the so-called "golden handshake" under which Lockheed can make up its losses on the first order of 58 planes by charging a higher price on the second purchase of 62.

He said the Air Force would open immediate negotiations with Lockheed to revise this formula and other provisions of the contract involving the amount the company can charge for spare parts and the amount the Government can penalize the company for deficiencies or late delivery.

The report, prepared by 11 different Air Force committees and a four-man outside civilians review group, was ordered by Laird on April 30. It covered the entire eight-year history of the program, from the beginning of its planning in 1961.

In his letter submitting the report to Seamans, Whittaker said his aim had been "neither to conduct a witch hunt nor to perform a whitewash."

Despite its criticisms of the original contract, the panel emphasized that it "by no means represents a windfall" of profits for Lockheed. In comparison to other aircraft programs, the report said, it was questionable whether Lockheed would reap even normal profits, "let alone excessive" ones.

Nonetheless, the report said, the repricing formula was a "reverse incentive" that should be dropped from the contract.

If this and other controversial provisions weren't revised, the report added, there was a "distinct possibility" that the plane's cost overrun could increase.

The report noted that the \$5.1 billion estimate for the total program was a 52 per cent increase over the original target costs. It said this was mostly attributable to inflation and the addition of \$295 million for spare parts and aircraft modifications not included in the original cost projection.

While the report cleared Lockheed of any charges of profiteering on the aircraft, it was sharply critical of the company's procedures in estimating original costs.

It said the company had been "overly ambitious" in underbidding its two competitors, Boeing and McDonnell Douglas, and had erred in assuming that the project was just a scaled-up C-141—another large cargo plane produced by Lockheed.

But in response to reporters' questions, Seamans and Whittaker denied that the company had deliberately "bought into" the program with low initial cost estimates in order to get "bailed out" later with a higher price for the second production run.

Whittaker said the company's thinking had been marked by too high a degree of technical optimism, too low a projection of inflation, and a desire to keep its plant fully operating after the final production run of C-141s.

"What the various interplay of those factors was is anybody's guess," he concluded.

UNANIMOUS-CONSENT AGREEMENT

Mr. STENNIS. Mr. President, I have conferred with the Senator from Penn-

sylvania. It is agreeable with us, if it is agreeable with the Senate, to have just 5 minutes to each side for debate now, and then proceed to a vote. I make that request.

The PRESIDING OFFICER. Is there objection to the unanimous-consent request? The Chair hears none, and it is so ordered.

Who yields time?

Mr. SCHWEIKER. Mr. President, for the life of me I cannot understand why it is that the largest operation that the Government has going, namely, the Department of Defense, would not subject itself to some kind of certified public accounting or some kind of auditing system or some kind of statutory authority that insures the figures will be accurate and honest. I had the privilege in the other body of serving for 6 years on its Committee on Armed Services, and for a short time I have served on the same committee in this body.

Frankly, our decisionmaking process is totally related to the accuracies of details and fiscal figures and accounting presentations. After the inquiries into the C-5A and other matters in this body and the other body, it is obvious to me that we have been making many false assumptions and making many decisions based on erroneous facts.

What is so objectionable to having an auditor check into these matters? What is so objectionable to having the General Accounting Office have subpoena power, as the Senator from Kentucky pointed out, to call in contractors? We do it with respect to some other programs, but when 40 percent of our national budget goes to defense, why do we not have a fiscal watchdog in this area?

As far as costs are concerned, the cost of an \$80 billion operation is one half of one one-hundredth percent. That is what the cost would be, even if everything went wrong with the system, according to their estimates. I would like to repeat that. The cost of the proposal at the outside would be something like \$4 million for 200 people—about one-half of one one-hundredth percent.

If we look at the C-5A for a second, we see where we would have saved thousands more than that. What is wrong with investing a little of the taxpayers' money to get a dividend that would return into their pockets perhaps a million times the investment, or perhaps be devoted to other activities of the Federal Government?

The chairman of the committee has been most cooperative. I wrote the committee and the chairman and advised them on June 18 that I was preparing this amendment for the consideration of the committee. We had 2 weeks in which to have hearings or in which to suggest hearings. On the floor today was the first time I ever even heard the word "hearing" mentioned. I think it is important to point out that we have had plenty of time to hold hearings. I canvassed the senior members of the committee. It was obvious they were against the amendment. So I did not press it to a vote. I thought, in good conscience, there was not much point in pushing it to a vote when the chairman

expressed complete opposition to my amendment. But I think it is important to note that we did not have hearings, that I was not offered an opportunity for hearings. I think this is the first time I have heard the word "hearing" discussed.

Mr. DOLE. Mr. President, will the Senator yield for a question?

Mr. SCHWEIKER. I yield.

Mr. DOLE. First, I commend the Senator from Pennsylvania, with whom I had the pleasure of serving in the House of Representatives for 8 years. There are those of us on both sides who see a great deal of merit in the amendment, but, unlike the Senator from Pennsylvania, we have not had an opportunity to give it serious study or consideration. I would hope there would be hearings on the proposal. I heard the chairman state that he is willing to have hearings at the earliest possible time.

I would not want to prejudge the amendment, but I believe we would be in a better position if we had hearings and the opportunity to hear testimony not only from the Defense Department but from contractors and the GAO.

While many of us are sympathetic with the general idea of what the Senator would hope to accomplish, I trust the Senator agrees that the proper way to proceed would be to first have hearings, if the amendment is defeated, and then see what should be done.

Mr. SCHWEIKER. I thank my distinguished colleague. I appreciate his comments. I think we had ample opportunity to hold hearings, but I was not given that opportunity, and we did not hold hearings.

I think the amendment is pretty much self-explanatory. It is a question of whether we want to accept the basic principle of having a fiscal watchdog over the Defense Department. In view of what we read in the news media today, I do not know how anyone could suggest anything other than that we should have a watchdog when we consider what is happening in the Defense Department.

I think the issue is clear. The distinguished Senator from Mississippi says he does not want to give them subpoena power. How in the world can we ask somebody to be accountable for something, and then not provide the authority to back it up? How can we ask them to be auditors, and then say, "we do not give you the responsibility or the authority to see that the facts are available"?

I think it is important also that this concept was evolved and developed by the Comptroller General himself. I was surprised to hear of his letter to the Senator from Mississippi, because when I talked to the Comptroller General some 6 or 8 weeks ago and asked him the same question, he told me that this was a matter of basic policy for Congress and the Senate itself to decide, that this was our issue.

The PRESIDING OFFICER. The Senator's 5 minutes have expired.

Mr. STENNIS. Mr. President, if the Senator needs more time, I will give him a minute.

Mr. SCHWEIKER. No, I am through.

Mr. STENNIS. In reply to the state-

ment that the Senator has just made, I shall review the matter briefly.

This proposed amendment, with no hearings and no report on it, with no committee having passed on it, and recommended by no committee, would change the whole structure of the concept and mission of our General Accounting Office. I have said we should have hearings, and I meant every word of it, of course. I believe the other committee that has jurisdiction over the General Accounting Office should have hearings, before making such a far-reaching change as this amendment would effect. That can be handled.

There is no definition of terms, and no estimate on the number of people who would be required as new employees, nor of the cost of the operation.

The head of the General Accounting Office, Mr. Staats—and I think he is an exceptionally fine and capable man, and a real administrator, doing splendid work—has looked into all of this and come to his own conclusions. I did not try to influence him. I shall quote briefly from a letter which, after we had talked about the matter a few days ago, I asked him to write. I simply said to him, "Well, if you don't mind, just put that down in the form of a letter." I read briefly, for those who were not here before:

Before legislation of this type is enacted, it would be our recommendation that the most careful consideration be given to it by the Congress. The type of reviews made by this office and the needs of the interested committees of Congress need further development and exploration.

That is exactly what I had said about it after I read his letter.

The letter continues:

For these reasons, we believe that legislation prescribing a particular form of reporting at this time would be unwise. In general, we believe the basic authority of the General Accounting Office is adequate to carry out the program which we outlined.

He had outlined a proposed program in the first two pages of his letter.

Mr. President, in view of the fact that we have readily agreed, and wanted to agree, to have hearings on the whole concept of this matter, hearings which it was just not possible to hold at the late date it was mentioned to me, and in view of the fact that I, as chairman of the committee, have pledged myself to institute such hearings and consider the matter on its merits; in view of the fact that this subpoena power will have to be measured and carefully drawn; and since I believe everyone has had all the time he needs to consider the matter here, I believe, if we are going to take further action, it would be better just to move now to table the amendment, and have a vote on that motion.

May I have the attention of the Senator from Pennsylvania? I just stated that, in view of the fact that we have agreed on the need for hearings and a continuation of this matter, I believe it would be better just to have a motion to table, and vote on that; and, if that does not dispose of the matter, we could have another vote, but if it did dispose of it, then we would agree to go on with the hearings.

Mr. SCHWEIKER. Mr. President, will the Senator yield?

Mr. STENNIS. I yield.

Mr. SCHWEIKER. First, there was some indecision in the Senator's mind as to which committee the matter should come before; so there is not much sense in holding hearings in our committee before that matter is settled.

Mr. STENNIS. That will all be taken up. I think it ought to be voted upon, but we could use that as a start.

Mr. GRIFFIN. Mr. President, I believe the concept embodied in the amendment offered by the Senator from Pennsylvania is excellent. I am strongly inclined to support what he is trying to do.

On the other hand, a responsible legislator cannot help but be impressed by the complexity of the issues raised and by the need for committee hearings on such a legislative proposal.

In view of the assurances given by the Chairman of the Armed Services Committee that hearings on this proposal will be conducted and that it will be carefully considered, I believe it would be best at this time to afford the committee that opportunity.

At the same time, I wish to commend the Senator from Pennsylvania for presenting the amendment and for the outstanding leadership he is providing. He is moving in the right direction, and I hope we will soon be in a position to vote approval of such an amendment.

Mr. STENNIS. Mr. President, how much time do I have remaining?

The PRESIDING OFFICER. The Senator has only seconds.

Mr. STENNIS. I have concluded my remarks; and in the spirit of the premises, I move to lay on the table the amendment proposed by the Senator from Pennsylvania.

Mr. SCHWEIKER. Mr. President, I ask for the yeas and nays.

The yeas and nays were ordered.

The PRESIDING OFFICER. The question is on agreeing to the motion by the Senator from Mississippi (Mr. STENNIS) to lay on the table the proposed amendment of the Senator from Pennsylvania (Mr. SCHWEIKER). On this question, the yeas and nays have been ordered, and the clerk will call the roll.

The legislative clerk called the roll.

Mr. KENNEDY. I announce that the Senator from Indiana (Mr. BAYH), the Senator from Tennessee (Mr. GORE), the Senator from Maine (Mr. MUSKIE), and the Senator from Alabama (Mr. SPARKMAN) are necessarily absent.

Mr. SCOTT. I announce that the Senator from Nebraska (Mr. CURTIS) is detained on official business, and if present and voting would vote "yea."

The result was announced—yeas 44, nays 51, as follows:

[No. 69 Leg.]

YEAS—44

Allen	Ellender	Long
Allott	Ervin	Magnuson
Anderson	Fannin	McClellan
Baker	Fong	McGee
Bennett	Goldwater	Miller
Bible	Griffin	Montoya
Boggs	Gurney	Russell
Byrd, W. Va.	Hansen	Smith
Cannon	Holland	Stennis
Cotton	Hollings	Symington
Cranston	Hruska	Talmadge
Dirksen	Inouye	Thurmond
Dole	Jackson	Tower
Dominick	Jordan, N.C.	Young, N. Dak.
Eastland	Jordan, Idaho	

NAYS—51

Aiken	Hatfield	Pearson
Bellmon	Percy	Hughes
Brooke	Javits	Fell
Burdick	Kennedy	Prouty
Byrd, Va.	Mansfield	Proxmire
Case	Mathias	Randolph
Church	McCarthy	Ribicoff
Cook	McGovern	Saxbe
Cooper	McIntyre	Schweiker
Dodd	Metcalf	Scott
Eagleton	Mondale	Spong
Fulbright	Moss	Stevens
Goodell	Mundt	Tydings
Gravel	Murphy	Williams, N.J.
Harris	Nelson	Williams, Del.
Hart	Packwood	Yarborough
Hartke	Pastore	Young, Ohio

NOT VOTING—5

Bayh	Gore	Sparkman
Curtis	Muskie	

So Mr. STENNIS' motion to lay Mr. SCHWEIKER's amendment on the table was rejected.

The PRESIDING OFFICER. The question is on agreeing to the amendment of the Senator from Pennsylvania.

Mr. STENNIS. Mr. President, I think this matter should be discussed further, for the information of Senators, and I ask unanimous consent that additional time of 15 minutes to each side be allotted.

The PRESIDING OFFICER. Is there objection?

Mr. SAXBE. I object.

The PRESIDING OFFICER. Objection is heard.

Mr. STENNIS. Is there objection, Mr. President?

The PRESIDING OFFICER. Objection is heard.

Mr. STENNIS. Mr. President, I would not have made that request, except—

Mr. MANSFIELD. Mr. President, will the Senator make his request again?

Mr. STENNIS. I do not care to pursue the matter against the will of the Senate.

Mr. SCHWEIKER. Mr. President, will the Senator yield?

The PRESIDING OFFICER. Does the Senator renew his request?

Mr. STENNIS. Mr. President, I ask unanimous consent that we have additional debate on the question of this amendment and that 15 minutes be allotted to each side, under the usual control.

The PRESIDING OFFICER. Is there objection? The Chair hears none, and it is so ordered.

Who yields time?

Mr. STENNIS. Mr. President, the Senator from Florida has an inquiry. I yield to him for that purpose.

Mr. HOLLAND. I would like to have 5 minutes.

Mr. STENNIS. Mr. President, this is a far-reaching amendment.

Mr. KENNEDY. May we have order, Mr. President?

Mr. STENNIS. It provides for certain quarterly reports to be made by the General Accounting Office regarding major contracts, and it includes a power of subpoena for the General Accounting Office in that field.

Mr. President, I will be as brief as I can. The General Accounting Office has been over this matter many times, and I have a letter from Mr. Staats in which he says that he has reviewed the entire matter and that he thinks present legislation gives him abundant authority,

and he does not favor the adoption of this amendment.

Referring now to the contents of the amendment—I think this is highly important—it would change the whole nature, concept, and mission of our General Accounting Office.

Mr. YOUNG of Ohio. Mr. President, may we have order? I ask that the Sergeant at Arms be directed to clear the corridor—

Mr. LONG. I object.

The PRESIDING OFFICER. Does the Senator from Mississippi yield?

Mr. YOUNG of Ohio. I ask that the Sergeant at Arms clear the aisle.

Mr. STENNIS. Objection is heard, Mr. President. I do not want to be charged with the time.

My concern about this matter is the loose language that changes the very nature of our General Accounting Office, as I have said, and gives the most far-reaching subpoena power to the General Accounting Office to go into all the files and the records of all the contractors concerning any contract it may select. That, in itself, is not bad. The committee has that subpoena power. Congress has that responsibility. This committee is pledged and dedicated to following up that money. We already have the machinery in operation. We have on our staff highly qualified men, now on a reimbursable basis from the General Accounting Office, but it is going to be made permanent with some personnel. I am satisfied that they will have the capacity to make these quarterly checks and then report to us.

The Department of Defense has gone into the matter by having their own quarterly checks into these contracts. They have also put this matter under the scrutiny of the Budget Bureau, but I merely mention that in passing.

The President has set up a blue-ribbon panel to go into this subject. I am sure that the experiences of this year are going to culminate in making it possible to know where we are and what we should do.

There have been no hearings with respect to this amendment; there is no record here. It does not have the recommendation of the Committee on Armed Services, because it was withdrawn and no vote was requested. There is no estimate of what it would cost or how many new employees would be involved; and the language is very loose, indeed, as to how far it would go in granting this tremendous authority.

This is a vital subject. Let this matter be introduced as a bill, and let us get some qualified people to testify about it—for example, the General Accounting Office, the Department of Defense, and outside witnesses. Then we will know where the problem is and what the best solution is. The General Accounting Office tells us now that this is not the best solution, that it is not the way to go at it. No one is telling us that it is the best solution, except for the general statements on the floor, unsupported by any kind of testimony.

If that is the way to run far-reaching affairs such as this, it is a new chapter in the book. We have members of the

committee who are qualified to pass on matters of this kind, and they have not had a chance to do so. They are qualified to make recommendations. Members of the committee have jurisdiction over the General Accounting Office. They are qualified in every way. They have not had this opportunity. There has been no testimony—just a lick and a promise and a hope and a demand that something be done. I, too, want something done. I am pledged over and over to follow up any dollars that are authorized.

But I think by all standards the committee should have a chance to pass on this matter. They know something about the problem and they should be able to make a recommendation.

Mr. SYMINGTON. Mr. President, will the Senator yield?

Mr. STENNIS. I yield.

Mr. SYMINGTON. Mr. President, I would respectfully urge the Senate to give full consideration to the inherent danger which could lie in agreeing to an amendment of this character without hearings.

I have had experience with the General Accounting Office as an industrialist, as a member of the executive branch, and as a Member of Congress. The General Accounting Office is the watchdog of the Congress, and as a result of the decision of the chairman of the Armed Services Committee we are already moving into a more direct relationship.

If the Comptroller General of the United States, who would function as a result of this legislation in a new field, object to this legislation, should we not, before we consider this bill, want to know why he objects, why he thinks it would be less favorable to the taxpayers?

Another aspect occurs. I have respect for the new Secretary of Defense, a former Member of Congress, and the Deputy Secretary of Defense, as successful businessmen as we have in the country today. They are trying to see that the taxpayers get the most for their dollar in this defense field.

A contract was mentioned on the floor of the Senate recently by advocates of this amendment. That has little to do with current efforts being made in the Department of Defense today to tighten control.

Mr. President, I do not believe it wise to cut into current functioning, unless it is clear just what his new authority and responsibility would be, the Comptroller General.

For those reasons, I would urge Senators, after this constructive statement made by the chairman, who is already using more than ever before General Accounting Office people in committee work, that we have hearings before reaching any conclusion about this legislation.

There are two witnesses I would like to hear. First, the Secretary of Defense. Second, the Comptroller General of the United States, who for some 20 years or more was Deputy Director of the Bureau of the Budget and therefore has had more experience than most with respect to contractual relationships with the Government.

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Mr. STENNIS. Mr. President, how much time do I have remaining?

The PRESIDING OFFICER. The Senator has 6 minutes remaining.

Mr. STENNIS. Mr. President, I yield to the Senator from Pennsylvania.

Mr. SCHWEIKER. Mr. President, I yield to the Senator from Kentucky.

Mr. COOK. Mr. President, we talked about whether there should be hearings on no more than an auditing procedure, and the fact that the Comptroller General with the Secretary of Defense is developing a reporting system. This occurs in many other departments of the Government. One of the major arguments of the Senator from Mississippi, the chairman of the committee, when we first started the debate, when there were three Senators in the Chamber, was that he absolutely abhorred the idea that this bill had in it the power of subpoena. He said that was not the way to do it; and he said that was not the American way to do it.

Mr. President, I want every Senator to know that many of us have given the authority to many agencies, which I have already listed. I will list them again. We have given the power of subpoena and to bring witnesses, to seek books and records, to the Civil Aeronautics Board, to the Federal Communications Commission, to the Federal Trade Commission, to the Commerce Department, to the Securities and Exchange Commission, to the SBA, the Department of Justice, the Department of Agriculture, the Department of Labor, the Federal Deposit Insurance Corporation, the National Labor Relations Board, and last, but not least, we have given it to the Internal Revenue Department. We have given that authority to the Internal Revenue Department, the power to subpoena, to go into anybody's records or tax returns, to get anybody's books. We are sitting here today saying that the power of subpoena to the average American individual has been given as a matter of law, but the chairman has said the power of subpoena rests with the committee, and we can do this if we want to but we are not going to make it a matter of law that the Department of Defense and its contractors must subject themselves to the power of subpoena when we want to look into whether they abided by their contracts.

Mr. STENNIS. Mr. President, I think my statement was that after hearings and decision in this matter, I might favor giving this power.

Mr. COOK. Mr. President, I do not wish to argue with the chairman of the committee, but he made clear he did not want to give it to such an agency as this, that it rested in the committee, and that he wanted to have hearings.

On many occasions the Senate has said that the power of subpoena is already a matter of law to many agencies of the Federal Government; but to the Department of Defense and its contracting officers, it is not given.

I thank the Senator for yielding.

The PRESIDING OFFICER. Who yields time?

Mr. SCHWEIKER. Mr. President, there has been a lot of talk about hearings. There has been a lot of talk about

study, and there has been a lot of talk about consideration.

I would like to set the record straight in this regard. I wrote to fellow members of my committee on June 18, 2½ weeks before the bill was reported. At that time, was anybody willing to have hearings? Was anybody willing to talk about hearings? Was anybody interested in studies, or anything but being opposed to the amendment? As far as bringing the amendment to a vote, we did take an informal showing around the table, and obviously I was outnumbered. Of course, I did not force the matter to a rollcall vote for obvious reasons. It was obvious I was opposed by the senior members of the committee, and I did not force a rollcall vote.

I do not understand why we need hearings. I do not understand why we need a study to see if the Department of Defense should have an auditor. It is as simple as that. Should we have a fiscal watchdog to see where the \$80 billion being spent is going, or where 41 percent of our budget is going? Why do we need hearings to determine whether an auditing function is called for?

Mr. COOK. Mr. President, will the Senator yield?

Mr. SCHWEIKER. I yield.

Mr. COOK. Is it not a fact that in the defense bill on which we are about to vote, or will vote next week or next month, there is an item of \$1.5 billion of Defense Department contractual overruns and, had there been a watchdog, an auditing system in effect long before this, perhaps we would not have to make up for such errors and inconsistencies by substitute legislation in the future?

Mr. SCHWEIKER. The Senator is correct. Other things also came to light. I will not mention the weapons system. We have in this bill \$20 billion for weapons systems.

We found one weapon, which the particular service involved did not want, that involved \$1.5 billion. Only because one of the members of the committee was a pilot and knew something about it did we take \$1.5 billion from the bill and reverse the error. That is the kind of matters we are confronted with when we do not have an actual up-to-date auditor to tell us what is going on.

To vote on \$20 billion and not know fiscally what is in it is a matter of conscience with me, and it is a matter which can be rectified only by auditing and fiscal responsibility. I do not understand why we are not ready to spend \$4 million at the outside, which is the Comptroller General's figure, and 200 people at the outside, which is what they might need to establish this responsibility. That is one-half of one one-hundredths percent of our defense budget. Why are we not willing to put an investment in auditing like any other large corporation, like any other operation in the country that deals with \$80 billion? For the sake of our taxpayers, if for no one else, we should do that.

Mr. JAVITS. Mr. President, will the Senator from Pennsylvania yield?

Mr. SCHWEIKER. I yield.

Mr. JAVITS. I have two questions I should like to ask the Senator. I notice

his time period for the Secretary of Defense to review his 3 calendar months.

Business experience would indicate—and I am not saying this in a hostile manner because I am sympathetic to the amendment—but business experience would indicate that that causes every review to run into every other review.

I wonder whether the Senator has had any experience on this which makes the 3 months preferable, or whether he would be interested in making it 6 months.

The other question I have is whether subdivision F on page 4 of the amendment was really clear, that there should be spot audits? There is something in the minds of business people, kind of being crawled over by different sets of audits. It seems to me what the Senator had in mind, rather than any mandatory audit, would be a spot audit on the part of the Comptroller General.

Now those two points go to the practicality, I am sure, of what the Senator is trying to bring about. I think, if I divine the Senator correctly, that he does want control of oversight, which we really cannot give because we are not organized for it; but he does not want, either, inordinate costs to creep into the manufacturing itself, because we will be paying for all of it in the contract, and if he has to, the contractor will charge for it, and he does not want to interfere with efficient operation by an inordinate amount of paperwork, which is vexing to the contractor.

Mr. SCHWEIKER. Yes. I concur, and thank the Senator for his constructive remarks. Three months was selected because in a number of the major weapons systems, a 6-month lag is too long.

The C-5A option was exercised several months ago. We will never be on top of an exercise of an option in a major contract properly if we have that 6-month lag.

The amendment affects only large, major weapons systems. I ask the Senate to keep that in mind. We are talking primarily about weapons systems that account for more than \$100 million a year each. This involves only about 55 contracts. Thus, we are not talking about 90 percent of the burdensome reporting. We are also talking about spot audits at the request of the Comptroller General.

We worded the amendment in his language, in his way, so that he would live with it, so that it would be practical. He suggested this language to overcome the problem the Senator from New York is concerned about.

Mr. JAVITS. On page 4, line 10 "the costs incurred and to be incurred," does the Senator have in mind the same order of magnitude of major contracts in the \$100 million range that he refers to?

Mr. SCHWEIKER. Yes. This is correct.

Mr. JAVITS. I thank the Senator.

Mr. STENNIS. Mr. President, I yield 3 minutes to the distinguished Senator from Illinois.

Mr. DIRKSEN. Mr. President, the pending amendment just came to my attention this noon. I did not know that it was going to be submitted. I had a chance to look at it with a sandwich in one hand and the amendment in the other.

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I thought it was a far-reaching proposal that certainly deserves a lot more consideration than it will get in this discussion.

I heard it pointed out earlier today that this should go to the Government Operations Committee for hearings and then subsequently to the Appropriations Committee, or to the Armed Services Committee—either one.

The Government Operations Committee is the oversight standing committee in the Senate. It is the oversight standing committee also in the House of Representatives. If we want to note how much authority and jurisdiction it has, all we have to do is look in the rule book and see where it spells out the jurisdiction of every one of the standing committees of the Senate.

That is the oversight committee.

What this is, in essence, is an oversight operation on major Federal contracts as provided in section 1 of the bill. It goes awfully far and perhaps there has to be modification of the language if we are going to do exactly this.

To what extent it modifies our concept of the General Accounting Office and the Comptroller General is not too readily apparent until the matter is given far more study than it has had up to this point.

Thus, I share with the chairman of the committee the belief that this should not be put in this bill until it has had further consideration.

For that reason, I think that the amendment should be voted down because there will always be an opportunity to go before the Government Operations Committee and see what should be done.

I served on that committee years ago and I know what its jurisdiction is. I know the latitude of its power. The sky is almost the limit, so far as that committee is concerned. That is the proper place for an amendment of this kind. It only adds to my conviction that it should be rejected at this point and given much more consideration than it has had up to this good hour.

Mr. STENNIS. Mr. President, I yield myself the remaining 2 minutes.

The PRESIDING OFFICER. The Senator from Mississippi is recognized for 2 minutes.

Mr. STENNIS. Mr. President, I have already read the letter from the Comptroller General, Mr. Staats.

When the pilot of an airplane says that he had better not fly the plane today because of adverse weather conditions, and so forth, we take his advice. On that same basis, I read from Mr. Staats' letter again:

For these reasons, we believe that legislation prescribing a particular form of reporting at this time would be unwise.

Mr. President, this is an important matter. I have no personal concern about it except my obligation to the Senate. But I say right now that we had better stop this matter here, and get it before the Government Operations Committee which is the parent committee of the GAO of which the Senator from Arkansas is chairman. I have learned that the Senator from Connecticut is chair-

man of one of the outstanding subcommittees in that group. Let them analyze and make recommendations. If the Senator from Pennsylvania wants it to come over, we would like to have it come over to the Armed Services Committee, too, and let us analyze and perhaps make recommendations—whatever we want to. But I say that we are dealing with deadly stuff here, dealing in shotgun methods when no one knows, as the Senator from Illinois pointed out, what the phrases mean, and no one knows how far it will go to change the nature of the GAO, about which the Senator from Missouri has advised us.

No one knows what a major contract is. What is a major contract? That is what the amendment says. It goes to major contracts. Can anyone say what is a major contract—with no proof, with no record, with no hearings, with no report from the committee, and no kind of recommendations.

Let us not go off the deep end here on one of the most important matters we have, on something we all are trying to do something about.

The PRESIDING OFFICER. The Senator from Pennsylvania has 4 minutes remaining.

Mr. YARBOROUGH. Mr. President, will the Senator yield 1 minute to me?

Mr. SCHWEIKER. I yield 1 minute to the Senator from Texas.

Mr. YARBOROUGH. In answer to what the Senator from Mississippi has just said, in subsection (c) on page 3 of the amendment, beginning on line 14, the language reads:

The Secretary of Defense after consultation with the Comptroller General and with the chairman of the Committees on Armed Services and the Committees on Appropriations of the Senate and the House of Representatives shall prescribe criteria for the determination of major contracts under subsection (a).

So the chairman of the committee will be a part of those determining what a major contract is. This agency of the Government, which has these big war contracts, owes some responsibility to the people of the United States, such as in the case of the C-5A, which rode in with a bill \$700 million more than it was supposed to cost the people of the country. It is about time that the Congress exercised the power of the purse strings. This Department should be accountable, like all the rest, to the people of the country. This Department has a special largesse. They go scot-free. It is about time that the people in that Department were made responsible for it.

Mr. SCOTT. Mr. President, will the Senator yield briefly?

Mr. SCHWEIKER. I yield to my colleague from Pennsylvania.

Mr. SCOTT. Mr. President, the phrase "scot free" was used. I want to make it clear that, as far as I am concerned, the Pentagon is not to be freed of me or my ideas. I think the junior Senator from Pennsylvania is quite right that there ought to be a willingness to account, a willingness to avoid overruns, a willingness to operate the Defense Department for the primary concern of the taxpayers, and we should give the Congress and the Comptroller General the right to have

something to say about it. Therefore, I support the amendment offered by my colleague from Pennsylvania.

Mr. SCHWEIKER. Mr. President, the point has been brought out about the Comptroller General's expressing a certain view in a letter. I would like to point out that, 6 weeks prior to that letter, the Comptroller General was in my office. When I asked him exactly the same question, he said it was a matter of policy for the Senate to decide whether we should place the auditing function in the Comptroller General. I am delighted to see that letter, but 6 weeks ago, verbally, he gave me that very answer.

We talk about whether this amendment should go to the Armed Services Committee or should go to the Government Operations Committee or should go to other committees. All I can say is that I, as a member of the Armed Services Committee, am asked to vote for a \$20 billion bill. How on earth can I meet my responsibility if I do not even know the figures are honest? How can I meet my responsibility if I do not know whether that \$20 billion figure has any meaning in terms of being audited, or going through the process of certified public accounting, or having some kind of relation to giving us the basic tools of the trade that we have lacked so long to enable us to ride herd on the Pentagon?

Mr. President, I ask unanimous consent to have 2 additional minutes.

The PRESIDING OFFICER. The time of the Senator from Pennsylvania has not expired. He has 2 minutes.

Mr. SCHWEIKER. It is suggested that this proposal should go to this committee for hearings or to that committee for a report or to that committee for study. All I say is that we have had no hearings, we have had no report, and we have had no study. I suggest that if we go the course suggested, we will have no bill as well.

The issue is very simple. Are we going to take some fiscal responsibility for supervising these huge amounts of money, as is done for other departments? Are we going to decide priorities for spending the money as we do in our domestic programs?

I may add that this amendment has been on the desk since the 18th of July. Every Member has had an opportunity to see it or study it. It is not a matter of a new amendment or a quick amendment. I think this amendment was on the desk of each Senator for a longer time than most amendments are. It is clear. It is simple. The issue is whether we are going to supervise fiscally an \$80 billion budget and exercise our responsibility.

The PRESIDING OFFICER. The question is on agreeing to the amendment of the Senator from Pennsylvania, offered for himself and other Senators. On this question the yeas and nays have been ordered, and the clerk will call the roll.

The assistant legislative clerk called the roll.

Mr. EAGLETON (after having voted in the affirmative). On this vote, I have a pair with the Senator from Nebraska (Mr. CURRIS). If he were present and voting, he would vote "nay"; if I were

at liberty to vote, I would vote "yea." Therefore, I withdraw my vote.

Mr. KENNEDY. I announce that the Senator from Indiana (Mr. BAYH), the Senator from Nevada (Mr. CANNON), and the Senator from Tennessee (Mr. GORE) are necessarily absent.

I further announce that, if present and voting, the Senator from Nevada (Mr. CANNON) would vote "nay."

Mr. SCOTT. I announce that the Senator from Tennessee (Mr. BAKER), the Senator from Nebraska (Mr. CURTIS), and the Senator from Alaska (Mr. STEVENS) are detained on official business.

If present and voting, the Senator from Tennessee (Mr. BAKER) and the Senator from Nebraska (Mr. CURTIS) would each vote "nay."

The result was announced—yeas 47, nays 46, as follows:

[No. 70 Leg.]
YEAS—47

Aiken	Hughes	Pearson
Bellmon	Javits	Pell
Brooke	Kennedy	Percy
Burdick	Mansfield	Prouty
Byrd, Va.	Mathias	Proxmire
Case	McCarthy	Randolph
Church	McGovern	Saxbe
Cook	McIntyre	Schweiker
Cooper	Metcalfe	Scott
Fulbright	Mondale	Spong
Goodell	Montoya	Tydings
Gravel	Moss	Williams, N.J.
Harris	Muskie	Williams, Del.
Hart	Nelson	Yarborough
Hartke	Packwood	Young, Ohio
Hatfield	Pastore	

NAYS—46

Allen	Fannin	McGee
Allott	Fong	Miller
Anderson	Goldwater	Mundt
Bennett	Griffin	Murphy
Bible	Gurney	Ribicoff
Boggs	Hansen	Russell
Byrd, W. Va.	Holland	Smith
Cotton	Hollings	Sparkman
Cranston	Hruska	Stennis
Dirksen	Inouye	Symington
Dodd	Jackson	Talmadge
Dole	Jordan, N.C.	Thurmond
Dominick	Jordan, Idaho	Tower
Eastland	Long	Young, N. Dak.
Ellender	Magnuson	
Ervin	McClellan	

PRESENT AND ANNOUNCING A LIVE PAIR AS PREVIOUSLY RECORDED—1

Eagleton, for.

NOT VOTING—6

Baker	Cannon	Gore
Bayh	Curtis	Stevens

So Mr. SCHWEIKER's amendment (No. 85) was agreed to.

Mr. SCHWEIKER. Mr. President, I move to reconsider the vote by which the amendment was agreed to.

Mr. DIRKSEN. I move to lay that motion on the table.

Several Senators asked for the yeas and nays.

The PRESIDING OFFICER (Mr. SAXBE in the chair). The yeas and nays have been requested. Is there a sufficient second?

The Chair is in doubt as to whether there is a sufficient second. The Senate will be in order, and the clerk will count.

The Chair is satisfied that there is a sufficient second. The clerk will call the roll. The question is on agreeing to the motion to lay on the table the motion to reconsider.

The assistant legislative clerk proceeded to call the roll, and Mr. AIKEN answered in the affirmative.

Mr. GOLDWATER. I suggest the absence of a quorum.

The PRESIDING OFFICER. The clerk will call the roll.

Mr. AIKEN. Mr. President, I had already voted "no."

Mr. FULBRIGHT. Mr. President, a point of order. The Senator from Vermont had already voted.

The PRESIDING OFFICER. The Chair is of the opinion that the rollcall had started. The rollcall will continue.

The assistant legislative clerk resumed the call of the roll, and Mr. ALLEN answered in the negative.

Mr. GOODELL. Mr. President, a parliamentary inquiry.

The PRESIDING OFFICER. The Senator will state it.

Mr. GOODELL. Mr. President, may we have the question stated again?

The PRESIDING OFFICER. The question is on agreeing to the motion to lay on the table the motion to reconsider. An affirmative vote will lay the motion on the table. A negative vote will not.

The assistant legislative clerk resumed the call of the roll.

Mr. METCALF (when his name was called). On this vote I have a pair with the Senator from Tennessee (Mr. BAKER). If he were present and voting, he would vote "nay"; if I were at liberty to vote, I would vote "yea." I withhold my vote.

Mr. EAGLETON (when his name was called). On this vote I have a pair with the Senator from Nebraska (Mr. CURTIS). If he were present and voting, he would vote "nay"; if I were at liberty to vote, I would vote "yea." I withhold my vote.

The rollcall was concluded.

Mr. KENNEDY. I announce that the Senator from Indiana (Mr. BAYH), the Senator from Nevada (Mr. CANNON), and the Senator from Tennessee (Mr. GORE) are necessarily absent.

I further announce that, if present and voting, the Senator from Nevada (Mr. CANNON) would vote "nay."

Mr. SCOTT. I announce that the Senator from Tennessee (Mr. BAKER), the Senator from Nebraska (Mr. CURTIS) and the Senator from Alaska (Mr. STEVENS) are detained on official business.

The Senator from Maryland (Mr. MATHIAS) is absent on official business.

The respective pairs of the Senator from Tennessee (Mr. BAKER) and that of the Senator from Nebraska (Mr. CURTIS) have been previously announced.

The yeas and nays resulted—yeas 46, nays 45, as follows:

[No. 71 Leg.]

YEAS—46

Aiken	Hatfield	Pell
Bellmon	Hughes	Percy
Brooke	Javits	Prouty
Burdick	Kennedy	Proxmire
Byrd, Va.	Mansfield	Randolph
Case	McCarthy	Saxbe
Church	McGovern	Schweiker
Cook	McIntyre	Scott
Cooper	Mondale	Spong
Ellender	Montoya	Tydings
Fulbright	Moss	Williams, N.J.
Goodell	Muskie	Williams, Del.
Gravel	Nelson	Yarborough
Harris	Packwood	Young, Ohio
Hart	Pastore	
Hartke	Pearson	

NAYS—45

Allen	Fannin	McClellan
Allott	Fong	McGee
Anderson	Goldwater	Miller
Bennett	Griffin	Mundt
Bible	Gurney	Murphy
Boggs	Hansen	Ribicoff
Byrd, W. Va.	Holland	Russell
Cotton	Hollings	Smith
Cranston	Hruska	Sparkman
Dirksen	Inouye	Stennis
Dodd	Jackson	Symington
Dole	Jordan, N.C.	Talmadge
Dominick	Jordan, Idaho	Thurmond
Eastland	Long	Tower
Ervin	Magnuson	Young, N. Dak.

PRESENT AND GIVING LIVE PAIRS, AS PREVIOUSLY REPORTED—2

Metcalfe, for.
Eagleton, for.

NOT VOTING—7

Baker	Curtis	Stevens
Bayh	Gore	
Cannon	Mathias	

So the motion to lay on the table was agreed to.

The PRESIDING OFFICER. Is there further amendment?

Mr. MANSFIELD. Mr. President, may we have order?

The PRESIDING OFFICER. The Senate will be in order.

Mr. MANSFIELD. Mr. President, are there any amendments at the desk?

The PRESIDING OFFICER. There are a number that have been submitted and printed. They have no parliamentary standing. They have not been called up.

Mr. MANSFIELD. Does any Senator desire to call up an amendment now? If we are going to stay late and get through with this bill, hopefully by August 13, now is the time for all good men on both sides of the aisle to come to the aid of their party. [Laughter.]

Mr. PROXMIRE. Mr. President, will the Senator yield?

Mr. MANSFIELD. I yield.

Mr. PROXMIRE. Some eight amendments on chemical and biological warfare are pending. We are trying to work out now with Senator MCINTYRE an agreement on these amendments, and some of us who have amendments feel that these amendments should go first.

Mr. MANSFIELD. I see.

Mr. PROXMIRE. For that reason, I would appreciate it if we could have a little hiatus.

Mr. LONG. Then, may I put something in the RECORD at this time?

Mr. MANSFIELD. Yes.

TAX REFORM

Mr. LONG. Mr. President, the lead editorial of the Wall Street Journal today deals with the tax reform package. It is a very thoughtful editorial and deserves the attention of every Member of the Senate. It is entitled "From Confusion to Chaos," and describes the bill in its present form, as voted on by the House of Representatives, in the nature of a tax reform measure.

I ask unanimous consent to have the editorial printed at this point in the RECORD.

There being no objection, the editorial was ordered to be printed in the RECORD, as follows:

FROM CONFUSION TO CHAOS

One thing can be said with certainty, anyway, about the new tax bill. It was born in

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confusion, and if it is passed in its present form, it will splice confusion with chaos.

Beyond that, certainty fades even among tax experts in or out of Government. As Edwin S. Cohen, Assistant Secretary of the Treasury, ruefully put it, the House tax "reform" bill might better be known as "the lawyers and accountants relief act of 1969."

If the members of the House Ways and Means Committee didn't quite know what they had put in the bill when they approved it, which they didn't, and if the Treasury Department officials aren't quite sure yet what some of it says, which they aren't, pity the poor taxpayer trying to figure out what has been done to him. Or, for that matter, the newspapermen, poor wretches, trying to explain it all to their readers.

What happened, in case you got lost in the news, was that the Ways and Means Committee approved the bill last Friday in a great rush to answer the clamor for "reform," which is of course something that everybody's for.

Since many of its provisions had been announced piecemeal, at least in principle, there was a general understanding that the bill would help the low income taxpayer and soak the wealthy taxpayer; but since many of the provisions had not been put into precise language, and no committee report was available, there was considerable confusion as to what had actually been done. In a tax bill, the exact words are more important than the generalities.

Indeed, even Chairman Mills, one of the oldest hands in the taxing business, had to confess himself confused. On Tuesday he had to reassemble his committee to amend the rate schedules for low income taxpayers because of what Mr. Mills called a "misunderstanding." As it turned out, a \$2.4 billion misunderstanding.

So don't expect from us this morning any definite explanation on what it all means. A summary of the bill was finally made available this week (minus, of course, the changes made on Tuesday) but it takes time to digest 226 pages of tax prose and another 143 pages of "technical explanation" even if you're a Philadelphia lawyer.

But a few observations may not be out of order.

One is that there are a lot of happy things proposed, for the future if not the present. By the end of 1972, if you can dream so far ahead, the general tax rates will be reduced by an average of about 5%. If you're in the lowest tax bracket the exemptions have been increased so that you may not have to pay any taxes at all; about 5.2 million people will be removed from the tax rolls entirely. If you're in the top tax bracket, you can keep 35% of your top earnings instead of just 30% as at present—maybe, if you have the right kind of income.

Moreover, if you earn your own income—as distinguished from those lazy fellows, retired or otherwise, who live off of dividends of savings account interest—your top tax won't take more than half of what you earn.

Another observation is that it is a canard to label this a soak-the-rich tax bill, in spite of its heralded provisions for a minimum tax aimed at the rich. Short of Castro confiscation it's hard to write a tax bill that will be more than an inconvenience to Fords, Rockefeller or Kennedys.

The man who gets dunked is the man in the middle, the corporate executive or the doctor or lawyer who may have no real wealth but high earnings for a brief span of years. That is, the man with mixed income, some from salary, some from savings; the man with some capital gains that he has been counting on for his retirement years.

For all the rules on such things as deferred compensation, stock options, many forms of pension plans and almost everything else on which the retirement plans of such men might be based—all these rules would

be changed. Some of these changes would even penalize those already retired who planned in good faith on the rules at the time; almost all of them would penalize younger men planning now for retirement. Hardly anybody can figure out yet precisely how the new rules would affect particular cases, but it is clear enough that the punishment is aimed not at the rich but at the successful.

Yet however all this may affect individuals, happily or otherwise, other changes are sure to have far-reaching effects, though uncertain ones, rippling out through the economy.

No one, for example, can anticipate the effects of the new treatment proposed on heretofore tax exempt bonds of states, municipalities, school boards and the like. The uncertainty is acknowledged in the proposed provision that these local authorities will be eligible for a Federal subsidy to offset the effects—but there is a sociological and political effect, as well as an economic one, in forcing them to go hat in hand to Washington. An unmeasurable effect.

Unmeasurable also are the effects of provisions in the bill which would revamp the tax treatment of charitable contributions, stock dividends, the handling of corporate bonds and debentures, depreciation charges for utility firms, cooperatives, foundations, multiple corporations. Some of these may be worthy reforms, some not. The point, rather, is that no one can anticipate now what unexpected, and perhaps untoward, effects all these things may have on that most complicated of mechanisms, the ecology of a complex economy.

Chairman Mills himself admits as much. He has promised that his committee will "later" analyze the impact of the bill he now proposes.

Somehow "later" seems not quite soon enough.

ACM

AUTHORIZATION OF APPROPRIATIONS FOR FISCAL YEAR 1970 FOR MILITARY PROCUREMENT, RESEARCH AND DEVELOPMENT, AND FOR THE CONSTRUCTION OF MISSILE TEST FACILITIES AT KWAJALEIN MISSILE RANGE, AND RESERVE COMPONENT STRENGTH

The Senate resumed the consideration of the bill (S. 2546) to authorize appropriations during the fiscal year 1970 for procurement of aircraft, missiles, naval vessels, and tracked combat vehicles, and research, development, test, and evaluation for the Armed Forces, and to authorize the construction of test facilities at Kwajalein Missile Range, and to prescribe the authorized personnel strength of the Selected Reserve of each reserve component of the Armed Forces, and for other purposes.

Mr. MANSFIELD. Mr. President, there may well be votes.

Mr. MAGNUSON. If there is no amendment, is the bill not automatically up for third reading?

Mr. MANSFIELD. No, Mr. President. In that case, I ask—

Mr. MAGNUSON. I just asked the question. The Chair has not answered the question. When there are no amendments to be offered, does the bill automatically go to third reading?

Mr. MANSFIELD. Mr. President, I have the floor.

I ask unanimous consent that the pending business be laid aside temporarily, and that the Senate proceed to the consideration of Calendar No. 214,

H.R. 7206, an act to adjust the salaries of the Vice President of the United States and certain officers of Congress. There will be votes.

Mr. STENNIS. Mr. President, reserving the right to object, I want to inquire what the situation will be now. If we are going to have any other amendments this afternoon, it seems to me that we should take them up now.

It is correct, as the Senator has said, that a number of amendments, at my suggestion, are in conference with one of the subcommittee chairmen. But there are many other amendments that can be taken up, and we certainly will not get through before the August recess unless we keep working on this bill. Simply because it is inconvenient for someone to call up this amendment, I do not think is sufficient reason. I am speaking now in the interest of keeping the bill moving.

The PRESIDING OFFICER. In answer to the question, there is a pending request of the Senator from Montana. As to the bill (S. 2546), the Chair will bring the bill to a third reading, if no one, after a hiatus, seeks recognition to speak or to bring up an amendment.

Mr. MANSFIELD. Mr. President, if I have to do it myself, I will offer an amendment in order to prevent third reading. I have no amendments, but I hope this matter is not pushed, because the right of every Senator must and will be protected.

Mr. President, I renew my request.

Mr. STENNIS. Mr. President, reserving the right to object, I did not suggest third reading.

Mr. MANSFIELD. I know the Senator did not.

Mr. STENNIS. I just wanted it understood—

Mr. MAGNUSON. I did not suggest it, either. I just asked what the rule was. And I got the right answer. [Laughter.]

Mr. STENNIS. One more question: Does the Senator from Montana expect extended debate on the salary bill?

Mr. MANSFIELD. No. I understand that the distinguished Senator from Delaware will offer an amendment relative to the pay raise commission. The yeas and nays will be requested. I do not know whether there will be any, but I would hope that we could dispose of this bill within an hour, and that, if there is any argument, we could have rollcall votes as soon as possible, so that we can all be on record.

Mr. HOLLAND. Mr. President, the Senator from Florida was not able to make his opinion heard on the last amendment, and he wishes to speak 4 or 5 minutes on it, because he thinks this will be a matter in conference which should require the expression of opinions of Senators who have strong opinions on it. After he has made that statement, he would be very happy to agree to the request of the majority leader.

Mr. MANSFIELD. Mr. President, I withdraw my request. I thought this had been cleared. The Senate was given notice on this. A decision has been made on the previous motion, and I had hoped, in the interest of comity with the other side and with the Committee on Post Office and Civil Service,

which had agreed unanimously to something or other, that we could tend to this and give the chairman of the committee a chance to eat. He has not had a bite since breakfast. I had hoped we could get on with this bill and have the other comments later. But, on the basis of the request made, I reluctantly withdraw the request.

The PRESIDING OFFICER. The Chair has heard no objection to the request of the Senator from Montana.

Mr. HOLLAND. I shall object unless I am allowed to speak 4 or 5 minutes on the subject I mentioned.

Mr. MANSFIELD. The Senator can get the time on this bill if he wants it, but if he wants it separate, I will withdraw the request.

The PRESIDING OFFICER. Objection is heard.

The question recurs.

Mr. HOLLAND. Mr. President, the decision just made by the Senate, by a cliff-hanger vote, is a decision on a matter which I think should be fully discussed in the RECORD, because surely it will be in conference and surely all reasonable arguments should be heard on it.

The Senator from Florida had asked for time to be heard, and the amount of time available was not sufficient, so he was not allowed to make his statement.

Mr. President, may we have order?

The PRESIDING OFFICER. The Senate will be in order.

Mr. HOLLAND. Mr. President, I can speak a good deal longer than 4 or 5 minutes, if it is necessary, but I would prefer to confine my remarks to the shortest possible time.

Mr. President, I had asked the Presiding Officer to recognize me as soon as the result of the vote was announced. I did not realize that I had to go further than that in order to exercise my rights in this matter.

Mr. President, I think the Senator from Mississippi, the chairman of the Armed Services Committee, and the Senator from Missouri, one of the ranking members of the committee, and others who spoke were exactly within their rights and exactly stated the facts that the function of the so-called Schweiker amendment materially changes the functions of the General Accounting Office.

It was for that reason that I thoroughly agreed with that that the matter required and was intended to have full study by the Committee on Armed Services and also by the Committee on Government Operations before it should be seriously considered by the Senate.

The Senator from Florida would like to see an act passed under which the General Accounting Office was more fully availed of in connection with checking on defense contracts. He wants that to be made clear but he is not willing to take that action in the overriding of the two fine committees that the Senator from Florida has mentioned; nor is he willing to take it in this action which has been taken which materially changes the function of the General Accounting Office.

Mr. President, I ask unanimous consent to have printed in the RECORD the

list of the members of the Committee on Armed Services, which is so ably headed by the Senator from Mississippi as chairman of the committee and by the Senator from Maine (Mrs. SMITH) as the ranking minority member.

There being no objection, the list was ordered to be printed in the RECORD, as follows:

ARMED SERVICES

John Stennis, of Mississippi, *chairman*.
Richard B. Russell, of Georgia.
Stuart Symington, of Missouri.
Henry M. Jackson, of Washington.
Sam J. Ervin, Jr., of North Carolina.
Howard W. Cannon, of Nevada.
Stephen M. Young, of Ohio.
Daniel K. Inouye, of Hawaii.
Thomas J. McIntyre, of New Hampshire.
Harry F. Byrd, Jr., of Virginia.
Margaret Chase Smith, of Maine.
Strom Thurmond, of South Carolina.
John G. Tower, of Texas.
Peter H. Dominick, of Colorado.
George Murphy, of California.
Edward W. Brooke, of Massachusetts.
Barry Goldwater, of Arizona.
Richard S. Schweiker, of Pennsylvania.

Mr. HOLLAND. Mr. President, I next ask unanimous consent to have printed in the RECORD the list of members of the Committee on Government Operations which is so ably headed by the senior Senator from Arkansas (Mr. McCLELLAN) and by the senior Senator from South Dakota (Mr. MUNDT) as the ranking minority member.

There being no objection, the list was ordered to be printed in the RECORD, as follows:

GOVERNMENT OPERATIONS

John L. McClellan, of Arkansas, *chairman*.
Henry M. Jackson, of Washington.
Sam J. Ervin, Jr., of North Carolina.
Edmund S. Muskie, of Maine.
Abraham A. Ribicoff, of Connecticut.
Fred R. Harris, of Oklahoma.
Lee Metcalf, of Montana.
Eugene J. McCarthy, of Minnesota.
James B. Allen, of Alabama.
Karl E. Mundt, of South Dakota.
Jacob K. Javits, of New York.
Charles H. Percy, of Illinois.
Robert P. Griffin, of Michigan.
Ted Stevens, of Alaska.
Edward J. Gurney, of Florida.

Mr. HOLLAND. Mr. President, in the first place I do not believe the Senate realizes what it has done has been to render a vote of no confidence. The vote of the Senate is a vote of no confidence in these two fine committees and their members.

The Senator from Florida has the fullest confidence in the membership of both of these committees. Incidentally, the distinguished Senator from Pennsylvania, who offered the amendment, is a member of the Committee on Armed Services, and the Senator from Florida has confidence in him. I would like to see this subject matter seriously considered by the appropriate committees before the Senate is required to act upon it.

In the second place, I wish to call attention to the language in the amendment, which has just been agreed to by a majority of one vote of the Senate, which I think completely changes the nature of the General Accounting Office. I will read, therefore, from page 4 of the amendment of the distinguished Senator

from Pennsylvania (Mr. SCHWEIKER) beginning at line 8 under subsection (f):

(f) The Comptroller General shall make independent audits of major contracts where in his opinion the costs incurred and to be incurred, the delivery schedules, and the effectiveness of performance achieved and anticipated are such as to warrant such audits and he shall report his findings to the Congress and to the Committee on Armed Services and the Committee on Appropriations of the Senate and of the House of Representatives.

Mr. President, the Senator from Florida has used the General Accounting Office a good many times. I see present in the Chamber the distinguished senior Senator from Nebraska (Mr. HRUSKA) who is the ranking minority member of the committee of which I am chairman. The Senator from Nebraska will well recall that our subcommittee has on various occasions used the General Accounting Office to investigate matters which we thought required investigation. It has done so ably, and its opinions have been very fine opinions, and they have been very helpful to the members of the committee and Congress.

I have been here for 23 years and never has it been even remotely suggested that the Comptroller General shall be the moving party, shall be the policymaker, shall be the decisionmaker on the question of where he goes with his investigation. Yet the wording which I have read from the amendment just agreed to makes it clear that, "the Comptroller General shall make independent audits of major contracts where in his opinion the costs incurred and to be incurred, the delivery schedules, and the effectiveness of performance achieved and anticipated are such as to warrant such audits."

I know of no such provision in any other act ever passed in Congress, at least in these 23 years, or any action ever taken by Congress or any committee of Congress in these 23 years, which even approaches this degree of giving complete discretion, complete judgment, complete decision, complete power to the General Accounting Office, and the means to the Comptroller General, as to where he shall go in a vast agency of Government which spends something like \$80 billion.

I thoroughly agree with the letter of the Comptroller General to the distinguished chairman of the Committee on Armed Services which made it very clear that he thought that such matter was a serious matter, would represent a serious departure, did require long hearings, did require decision on how many additional employees might be required, did require decision as to just what would be the function of Congress and what the function of the Comptroller General in this vast field of expenditures of the Department of Defense would be, which every one of us agrees should be carefully supervised by Congress.

But, Mr. President, note carefully the independent decision and independent judgment this amendment just past gives to the Comptroller General, no matter how fine a man he is, because the whole concept of the setting up of the General Accounting Office was to set up an office which would be an arm of Con-

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gress, not the head, not the guide, not the leader, not the one determining policy, but the arm of the Congress to investigate where Congress felt investigation should be made. The General Accounting Office has uniformly been so used in all of the cases in which I have had any information at all as to their various activities, which have been many.

Therefore, the Senator from Florida simply wants the Record to show he completely agrees on the two major points with the position taken by the distinguished chairman of the committee: First, that hearings are absolutely necessary, that this is a vital, very important, and serious matter; and, second, as agreed to, the amendments means a very great change in the functioning of the General Accounting Office and makes of it instead of an arm of Congress the leader and guide of Congress in various major fields of expenditure.

The Senator from Florida would have no objection at all to the granting of subpoena powers in proper cases, and he has voted on many occasions to give subpoena powers to various investigating committees and various regulatory agencies and the like. That is not a part of the objection of the Senator from Florida, but he does object to this kind of handling of such an important matter and particularly when this matter marks a complete change of the character of the General Accounting Office. It is an important arm of the legislative department, and not of the executive department. It is an arm to which we can refer matters which Congress thinks should be investigated and reported upon.

To turn the Comptroller General loose without any guidance except the language here relating to—in his opinion—which is the wording, he can move as he pleases in any area looking for matters he thinks important.

Mr. President, I wanted this statement to appear in the Record because I have very strong feelings in the matter, and because I think I have as strong a desire as any in this Chamber to have properly reviewed and properly supervised the expenditures of vast amounts of money which we entrust to the Defense Department for expenditures. But I am not willing on this floor, without a committee report, without committee hearings, particularly when it is clear the amendment was offered to the committee and then withdrawn without the committee's being given a chance to pass upon it. I am not willing to vote for such a far-reaching amendment which, in effect, is a vote of no confidence as to the Armed Services Committee and the Government Operations Committee and is, in effect, a vote which would change completely the nature of the GAO which is one of the very important agencies belonging to the legislative branch and which we may regard as our investigating arm. That is what it is.

I thank the Senator from Mississippi for yielding to me.

Mr. STENNIS. I thank the Senator for his fine remarks. I am sorry he did not have an opportunity to speak before this time.

Mr. HOLLAND. I thank the Senator.

I realize the difficulties under which he is operating. I have no feeling about the matter at all. I simply wanted to have in the Record a clear statement of my opinion on this matter because, may I respectfully say, I differ with the majority of Senators who have voted for this amendment without hearings, as far-reaching as it is, that it should be adopted and written into law.

GREAT PLAINS CONSERVATION PROGRAM

Mr. ELLENDER. Mr. President, I ask the Chair to lay before the Senate a message from the House of Representatives on H.R. 10595.

The PRESIDING OFFICER laid before the Senate a message from the House of Representatives announcing its disagreement to the amendments of the Senate to the bill (H.R. 10595) to amend the Act of August 7, 1956 (70 Stat. 1115), as amended, providing for a Great Plains conservation program, and requesting a conference with the Senate on the disagreeing votes of the two Houses thereon.

Mr. ELLENDER. I move that the Senate insist upon its amendments and agree to the request of the House for a conference, and that the Chair be authorized to appoint the conferees on the part of the Senate.

The motion was agreed to; and the Presiding Officer appointed Mr. EASTLAND, Mr. HOLLAND, Mr. JORDAN of North Carolina, Mr. AIKEN, and Mr. COOK conferees on the part of the Senate.

MESSAGES FROM THE PRESIDENT

Messages in writing from the President of the United States were communicated to the Senate by Mr. Geisler, one of his secretaries.

PUBLIC TRANSPORTATION—MESSAGE FROM THE PRESIDENT (H. DOC. NO. 91-145)

The PRESIDENT pro tempore laid before the Senate the following message from the President of the United States, which was referred to the Committee on Commerce:

To the Congress of the United States:

Public transportation has suffered from years of neglect in America. In the last 30 years urban transportation systems have experienced a cycle of increasing costs, decreasing funds for replacements, cutbacks in service and decrease in passengers.

Transit fares have almost tripled since 1945; the number of passengers has decreased to one third the level of that year. Transit industry profits before taxes have declined from \$313 million in 1945 to \$25 million in 1967. In recent years 235 bus and subway companies have gone out of business. The remaining transit companies have progressively deteriorated. Today they give their riders fewer runs, older cars, and less service.

Local governments, faced with demands for many pressing public services and with an inadequate financial base, have been unable to provide sufficient assistance.

This is not a problem peculiar to our largest cities alone. Indeed, many of our small and medium-sized communities have seen their bus transportation systems simply close down.

When the Nation realized the importance and need for improved highways in the last decade, the Congress responded with the Highway Act of 1956. The result has been a magnificent federally-aided highway system. But highways are only one element in a national transportation policy. About a quarter of our population lack access to a car. For these people—especially the poor, the aged, the very young and the handicapped—adequate public transportation is the only answer.

Moreover, until we make public transportation an attractive alternative to private car use, we will never be able to build highways fast enough to avoid congestion. As we survey the increasing congestion of our roads and strangulation of our central cities today, we can imagine what our plight will be when our urban population adds one hundred million people by the year 2000.

We can not meet future needs by concentrating development on just one means of transportation. We must have a truly balanced system. Only when automobile transportation is complemented by adequate public transportation can we meet those needs.

THE PUBLIC TRANSPORTATION PROGRAM

I propose that we provide \$10 billion out of the general fund over a 12-year period to help in developing and improving public transportation in local communities. To establish this program, I am requesting contract authorization totaling \$3.1 billion for the first five years starting with a first year authorization of \$300 million and rising to \$1 billion annually by 1975. Furthermore, I am asking for a renewal of this contract authorization every two years so that the outstanding contract authorization will never be for a shorter period than three years. Over the 12-year period, \$9.5 billion is programmed for capital investments and \$500 million for research and development.

The program which I am recommending would help to replace, improve and expand local bus, rail and subway systems. It would help to develop and modernize subway tracks, stations, and terminals; it would help to build and improve rail train tracks and stations, new bus terminals, and garages.

The program would authorize assistance to private as well as public transit systems so that private enterprise can continue to provide public services in urban transportation. It would give State governments an opportunity to comment on project applications in order to improve intergovernmental coordination. It would require local public hearings before any major capital construction is undertaken. And it would permit localities to acquire rights-of-way in advance of system construction in order to reduce future dislocation and costs.

Fares alone cannot ordinarily finance the full cost of public transit systems, including the necessary capital investments. Higher fares usually result in fewer riders, taking much of the "mass"

out of mass transit and defeating the social and economic purpose of the system.

One problem with most transit systems operating today is that they rely for revenues on people who *must* use them and make no appeal to those who have a choice of using them or not. Thus we have the self-defeating cycle of fewer riders, higher fares, lower revenues, worse facilities, and still fewer riders.

The way to break that cycle is to make public transit truly attractive and convenient. In this way, more riders will provide more revenues, and fares can be kept down while further efficiencies can be introduced.

In addition to assistance for capital improvements, I am proposing substantial research and technology efforts into new ways of making public transit an attractive choice for owners of private cars. These would include:

- Advanced bus and train design to permit easier boarding and dismounting.
- Improved interiors in bus and trains for increased convenience and security for riders.
- New traffic control systems to expedite the flow of buses over streets and highways.
- Tracked air cushioned vehicles and automated transit.
- Flexible bus service based on computer-forecast demands.
- New bus propulsion systems which would reduce noise and air pollution as well as cost.
- Systems such as moving sidewalks and capsules to transport people for short distances within terminals, and other major activity.

In summary, this public transportation program I am recommending would give State and local governments the assurance of Federal commitment necessary both to carry out long-range planning and to raise their share of the costs. It would meet the challenge of providing resources that are adequate in amount and it would assure adequate duration of their availability.

The bus rider, train commuter and subway user would have better service. The car driver would travel on less congested roads. The poor would be better able to get to work, to reach new job opportunities and to use training and rehabilitation centers. The centers of big cities would avoid strangulation and the suburbs would have better access to urban jobs and shops.

Most important, we as a Nation would benefit. The Nation which has sent men to the moon would demonstrate that it can meet the transportation needs of the city as well.

RICHARD NIXON.

THE WHITE HOUSE, August 7, 1969.

EXECUTIVE MESSAGES REFERRED

As in executive session, the Presiding Officer laid before the Senate messages from the President of the United States submitting the nomination of George E. Woods, Jr., of Michigan, to be U.S. attorney for the eastern district of Michi-

gan, and withdrawing the nomination of Louis R. Bruce, of New York, to be Commissioner of Indian Affairs, which nominating message was referred to the Committee on Interior and Insular Affairs.

TEMPORARY EXTENSION TO OCTOBER 31, 1969, OF AUTHORITY CONFERRED BY THE EXPORT CONTROL ACT OF 1949

Mr. MUSKIE. Mr. President, I ask that the Chair lay before the Senate a message from the House of Representatives on House Joint Resolution 864.

The PRESIDING OFFICER laid before the Senate the joint resolution (H.J. Res. 864), to provide for a temporary extension to October 31, 1969, of the authority conferred by the Export Control Act of 1949, which was read twice by its title.

Mr. MUSKIE. Mr. President, I ask unanimous consent that the Senate proceed to its immediate consideration.

The PRESIDING OFFICER. Is there objection to the present consideration of the joint resolution?

There being no objection, the Senate proceeded to consider the joint resolution.

Mr. MUSKIE. Mr. President, what is involved here is the authority of the Commerce Department to regulate exports from the United States. The Senate has before it on the calendar a bill which has been considered by the Committee on Banking and Currency and reported to the Senate which deals with the expansion and regulation of exports. However, in order to give that bill proper consideration, we need temporary extension for the second time of the present law.

This joint resolution would have that effect. The House has approved it. We have cleared it with both sides of the aisle.

I therefore ask that the Senate approve this resolution at this time.

Mr. BYRD of Virginia. Mr. President, will the Senator from Maine yield?

Mr. MUSKIE. I yield.

Mr. BYRD of Virginia. What is the length of time for the extension?

Mr. MUSKIE. It is a 60-day extension from August 31. The first temporary extension expires then. This joint resolution extends it to October 31, in order to allow consideration of the principal legislation which is on the calendar.

Mr. BYRD of Virginia. I thank the Senator from Maine.

The resolution (H.J. Res. 864) was read the third time and agreed to.

SUBCOMMITTEE MEETING DURING SENATE SESSION

Mr. JAVITS. Mr. President, with the consent of both sides, I ask unanimous consent that the Subcommittee on Education of the Committee on Labor and Public Welfare may meet for 15 minutes to report a bill to the full committee at this particular time.

The PRESIDING OFFICER. Without objection, it is so ordered.

LEGISLATIVE SALARY ADJUSTMENTS

Mr. MANSFIELD. Mr. President, I ask unanimous consent that the pending business be laid aside temporarily and that the Senate proceed to the consideration of Calendar No. 214, H.R. 7206.

The PRESIDING OFFICER. The bill will be stated by title.

The LEGISLATIVE CLERK. H.R. 7206, to adjust the salaries of the Vice President of the United States and certain officers of the Congress.

The PRESIDING OFFICER. Is there objection to the present consideration of the bill?

There being no objection, the Senate proceeded to consider the bill.

AMENDMENT NO. 39

Mr. WILLIAMS of Delaware. Mr. President, I send to the desk my amendment No. 39 and ask that it be stated.

The PRESIDING OFFICER. The amendment will be stated.

The LEGISLATIVE CLERK. At the appropriate place insert a new section:

That (a) section 225 of the Federal Salary Act of 1967 is hereby repealed.

(b) Section 216 of such Act is amended by striking out "and subject to the operation of section 225 of this title."

Mr. WILLIAMS of Delaware. Mr. President, on April 29 this amendment was approved by a rollcall vote, and the vote was 49 to 36. I see no reason to debate the issue again. Surely there will be an equally favorable vote again. It is being offered on behalf of the Senator from Virginia (Mr. BYRD), the Senator from Colorado (Mr. DOMINICK), and myself.

It merely repeals the President's commission under which congressional salaries are fixed every 4 years. I am ready to vote.

Mr. President, I call for a division.

The PRESIDING OFFICER. A division is called for.

Mr. BYRD of West Virginia. Mr. President, I suggest the absence of a quorum.

The PRESIDING OFFICER. The clerk will call the roll.

The bill clerk proceeded to call the roll.

Mr. YOUNG of Ohio. Mr. President, I ask unanimous consent that the order for the quorum call be rescinded.

The PRESIDING OFFICER. Without objection, it is so ordered.

Mr. YOUNG of Ohio. Mr. President, I ask for recognition.

The PRESIDING OFFICER. The Senator from Ohio.

Mr. YOUNG of Ohio. Mr. President, the pending bill, which was passed in the other body and was reported by the Post Office and Civil Service Committee, proposes to increase the salary of the Vice President from \$43,000 a year to \$62,500 a year.

Earlier in this session the Congress increased the salary of the President of the United States by 100 percent, from \$100,000 per annum to \$200,000 per annum.

I recall that an amendment was offered to increase the salary of the President by only \$50,000 per annum. I supported that 50-percent increase. However, that

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(Mr. AIKEN), the Senator from South Carolina (Mr. THURMOND), and the Senator from Montana (Mr. MANSFIELD) be added as cosponsors of S. 2593, to exclude officers and employees of Western Hemisphere businesses from being charged against the Western Hemisphere immigration quota.

The PRESIDING OFFICER. Without objection, it is so ordered.

S. 2718

Mr. BENNETT. Mr. President, I ask unanimous consent, that at the next printing, the names of the distinguished Senator from Tennessee (Mr. GORE), the distinguished Senator from Nevada (Mr. BIBLE), the distinguished Senator from Washington (Mr. JACKSON), and the distinguished Senator from New Mexico (Mr. MONTOYA) be added as cosponsors of S. 2718, to modify ammunition record-keeping requirements.

The PRESIDING OFFICER. Without objection, it is so ordered.

S. 2721

Mr. JAVITS. Mr. President, I ask unanimous consent that, at the next printing, the names of the Senator from Illinois (Mr. PERCY) and the Senator from Alaska (Mr. STEVENS), be added as cosponsors of S. 2721, the Insured Student Loan Emergency Amendments of 1969.

The PRESIDING OFFICER. Without objection, it is so ordered.

S. 2758

Mr. BYRD of West Virginia. Mr. President, on behalf of the Senator from Minnesota (Mr. MONDALE), I ask unanimous consent that, at the next printing, the name of the senior Senator from New York (Mr. JAVITS), be added as a cosponsor of S. 2758, to amend section 312 of the Housing Act of 1964 to eliminate the provision which presently limits eligibility for residential rehabilitation loans thereunder to persons whose income is within the limits prescribed for below-market-interest-rate mortgages insured under section 221(d)(3) of the National Housing Act.

The PRESIDING OFFICER. Without objection, it is so ordered.

ENROLLED BILL PRESENTED

The Secretary of the Senate reported that on today, August 7, 1969, he presented to the President of the United States the enrolled bill (S. 714) to designate the Ventana Wilderness, Los Padres National Forest, in the State of California.

THE 1970 NASA AUTHORIZATION BILL—AMENDMENTS

AMENDMENT NO. 128

Mr. YARBOROUGH. Mr. President, I submit an amendment intended to be proposed by me, to the Senate Aeronautical and Space Sciences Committee amendment to the bill H.R. 11271, the 1970 NASA authorization bill.

Scarcely 2 weeks ago this country launched three men to the moon. After a perfect trip into a lunar orbit, the Eagle and Columbia separated to attempt the first manned lunar landing. The entire world heard the words of

Comdr. Neil Armstrong declare that man had landed on the moon. Then the miracle of television brought us live the first human footsteps on the moon and the first exploration by men of an extraterrestrial body. The subsequent lift-off, rendezvous, and docking, return to earth, reentry, and splashdown completed the historic flight of Apollo 11.

This flight, and our entire space program, have demonstrated beyond any doubt the extraordinary power and sophistication of our space technology. It is difficult to comprehend that most of this technology did not exist 10 years ago. With the trail-blazing cooperation of Government, private industry, labor and education, we fulfilled the most challenging goal of the 1960's—the placing of men on the moon and their safe return.

The amendment which I submit today looks to the 1970's as years of vast potential for mankind—not only in the now human realm of space, but in every field of human endeavor. The first ten years of the space program have produced not only the headlines of accomplishment in space, but also thousands of products and techniques useful to all Americans. Teflon, space communication satellites, miniaturization, computer technology, photography and sensors of body functions are several of the most famous of these. Each person who views a television news report knows of the instant news available via satellite. Without the space program, it is doubtful that we would have as many and as varied innovative products and techniques as we have today. Especially in the field of computer technology and communications, it may be said with justification that the advancements made with the direct assistance of space research have provided industry, education, health and Government with tools to begin to handle the tempo of the 1970's.

As we prepare to enter the 1970's, we have chosen to continue exploring space and developing the earthly benefits from such exploration. The question before us is how rapidly shall we proceed? Many who urge cutback think of the money spent on space exploration as benefitting us only to the extent that we acquire additional knowledge of space. If this were true, then our large expenditures on space might be valid subjects for criticism. But for each dollar we invest in NASA, we in America and around the world receive uncounted additional dollar benefits in spin-off technological developments, in addition to the intangible benefits to our world stature and the increased respect for our American system of government.

Only yesterday Dr. Thomas Paine and Dr. George E. Mueller, top NASA officials, urged this country to set a national goal of going to mars in the 1980's. They realize that the technology we have rapidly developed in the last 10 years should continue to be used productively. Congress and the administration will certainly give these recommendations thorough study. But while this study is continuing, we must not make reductions in the NASA budget which would impair NASA's ability to undertake new and challenging projects.

As chairman of the Senate Committee on Labor and Public Welfare, Chairman of the Subcommittee on Health, and member of the Subcommittee on Education, I am daily involved with the extremely pressing needs of poverty, health, education—the entire waterfront of our domestic needs. These needs must be met. However, the money for the solution of our domestic problems should not come from the valuable, productive, peace-directed program of NASA. Let us rather look to the huge cost overruns of the Defense Budget, the overwhelming and unwise expense of the Vietnam war, and now the unproven and costly ABM proposal. At this crucial time in this Nation's history, we should commit ourselves to an all-out, crash effort to secure peace and to solve our domestic problems. But cutting the NASA authorization is not the way to pursue these goals.

In the 1970's, we will need to develop our maximum potential in technology if we are to keep pace with the knowledge explosion and to make significant inroads into our domestic problems. The NASA authorization bill, to be considered by us shortly, commits us to a more limited program than we should follow.

My amendment increases the NASA authorization as reported by the Senate Aeronautics and Space Sciences Committee. The increases my amendment suggests in the research and development of Apollo, space flight operations, bio-science, space application, lunar vehicle procurement, space vehicle systems, electronics systems, human factor systems, basic research, space power and electric propulsion systems, chemical propulsion, aeronautical vehicles and tracking and data acquisition simply raise the authorization for those items to the amount passed by the House; and these increases constitute a total accretion of \$256,500,000 in research and development and \$6,350,000 in research and program management.

I would like to see the Senate authorize more funds than this. In the fall of 1968 NASA stated to the Bureau of the Budget that \$4.2 billion was needed for fiscal year 1970 for a minimum space program and \$4.7 billion if we wanted to consolidate a position of world leadership. My amendment authorizes the bare minimum that we, as a nation, should commit to space. Its adoption is vital to the proper balance in our national priorities; it is vital to the future of our exciting and promising space program; and it is vital, in my opinion, to the interests and well-being of our country.

The PRESIDING OFFICER. The amendment will be received and printed, and will lie on the table.

AUTHORIZATION OF APPROPRIATIONS FOR FISCAL YEAR 1970 FOR MILITARY PROCUREMENT, RESEARCH AND DEVELOPMENT, AND FOR THE CONSTRUCTION OF MISSILE TEST FACILITIES AT KWAJALEIN MISSILE RANGE, AND RESERVE COMPONENT STRENGTH—AMENDMENT

AMENDMENT NO. 129

Mr. FULBRIGHT. Mr. President, in conformity with an understanding with

the chairman of the Armed Service Committee, I submit an amendment, intended to be proposed by me, to the bill (S. 2546) to authorize appropriations during the fiscal year 1970 for procurement of aircraft, missiles, naval vessels, and tracked combat vehicles, and research, development, test, and evaluation for the Armed Forces, and to authorize the construction of test facilities at Kwajalein Missile Range, and to prescribe the authorized personnel strength of the Selected Reserve of each reserve component of the Armed Forces, and for other purposes, and ask that it be printed and lie on the table, and which, I will, of course, call up at a later date.

The PRESIDING OFFICER. The amendment will be received and printed, and will lie on the table.

AMENDMENT NO. 130

Mr. MCGOVERN (for himself, Mr. GOODELL, Mr. HATFIELD, and Mr. PROXMIER) submitted an amendment, intended to be proposed by them, jointly, to Senate bill 2546, supra, which was ordered to lie on the table and to be printed.

(The remarks of Mr. MCGOVERN when he submitted the amendment appear earlier in the RECORD under the appropriate heading.)

ADDITIONAL COSPONSORS OF AMENDMENT

AMENDMENT NO. 85

Mr. SCHWEIKER. Mr. President, on July 18, I submitted amendment No. 85 to S. 2546, the military procurement authorization bill. At this time, I ask unanimous consent that, at the next printing, the names of the Senator from Missouri (Mr. EAGLETON) and the Senator from Utah (Mr. MOSS) be added as cosponsors.

The PRESIDING OFFICER. Without objection, it is so ordered.

NOTICE OF HEARING ON NOMINATION OF COMMISSIONER OF INDIAN AFFAIRS

Mr. JACKSON. Mr. President, for the information of the Members of the Senate and other interested persons, I announce that the Committee on Interior and Insular Affairs will hold an open hearing on the nomination by President Nixon of Louis R. Bruce, of New York, a full-blooded Indian, to be Commissioner of Indian Affairs, Department of the Interior. Mr. Bruce's father was a Mohawk chief and his mother an Oglala Sioux. The hearing will be held at 10 o'clock on Monday, August 11, in the committee room, 3110 New Senate Office Building.

As one who long has been deeply concerned with the advancement of Indians, I note with heartfelt approval that President Nixon is following the precedent established by President Johnson in appointing an Indian to head the Bureau of Indian Affairs, the agency of the executive branch with direct responsibility for the economic and political development of our American Indians. Mr.

Bruce will succeed Robert L. Bennett, an Oneida Indian, as Commissioner. Mr. Bennett served from April 1966, until this year.

Mr. President, I ask unanimous consent that a biographical sketch of Mr. Bruce setting forth his experience, education, and background be printed in the RECORD at this point.

There being no objection, the biographical sketch was ordered to be printed in the RECORD, as follows:

RÉSUMÉ OF LOUIS R. BRUCE

Home address: 44 West 10th St., New York, N.Y. 10011 (212) 477-0011.

Farm: RD #1, West Lake Road, Richfield Springs, N.Y. 13439, Tel: (315) 858-0292.

Office address: Executive Director and Chairman of the Board of Trustees, Zeta Psi Educational Foundation & Fraternity, Columbia University Club, 4 West 43rd Street, New York City, N.Y. 10036, Tel: (212) 736-0992.

Background information: Born December 30, 1906, on the Onondaga Indian Reservation and raised on the St. Regis Reservation (Mohawks). My father, Dr. Louis Bruce, a Mohawk Indian, whose father was Chief of the Mohawks, was a former dentist, major league baseball player, was also missionary to his people. During his whole life he fought for a better life for Indians. He was active in all Indian organizations until he died in 1968. He campaigned for the Indian Citizenship Bill of 1924. He was always a staunch Republican and campaigned for his party and urged Indians to vote.

Mother was an Oglala Sioux, born and raised on Pine Ridge Reservation until she was sent to Lincoln School in Philadelphia, Pa. Her mother was a full blood who never spoke English. She was married twice, first to a full blood and second to Joseph Rooks who was part English. There were 18 children. Today I have many relatives in South Dakota, some Pine Ridge and some Rosebud.

My sister and I both are enrolled members of Oglala Sioux, each with 160 acres of allotted land. At Mother's death we inherited 320 acres of her allotment. I had the pleasure of living on Pine Ridge for 4 years as a child.

Education: After attending reservation schools I was sent to Cazenovia Seminary, a Methodist Prep., where I participated in sports and school activities. I was elected President of the Junior and Senior Classes and as a Senior was Captain of Football, Baseball, Track and Basketball. I was Inter-scholastic Pole Vault Champion and as a result won a Scholarship to Syracuse University. I majored in Psychology and Business Administration. I worked my way through college tending furnaces, waiting on tables and my fraternity Zeta Psi, helped me at every turn for which I shall forever be grateful. I spent 4 years 1926-1930 at Syracuse. Later on, I took special non-credit courses in Public Speaking, Marketing, Community Organization, Public Relations and Personnel Administration at Columbia, Penn State and Cornell. 1950-51 American Management Association, New York, N.Y.

Family: Married to Anna Jennings Wilkoff; three children and five grandchildren. Oldest son Reserve Captain Air Force, PHD in Nuclear Physics, teaching at New Mexico State University.

1932 to the present I have always owned and operated a 600 acre dairy farm in Richfield Springs, N.Y. Part of the time operated by farm managers and at present operated by my youngest son. We are also in the horse breeding business. This is our permanent home.

1966-1969 to present—Executive Director and Chairman of Board of Trustees, Zeta Psi Educational Foundation and Fraternity. Plan,

direct and supervise seminars, workshops and conferences for college students who are members on 40 different campuses in Canada, and United States. Work with Deans and faculty advisors and assist each chapter with budgeting and general operation of 40 properties. Issue and interview students for grants and loans. Work with 21 adult members of the Board who serve as regional directors. Assist with placement of graduates on jobs or graduate schools. Also serve as consultant on Housing, including college housing, marketing and fund raising.

1966-1964 Public Relations and Promotions Director, MidEastern Cooperatives, a chain of cooperatives (23) Super Markets. Worked with Boards, trained employees edited magazine, supervised food testing programs.

1964-1961 community relations consultant, Executive Department, New York State Housing Division. Promotion and explanations of various types of housing to civic groups. Arranged and conducted Volunteer Leadership Seminars, assisted in organizing Boards, committees and conducted sessions for management personnel. Prepared and wrote management guides. Surveyed community needs, organized youth groups in ghetto areas and in Public Housing developments.

1961-1959 Special Assistant Commissioner for Cooperative Housing, FHA, Washington, D.C. Supervised, analyzed and expedited policy procedures for all Cooperative Housing developments in the territories of U.S. with full authority to present the policies of the commissioner. Served on national, state and local committees on housing. Worked with congressional leaders on legislation and participated in hearings. Spoke before Housing groups and civic organizations.

Was instrumental in changing the regulations of FHA for benefit of Indians. Promoted and organized the First National American Indian Conference in Washington, D.C. on Housing. (Copies of memos attached)

1959-1955 vice president, Compton Advertising Agency, New York.

Supervised and directed advertising campaigns in the food field and in the dairy and dairy product area. Supervised marketing studies in cities and assisted with American Dairy Association programs.

1955-1946 Member of Board of Directors, Dairymen's League Cooperative Association, New York.

Served as Education and Youth Director, conducting membership and employees meetings on the marketing of milk and products. Conducted Leadership Institutes for youth and adults. Testified at hearings. Represented the League on state and national committees.

1946-1942 Operated farm with training programs for war benefit. Active in community with youth groups. Initiated the Youth Council Programs.

1942-1935 New York State Director for Indian Projects, National Youth Administration.

WRITING AND HONORS

Winner of Freedoms Award for "Outstanding Contribution in promoting American way of Life," as result of article written—"What America Means to me."

Award was presented at Valley Forge by President Eisenhower.

1953—Winner of American Indian Achievement Award.

1950—Readers Digest—"Indian Trail to Success."

Editor—Highlights & Briefs—MidEastern Dairymen's League News (Youth section). The Circle of Zeta Psi.

1961—Received Distinguished Service Award at Zeta Psi International Convention.

1964—National Boy Scout Awards.

1967—Outstanding Service.

1958—National Rural Youth Special Achievement Award.

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Fourth, paragraph 2 of section 1 is deleted in the bill as recommended by the committee, because it is unnecessary in light of the legislation enacted during the 90th Congress (82 Stat. 354), which grants the Secretary general authority to make exchanges.

Mr. ALLOTT. Mr. President, the only amendment of interest is the one discussed in the paragraph enumerated "second." The other amendments are purely technical and are completely acceptable to me and the chairman of the full committee the Senator from Washington (Mr. JACKSON) and the chairman of the subcommittee, the Senator from Nevada (Mr. BIBLE).

The amendment of interest deletes the word "condemnation" from the text of the bill. The word "condemnation" was inserted in the bill by the Senate committee for the purpose of making it "abundantly clear to all concerned, that the power of condemnation is granted to the Department of Interior and the Park Service and can be employed swiftly, in the event it should become necessary to preserve the integrity of the monument."

The House points out in its report that—

The power of eminent domain is included by general law in the authority to acquire lands with donated or appropriated funds, its reiteration adds no new authority and is not necessary for the purposes of this legislation.

With this understanding, that is the Department of Interior has the power of eminent domain under general law and can employ that power with respect to the acquisition of lands for the Florissant Fossil Beds National Monument, I find this amendment acceptable to me, and I understand it is acceptable to the chairman of the full committee and the chairman of the subcommittee on that same basis. The intent of the Senate has not been changed, and the legislative history will show that the Secretary of the Interior has the power to condemn land under this bill.

Mr. President, I felt that it would be helpful to ascertain the position of the Department of the Interior with regard to the power of eminent domain under general law, I, therefore, instructed Mr. Charles Cook, minority counsel of the Senate Interior Committee, to obtain in writing the Department's position. In a letter dated August 4, 1969, and addressed to Mr. Cook, Deputy Solicitor Raymond Coulter sets forth the position of the Department that the authority to purchase lands includes the authority to acquire lands by condemnation. This authority is based upon general authority granted in the act of August 1, 1888, 25 Statute 357, 40 United States Code, section 257, and subsequent judicial interpretation of that statute.

Mr. President, I ask unanimous consent that the letter be printed in the RECORD.

There being no objection, the letter was ordered to be printed in the RECORD, as follows:

U.S. DEPARTMENT OF THE INTERIOR,
 OFFICE OF THE SOLICITOR,
 Washington, D.C. August 4, 1969.
 CHARLES F. COOK, Esq.,
 Minority Counsel, Committee on Interior and
 Insular Affairs, U.S. Senate, Washington,
 D.C.

DEAR MR. COOK: You have informally requested our views on the question whether the specific authority in a statute to acquire land by purchase would include the authority to acquire by condemnation. It is my opinion that it does.

The pertinent portion of the act of August 1, 1888, 25 Stat. 357, 40 U.S.C. § 257, provides as follows:

"In every case in which the Secretary of the Treasury or any other officer of the Government has been, or hereafter shall be, authorized to procure real estate for the erection of a public building or for other public uses, he may acquire the same for the United States by condemnation, under judicial process, whenever in his opinion it is necessary or advantageous to the Government to do so. * * *"

It has been held that this provision provides the authority to condemn where the authority to acquire property by purchase has been conferred by the Congress. *United States ex rel. TVA v. Welch*, 327 U.S. 546, 554; *United States v. Kennedy*, 278 F(2) 121, 122; *Swan Lake Hunting Club v. United States*, 381 F(2) 238.

In both the *Hanson Co.* case and the *Swan Lake Hunting Club* case, the Congress conferred the authority to purchase, and in both cases the court upheld the authority of the Federal agency involved to acquire by condemnation. In the *Swan Lake Hunting Club* case, which dealt with the Migratory Bird Conservation Act, 16 U.S.C. § 715 et seq., the court said, about the application of the 1888 statute quoted above as follows:

"This statute consistently has been interpreted to authorize acquisition by condemnation where specific authority to purchase has been conferred. 381 F(2) at 240."

We hope this information will serve to satisfy your request.

Sincerely yours,
 RAYMOND C. COULTER,
 Deputy Solicitor.

Mr. ALLOTT. Mr. President, with this legislative history and supporting materials, I believe that the question of condemnation is settled with regard to the acquisition of lands for the Florissant Fossil Beds National Monument.

Mr. President, I urge the Senate to concur in the House amendments in order that this measure may be sent to the White House at the earliest possible moment. There is urgency with regard to this measure as there is an imminent threat of commercial encroachment, and I believe it is in the national interest that this measure be signed into law at the earliest practicable date.

Mr. President, I wish to express my thanks to the distinguished Senator from Nevada whose basic interests, I am sure, do not lie in scientific research any more than mine do, but he has expressed great interest in this matter and has gone to great pains to hold hearings and to investigate.

The Senator from Nevada has become convinced, as I have, that this is one of the great paleontological points of interest in the United States. I wish to express my deep appreciation to the Senator from

Nevada at this time for his interest and support in the passage of the bill.

The amendments proposed by the House of Representatives are entirely satisfactory, particularly when compared with the opinion of the Deputy Solicitor and the House report.

Mr. BIBLE. I thank the Senator.

Mr. President, I yield to the distinguished junior Senator from Colorado, who is a cosponsor of the bill and who has been very active and very effective in connection with passage.

Mr. DOMINICK. Mr. President, I thank my friend, the Senator from Nevada, who has been such a help in this matter, as well as the senior Senator from Colorado (Mr. ALLOTT).

I was happy to cosponsor the bill and to participate in the hearings, and to do whatever I could to expedite the matter. I wish to say to both of them that this measure exemplifies the fact that when we have something which is really important, which could be threatened by some development which would injure the cause of the national monument, Congress can move rapidly and efficiently. I think we have acted in this manner in connection to prevent what otherwise would have ruined this national monument.

Mr. ALLOTT. I thank the Senator.

Mr. BIBLE. I thank the Senator.

Mr. President, I move that the Senate concur in the amendments of the House of Representatives.

The PRESIDING OFFICER. The question is on agreeing to the motion of the Senator from Nevada.

The motion was agreed to.

ARM
 AUTHORIZATION OF APPROPRIATIONS FOR FISCAL YEAR 1970 FOR MILITARY PROCUREMENT, RESEARCH AND DEVELOPMENT, AND FOR THE CONSTRUCTION OF MISSILE TEST FACILITIES AT KWAJALEIN MISSILE RANGE, AND RESERVE COMPONENT STRENGTH

The Senate resumed the consideration of the bill (S. 2546) to authorize appropriations during the fiscal year 1970 for procurement of aircraft, missiles, naval vessels, and tracked combat vehicles, and research, development, test, and evaluation for the Armed Forces, and to authorize the construction of test facilities at Kwajalein Missile Range, and to prescribe the authorized personnel strength of the Selected Reserve of each Reserve component of the Armed Forces, and for other purposes.

AMENDMENT NO. 86

Mr. EAGLETON. Mr. President, my amendment No. 86 to S. 2546 has been printed. I ask that the amendment be laid before the Senate and made the pending business.

The PRESIDING OFFICER (Mr. PROXMIER in the chair). The amendment will be stated.

The ASSISTANT LEGISLATIVE CLERK. The Senator from Missouri (Mr. EAGLETON) proposes for himself and the Senator

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from Oregon (Mr. HATFIELD) an amendment, as follows:

On page 2, lines 18 and 19, strike out "\$276,900,000;" and insert in lieu thereof "252,400,000;"

On page 2, line 26, strike out "\$1,638,600,000" and insert in lieu thereof "\$1,608,600,000".

At the end of the bill add a new section as follows:

"Sec. 402. None of the funds authorized to be appropriated by this or any other Act may be expended in connection with the design, development, testing, production, or procurement of the main battle tank designated as the MBT-70; and no funds may be appropriated for any such purpose until after the Comptroller General of the United States has completed and submitted to the Congress a comprehensive study and investigation of the past and projected costs of such tank and a thorough review of the considerations which went into the decision to produce such tank. In carrying out such study and investigation the Comptroller General of the United States shall, among other things, consider—

"(1) why research and development cost estimates have had to be revised steadily upward since 1965;

"(2) whether the MBT-70, considering its revised estimated production costs, will be the most effective weapon to meet the contingency for which was originally planned;

"(3) whether the strategic projections made in 1963 with regard to the use of the MBT-70 will still be valid when it finally becomes available for use; that is, will it be obsolete as the result of advanced technology and new strategy; and

"(4) whether there are more feasible and less expensive alternatives to the development of the MBT-70.

The Comptroller General of the United States shall submit the results of his study and investigation, together with such recommendations as he deems appropriate, to the Congress not more than six months after the date of the enactment of this Act."

Mr. MANSFIELD. Mr. President, I have discussed this matter with the Senator from Missouri (Mr. EAGLETON) and he has told me that it is not his intention to debate this amendment tonight but to have it as the pending business, so that it will be before the Senate and debate commenced thereon at the conclusion of the brief morning hour which we will have tomorrow.

Mr. EAGLETON. I thank the Senator.

ORDER FOR ADJOURNMENT FROM FRIDAY UNTIL 10 A.M. ON MONDAY, AUGUST 11, 1969

Mr. MANSFIELD. Mr. President, I ask unanimous consent that when the Senate completes its business tomorrow it stand in adjournment until 10 a.m. on Monday next.

The PRESIDING OFFICER. Without objection, it is so ordered.

ORDER FOR RECOGNITION OF SENATOR RANDOLPH ON MONDAY, NEXT

Mr. MANSFIELD. Mr. President, I ask unanimous consent that at the conclusion of the prayer and disposition of the Journal on Monday next, the distinguished Senator from West Virginia (Mr.

RANDOLPH) be recognized for not to exceed 30 minutes.

The PRESIDING OFFICER. Without objection, it is so ordered.

Mr. MANSFIELD. Mr. President, under the previous order the Senator from West Virginia will be followed for a period of not to exceed 30 minutes by the Senator from Kansas (Mr. PEARSON).

The PRESIDING OFFICER. The Senator is correct.

SUBSTITUTION OF CONFEEE ON H.R. 6508

Mr. MANSFIELD. Mr. President, I ask unanimous consent to substitute the Senator from Virginia (Mr. SPONG) for the Senator from Alaska (Mr. GRAVEL), as a conferee on the part of the Senate on H.R. 6508, the California Disaster Relief Act.

The PRESIDING OFFICER. Without objection, it is so ordered.

INDEFINITE POSTPONEMENT AND WITHDRAWAL FROM THE CALENDAR OF H.R. 13080

Mr. MANSFIELD. Mr. President, I ask unanimous consent that Calendar No. 332, H.R. 13080, an act to continue for an additional 15 days the existing rates of income tax withheld at the source, be withdrawn from the calendar and postponed indefinitely.

The PRESIDING OFFICER. Without objection, it is so ordered.

LIMITATION ON STATEMENTS DURING TRANSACTION OF ROUTINE MORNING BUSINESS

Mr. BYRD of West Virginia. Mr. President, I ask unanimous consent that there be a brief period for the transaction of routine morning business with statements made therein limited to 3 minutes.

The PRESIDING OFFICER. Without objection, it is so ordered.

EXECUTIVE COMMUNICATIONS, ETC.

The VICE PRESIDENT laid before the Senate the following letters, which were referred as indicated:

PROPOSED ALCOHOL BEVERAGE CONTROL AMENDMENTS ACT OF 1969

A letter from the Assistant to the Commissioner, Government of the District of Columbia, transmitting a draft of proposed legislation to amend the District of Columbia Alcohol Beverage Control Act (with accompanying papers); to the Committee on the District of Columbia.

PROPOSED ZONING LEGISLATION IN THE DISTRICT OF COLUMBIA

A letter from the assistant to the Commissioner, government of the District of Columbia, transmitting a draft of proposed legislation to amend "An act providing for the zoning of the District of Columbia and the regulation of the location, height, bulk, and uses of buildings and other structures and of the uses of land in the District of Columbia, and for other purposes," approved June 20, 1938, as amended (with accompany-

ing papers); to the Committee on the District of Columbia.

PROPOSED DISTRICT OF COLUMBIA HOUSING REVOLVING FUND ACT AND PROPOSED DISTRICT OF COLUMBIA UNCLAIMED PROPERTY ACT

A letter from the assistant to the Commissioner, government of the District of Columbia, transmitting a draft of proposed legislation to establish a revolving fund for the development of housing for low and moderate income persons and families in the District of Columbia, to provide for the disposition of unclaimed property in the District of Columbia, and for other purposes (with accompanying papers); to the Committee on the District of Columbia.

REPORTS OF COMPTROLLER GENERAL

A letter from the Comptroller General of the United States, transmitting, pursuant to law, a report on the cessation of unauthorized payments of proficiency pay and variable reenlistment bonuses to candidates in officer training programs, Department of Defense; dated August 6, 1969 (with an accompanying report); to the Committee on Government Operations.

A letter from the Comptroller General of the United States, transmitting, pursuant to law, a report on the effectiveness and administration of the Legal Services program under title II of the Economic Opportunity Act of 1964, Office of Economic Opportunity, dated August 7, 1969 (with an accompanying report); to the Committee on Government Operations.

PETITIONS AND MEMORIALS

Petitions, etc., were laid before the Senate, or presented, and referred as indicated:

By the VICE PRESIDENT:

A resolution adopted by the general meeting of the taxpayers of El Paso County, Inc., Colorado Springs, Colo., praying for the curbing of expenditures; to the Committee on Appropriations.

A resolution adopted by the general meeting of the taxpayers of El Paso County, Inc., Colorado Springs, Colo., requesting that the Congress let the surtax expire; to the Committee on Finance.

A resolution adopted by the general meeting of the taxpayers of El Paso County, Inc., Colorado Springs, Colo., remonstrating against the proposed guaranteed annual income; to the Committee on Finance.

REPORTS OF COMMITTEES

The following reports of committees were submitted:

By Mr. BIBLE, from the Committee on Interior and Insular Affairs, without amendment:

S. 1108. A bill to waive the acreage limitations of section 1(b) of the Act of June 14, 1936, as amended, with respect to conveyance of lands to the State of Nevada for inclusion in the Valley of Fire State Park (Rept. No. 91-348).

By Mr. BIBLE, from the Committee on Interior and Insular Affairs, with an amendment:

S. 2564. A bill to amend the Act fixing the boundary of Everglades National Park, Fla., and authorizing the acquisition of land therein, in order to authorize an additional amount for the acquisition of certain lands for such park (Rept. No. 91-347).

By Mr. ANDERSON, from the Committee on Interior and Insular Affairs, with an amendment:

S. 203. A bill to amend the Act of June 13, 1962 (76 Stat. 96), with respect to the Navajo Indian irrigation project (Rept. No. 91-363).



United States
of America

Congressional Record

PROCEEDINGS AND DEBATES OF THE 91st CONGRESS, FIRST SESSION

Vol. 115

WASHINGTON, WEDNESDAY, AUGUST 6, 1969

No. 133

Senate

(Legislative day of Tuesday, August 5, 1969)

ABM

The Senate met at 11 o'clock a.m., on the expiration of the recess, and was called to order by Hon. HERMAN E. TALMADGE, a Senator from the State of Georgia.

The Chaplain, the Reverend Edward L. R. Elson, D.D., offered the following prayer:

O Thou Sovereign Lord of life and of history, judge of men and nations, whose covenant is to bless those who desire to know and to do Thy will, help us this day that by prayer and study we may know and do Thy will. By the illumination of Thy spirit make us precise in analysis, accurate in expression, pure in motive, and wise in decision.

O Lord, grant us Thy grace and wisdom more perfectly "to establish justice, insure domestic tranquillity, provide for the common defense, promote the general welfare, and secure the blessings of liberty to ourselves and our posterity." Enable us to "put on the whole armour of God; to be strong in the Lord and the power of His might," and to deploy the strength of our true character, so that as a people we may send forth missiles of friendship and good will to all mankind.

In Thy holy name we pray. Amen.

DESIGNATION OF ACTING PRESIDENT PRO TEMPORE

The assistant legislative clerk read the following letter:

U.S. SENATE,
PRESIDENT PRO TEMPORE,
Washington, D.C., August 6, 1969.

To the Senate:

Being temporarily absent from the Senate, I appoint Hon. HERMAN TALMADGE, a Senator from the State of Georgia, to perform the duties of the Chair during my absence.

RICHARD B. RUSSELL,
President pro tempore.

Mr. TALMADGE thereupon took the chair as Acting President pro tempore. (At this point a disturbance occurred in the gallery. The Presiding Officer directed the Sergeant at Arms to preserve order.)

THE JOURNAL

Mr. MANSFIELD. Mr. President, I ask unanimous consent that the Journal

of the proceedings of Tuesday, August 5, 1969, be approved.

The ACTING PRESIDENT pro tempore. Without objection, it is so ordered.

EXECUTIVE SESSION

Mr. MANSFIELD. Mr. President, I yield myself one-half minute, out of the time allotted, to ask unanimous consent that the Senate go into executive session to consider a nomination on the Executive Calendar.

There being no objection, the Senate proceeded to the consideration of executive business.

The ACTING PRESIDENT pro tempore. The nomination on the Executive Calendar will be stated.

U.S. MARSHAL

The assistant legislative clerk read the nomination of Albert A. Gammal, Jr., of Massachusetts, to be U.S. marshal for the district of Massachusetts.

The ACTING PRESIDENT pro tempore. Without objection, the nomination is confirmed.

Mr. MANSFIELD. Mr. President, I ask unanimous consent that the President be immediately notified of the confirmation of the nomination.

The ACTING PRESIDENT pro tempore. Without objection, it is so ordered.

LEGISLATIVE SESSION

Mr. MANSFIELD. Mr. President, I move that the Senate resume the consideration of legislative business.

The motion was agreed to, and the Senate resumed the consideration of legislative business.

COMMITTEE MEETINGS DURING SENATE SESSION

Mr. MANSFIELD. Mr. President, for the information of the Senate, none of the regular committees will be permitted to meet during the session of the Senate this afternoon.

AUTHORIZATION OF APPROPRIATIONS FOR FISCAL YEAR 1970 FOR MILITARY PROCUREMENT, RESEARCH AND DEVELOPMENT, AND FOR THE CONSTRUCTION OF MISSILE TEST FACILITIES AT KWAJALEIN MISSILE RANGE, AND RESERVE COMPONENT STRENGTH

The ACTING PRESIDENT pro tempore. The Chair lays before the Senate the unfinished business, which will be stated by title.

The ASSISTANT LEGISLATIVE CLERK. A bill (S. 2546) to authorize appropriations during the fiscal year 1970 for procurement of aircraft, missiles, naval vessels, and tracked combat vehicles, and research, development, test, and evaluation for the Armed Forces, and to authorize the construction of test facilities at Kwajalein missile range, and to prescribe the authorized personnel strength for the Selected Reserve of each reserve component of the Armed Forces, and for other purposes.

The Senate resumed the consideration of the bill.

The ACTING PRESIDENT pro tempore. The question is on agreeing to amendment No. 101 of the Senator from Michigan.

Who yields time?

Mr. MANSFIELD. Mr. President, I ask unanimous consent to take out of the time of both sides the time for a quorum call; and I suggest the absence of a quorum.

The ACTING PRESIDENT pro tempore. Is there objection?

Mr. TOWER. Mr. President, reserving the right to object, do I correctly understand that the time is to be charged to both sides?

Mr. MANSFIELD. To both sides, yes.

The ACTING PRESIDENT pro tempore. Without objection it is so ordered. The clerk will call the roll.

The assistant legislative clerk proceeded to call the roll.

Mr. TOWER. Mr. President, I ask unanimous consent that the order for the quorum call be rescinded.

The ACTING PRESIDENT pro tempore. Without objection, it is so ordered.

Who yields time?

S 9235

S 9236

CONGRESSIONAL RECORD — SENATE

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Mr. STENNIS. Mr. President, I yield 15 minutes to the Senator from Virginia.

The ACTING PRESIDENT pro tempore. The Senator from Virginia is recognized for 15 minutes.

Mr. BYRD of Virginia. Mr. President, the Senate has been debating for 5 weeks the military procurement authorization bill. Most of the discussion has centered around whether or not the United States should deploy an anti-ballistic-missile defense system.

I think these discussions have been good.

I think the debates on both sides of the question have been illuminating and well handled. I wish to mention particularly the speech made yesterday by the distinguished Senator from Alaska (Mr. GRAVEL). I thought it was a well handled address.

I did not agree, and I do not agree with his conclusions, but I think his speech was somewhat typical of the excellent presentations that have been made on both sides of the question.

Mr. President, yesterday the distinguished senior Senator from Maine introduced an amendment as a substitute for the Cooper-Hart amendment.

The amendment offered by the Senator from Maine presents a clear-cut issue to the Senate.

The amendment introduced by the Senator from Maine would knock out all funds dealing with an anti-ballistic-missile defense system.

Those Senators who feel that this Nation should not have an ABM program will now have the opportunity to vote on this clear-cut issue.

All the other amendments which have been offered, including, particularly, the amendment offered by the distinguished Senator from Kentucky (Mr. COOPER) and the distinguished Senator from Michigan (Mr. HART), do not present as clear cut an issue. But the Senator from Maine has given the Senate an opportunity to register in a clear-cut way its approval or disapproval of an ABM system.

Mr. GORE. Mr. President, will the Senator yield?

Mr. BYRD of Virginia. I am on limited time but I will be glad to yield very briefly to the Senator from Tennessee. I would like to finish my remarks but I yield very briefly to the Senator.

Mr. GORE. I withdraw the request.

Mr. BYRD of Virginia. Mr. President, I wish to comment briefly now as to whether or not it would be in the best interest of our Nation to deploy an anti-ballistic-missile defense system.

First, we must consider what the proposed system will do and what it will not do.

The missile defense system is not an offensive weapon. It is purely a defensive one.

It is not a warmaking weapon. Its only use is to protect the United States in the event of attack. If the United States is not attacked then this weapon would not be used.

It does not add to our Nation's offensive potential but it does add to our Nation's protection.

President Nixon believes that the Safeguard system will strengthen the hand of the United States in any arms control talks with the Soviet Union. I believe that history teaches us that the Russians respect strength.

In speaking of the Soviet Union, what evidence is there to suggest that the United States should not be on the alert as to Soviet capabilities? We all know that in 1962 the Soviet Union brought offensive missiles to the island of Cuba, 90 miles off our shores.

We all know that the Soviet Union is the major supplier of major weapons for the North Vietnamese, and they have been for 4 years.

We all know that it was the Soviet Union that stood behind Nasser when he provoked hostilities with Israel in 1967.

We all know of the brutal invasion of Czechoslovakia by the Soviet Union in 1968.

We all know that in 1969 the Soviet Union further tightened the screws on Czechoslovakia.

So, Mr. President, I say that in this uncertain world of violence and instability it is important for our Nation to attempt to develop some defense against nuclear weapons.

Before it is completed the ABM system will be a costly one. Balanced against the cost is this: In this imperfect world of international violence and instability, can we afford not to develop some defense against nuclear attack?

Those who have discussed the ABM, and most of the expert witnesses testifying in regard to the ABM on both sides of the question, agree that the Soviet Union has been and is substantially increasing its offensive capability.

The evidence seems conclusive that with the SS-9 the Soviets have the capability to knock out land based strategic U.S. missiles.

Basically, the United States is relying on a strong offensive capability as the best deterrent against aggression. But if U.S. missile sites are knocked out, the U.S. retaliatory power is decreased.

Those who oppose deployment of the ABM system seem to put considerable faith in the possibility of arms control talks.

Most of those who oppose deployment of the ABM system feel that the Soviets have no intention of using its giant SS-9's to attack U.S. missile sites.

But, Mr. President, no one really knows what Russia's intentions are.

Most seem agreed, however, as to the magnitude of Russia's growing capability. To me, this is the most significant evidence obtained from the multitude of testimony in regard to the ABM system.

Another fact recognized by all scientists is that a long leadtime is required for deployment of a defensive system. There is a difference of opinion as to the precise number of years, but all scientists agree that the leadtime is substantial.

Thus, if the United States is to have an ABM defensive system by 1975, the deployment must begin now. None can say whether world conditions will be

better or worse 6 years from now. All of us hope that, somehow, the statesmen of the world will find a formula for world peace. But there is no evidence to suggest that such a formula is in sight.

Last year, I voted for substantial reductions in non-Vietnam defense costs, and will do so again this year. I favor a reduction of \$2 billion in the pending military procurement legislation. I have reached the conclusion, however, that it would be unwise to eliminate funds for the development of a system to protect the United States in the event of nuclear attack.

Mr. STENNIS. Mr. President, the Senate is out of order. May we have order in the Chamber.

The ACTING PRESIDENT pro tempore. The Senate will please be in order.

Mr. JACKSON. Mr. President, will the Senator from Virginia yield?

Mr. BYRD of Virginia. I yield.

Mr. JACKSON. I commend and highly compliment the able Senator from Virginia for an excellent analysis of the problem. I think the record he has made in his speech regarding the nature of the adversary is, indeed, very important in any Senator's coming to a conclusion on a vote on this important issue.

I must say that the able Senator from Virginia has put his finger right on the problem. We have spent a lot of time talking about the technical aspects of the ABM system but we have not had the kind of discussion, in my judgment, as to the nature of the adversary.

How can we really make a decision when we have not had that kind of presentation that I think is so essential. The Senator from Virginia has made a real contribution in this area in analyzing the kind of adversary we are up against.

I think that this point, as well as the points he is now making add immeasurably to this debate, and to the confidence of those Senators who really want to make sure that we are making the right move in trying to protect our deterrent so essential to the peace of the world.

Mr. BYRD of Virginia. Mr. President, I am very grateful to the Senator from Washington for his remarks.

Mr. TOWER. Mr. President, will the Senator from Virginia yield?

Mr. BYRD of Virginia. I yield.

Mr. TOWER. I should like to associate myself with the remarks of the Senator from Washington in commending the Senator from Virginia on his speech.

We should understand there is every reason to believe that the Soviet Union is not trying to achieve parity in terms of arms but, indeed, superiority.

Does not the distinguished Senator from Virginia think that since this evidence is very present, indeed, that we had better be considering how we will maintain our superior defense posture in the midseventies?

Mr. BYRD of Virginia. I quite agree with the distinguished Senator from Texas.

The ACTING PRESIDENT pro tempore. The time of the Senator from Virginia has expired.

Mr. STENNIS. Mr. President, does the Senator from Virginia desire more time?

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Mr. BYRD of Virginia. Five minutes.
Mr. STENNIS. Mr. President, I yield 5 additional minutes to the Senator from Virginia.

The ACTING PRESIDENT pro tempore. The Senator from Virginia is recognized for 5 minutes.

Mr. BYRD of Virginia. Mr. President, I should like briefly to summarize my position in regard to the ABM system and at the same time attempt to summarize the statements which have been made on both sides of this controversy.

First, I think we should be aware that the Senate, last year, under a Democratic President, agreed to proceed with the deployment of an ABM defensive system.

Why should it not now agree when we have a Republican President?

Number 2, the scientific community is sharply divided on the deployment of an ABM system, as to whether it can be accomplished and whether an effective system can be developed.

We know that many scientists, such as Dr. Teller, who developed the hydrogen bomb, feel that it can be developed. The entire world has just witnessed a demonstration of what Americans can do when, on July 20, we landed 2 men on the moon. Thus, I am willing to give the benefit of the doubt to the scientific community, those who feel that an effective system can be developed.

Third, most agree—perhaps all agree—that the Soviet Union has been and is substantially increasing its defensive capability.

Fourth, the ABM is purely and solely a defensive weapon. It cannot be used for offensive purposes.

Fifth, the evidence is that the Soviets with the SS-9 have the capability—we do not know what the intentions are—but the Soviets have the capability to knock out U.S. missiles.

Sixth, a long leadtime is required for the deployment of a defensive system. There is a difference of opinion as to the precise number of years, but all seem agreed that the length of time is substantial.

Seventh, those who oppose deployment of the ABM seem to put considerable faith in arms control talks. Well, the President of the United States is the only man, through his representatives, who can speak for the United States at the oncoming arms control talks.

The President of the United States is convinced that the deployment of an ABM system would strengthen his hand when the talks are held.

Thus, while I have had doubts concerning the ABM proposal, I have decided to resolve those doubts in favor of defense.

In such technical and complex matters as the ABM, it is not possible to be certain whether we are right—either those who take the position I take, or those who take the contrary position—none of us can be certain that we are right.

So while I have doubts concerning the ABM proposal, I have decided to resolve the doubts in favor of defense.

In the light of world developments, I have concluded it would be wise to support the Commander in Chief in his

firm belief that our missile bases must be protected against foreign attack.

In recent years, the world has made great strides in almost every line of endeavor—in medicine, in scientific achievements, in space.

But in learning to live in peace with one another, the nations have made little progress. During the past quarter of a century, the United States has been involved in three major wars.

Until a more peaceful world is at hand, it seems to me we have little choice but to spend the necessary funds in an effort to deter an attack on the 200 million people in the United States.

In such complex and technical matters as the ABM deployment question, it is not possible to be certain, but it is possible to be prudent. I support prudence.

Mr. COOK. Mr. President, will the Senator from Virginia yield?

Mr. BYRD of Virginia. If I have any time left, I shall be glad to yield to the Senator from Kentucky.

The PRESIDING OFFICER (Mr. BAYH in the chair). The time of the Senator from Virginia has expired.

Mr. STENNIS. Mr. President, I am sorry; I cannot yield right now. I yield myself 2 minutes on the amendment.

Mr. President, a great deal has been said from time to time to the effect that we must vote for the Cooper-Hart amendment; otherwise Congress would not be exercising control over this program. In other words, if the bill as written now is passed, it will be "goodbye" as far as Congress is concerned. There has been a great deal in the press on that, and statements have been made on the floor in various ways to that effect.

Mr. President, that impression, or statements to that effect, are just in total error. The big purpose of the authorization bill is the requirement that these matters have to come here to be authorized. There is a double control over it, through appropriations. That applies in the other body with the same force and effect. That matter is clear-cut, very positive and definite, as to what it means. It will have to be authorized and appropriated before any further use is made of it. I just wanted to state that for emphasis.

Mr. FULBRIGHT. Mr. President, will the Senator yield?

Mr. STENNIS. I want to be courteous to the Senator. I do not have much time. I yield to him.

Mr. FULBRIGHT. The Senator makes reference to what, as the Senator knows, I said exactly—not exactly, but partly. I think I made clear in my remarks, both in my prepared remarks and my extemporaneous remarks, that this is the first time an important military request has been debated on the floor of the Senate. I did not say, and I did not mean to say, it had not been examined carefully in the Armed Services Committee.

One of the embarrassing things for me in this whole matter is that I have the greatest respect for the Senator from Mississippi; and certainly I always have had, and still do, for the Senator from Georgia. I know they have done their best. They are great patriots, and they have done a good job in their committees.

But I have been in the Senate 25 years. The Senator has said there has been supervision, and so forth; but it has not taken place on the Senate floor. I have never witnessed or participated in a serious debate on it.

The PRESIDING OFFICER. The time of the Senator has expired.

Mr. STENNIS. I yield 1 minute.

Mr. FULBRIGHT. The Senator from New York raised an important matter. As the Senator from New York and I said yesterday, this is the very core of this matter. The most important matter involved in this debate is whether or not the Senate has the power, the will, and the determination to resist all of the influences brought to bear on the Members of the Senate. I mean legitimate influences. I mean from their constituents, from the great industries in the various States. I do not discount these influences and I do not in any way criticize them. I know I am subject to them just as well as anyone else. It is a fact of life in this great industrial Nation that the United States has become. I am not saying it in a critical way. But it is a serious matter.

I do not believe the Senator can cite a single case in which a serious challenge has been made on the floor of the Senate to any military program, involving, since World War II, over \$1 trillion—more than \$1,000 billion. I have never heard a serious debate take place on it. This is the first time. That is the only point I make, and I do not think the Senator will disagree with it.

The PRESIDING OFFICER. The time of the Senator has expired.

Mr. STENNIS. Mr. President, I yield one-half minute.

The Senator from Arkansas is discussing a wholly different matter from what I brought up. I merely brought up that the passage of the bill as written will still leave control of all this program in the hands of the Congress except the part that is in the bill. That is all. I do not complain about what the Senator has said. Of course, we will have control over it. Whether we have in the past exercised it is beside the issue.

Mr. FULBRIGHT. Of course, the Constitution gives us control. I am saying Congress has not exercised it. This is the first opportunity I have seen to exercise it. I agree that the Constitution gives us the power.

Mr. McINTYRE. Mr. President, will the Senator yield me time for a comment on that point?

Mr. STENNIS. Mr. President, I cannot yield any more just now. I just do not have the time. I dislike not to yield.

Mr. McINTYRE. Mr. President, will the Senator from Michigan (Mr. HART) yield to me briefly?

Mr. HART. Mr. President, I yield 1 minute.

Mr. STENNIS. Mr. President, I yield 1 minute.

The PRESIDING OFFICER. The Senator from New Hampshire has been yielded 1 minute. The Chair will let the Parliamentarian determine where that 1 minute came from.

Mr. McINTYRE. Mr. President, I have a comment on the question of control, because my distinguished chairman has

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just said that control over the whole ABM system is something that we on the Armed Services Committee, through the authorization bill, do exercise. And yet I know—and he must know—that under the experience we have had, if we do not express our senatorial decision putting strict control on the system on the record, then as we take up the authorization bill next year the system will be coming in the back door. We are not exerting the type of control that we in the Senate and the Congress should exercise over this massive new system. So I disagree seriously with my chairman on the question of control.

Mr. MURPHY. Mr. President, will the Senator yield?

Mr. STENNIS. Mr. President, I do not believe it is possible to carry on debate on controlled time in this way. We can come back to it later.

Mr. COOPER. Mr. President, I yield myself some time from our time, but I want to comment on two points.

The PRESIDING OFFICER. The Senator from Kentucky.

Mr. COOPER. Mr. President, in responding to the Senator from Mississippi, I want to say that when we speak about future control over this system, through appropriation and review, I doubt that it will be effective. We will make the essential decision today.

The second point I make is that last year the Senator from Michigan (Mr. HART), I, and other Senators offered the amendment with the primary purpose of opening up the defense budget to debate in the Senate and in the country. Debate upon the military appropriation bill has been opened in the Senate and the Congress, and for the first time an opportunity has been provided for all Members to exercise their judgment and responsibility.

On those two points I must disagree with the Senator from Mississippi.

Mr. HART. Mr. President, I yield myself 1 minute.

Before it is lost in the more wide-ranging debate, I think some comment should be made with respect to the point the Senator from Virginia made at the outset. He began, it will be recalled, by saying the amendment offered by the Senator from Maine (Mrs. SMITH) now gave us a clear-cut choice. Those who do not want the anti-ballistic-missile system now have the opportunity to say so and make it stick by adopting that amendment.

I think it clarifies—and helpfully—our alternative courses but the two courses earlier available have been clear. There are three now. The first is provided by the committee recommendation that we deploy an antiballistic missile labeled the "Safeguard." The second is the Cooper-Hart amendment, which says that we shall research and develop what we would hope might be an effective anti-ballistic-missile system, but we shall not undertake to deploy a doubtful system. The third is the proposal now by the Senator from Maine. This in effect abandons any effort to develop, through research and underwriting, a testing program to obtain an effective ABM system.

Those choices are clear cut. It would seem to me that the complexity of the anti-ballistic-missile technique and the relative ease of neutralizing any anti-ballistic-missile system now attainable, argues for research and against deployment. The alternative means now available to our deterrent strike force are, both in time and cost, within reach and much more prudent and effective than the deployment of a doubtful system.

I yield to the Senator from Tennessee.

Mr. GORE. Mr. President, I wish to point out that the amendment offered by the distinguished senior Senator from Maine may go further than she intends, because it would not only prevent testing, research, evaluation, and development, procurement of an ABM, but it would also prohibit testing, research, development, evaluation, or procurement of "any part or component of such system."

This would prevent the testing, evaluation, and procurement of such parts and such components as may be necessary for other missile developments when those same components and those same parts would be used in any possible ABM deployment. Many of these missile parts and components are identical with those used in other systems, and there are many other such weapons systems under evaluation and under study, and have been for the past decade, and will doubtless be, and should be, for the next decade.

So it would seem to me that if the amendment of the senior Senator from Maine were confined purely and strictly to deployment of the Safeguard anti-ballistic-missiles, then we might consider accepting it; but so long as it applies to and prohibits testing, evaluation, procurement, or research and development of "any part or component of such system," then it goes too far, and cannot be accepted. We must proceed with evaluation, testing, and research in many fields, including parts and components that may or may not be used in the ABM missiles.

Mr. MCINTYRE. Mr. President, will the Senator yield?

Mr. HART. I yield to the Senator from New Hampshire.

Mr. MCINTYRE. The remarks of the Senator from Michigan overlooked an amendment that will be offered either today or tomorrow by me. That amendment, it seems to me, reaches a common ground, because it retains control in Congress of the ABM system, and at the same time recognizes the possibility of the threat, and gives us a chance, if we want one, a year from now or possibly later, to move to deploy the ABM system.

Mr. HART. Mr. President, if there is time left, I shall react only to the point of saying I would be much more comfortable if we did not begin installing the machinery at the two proposed sites of the system, which would happen under the McIntyre amendment.

Mr. COOK. Mr. President, will the Senator yield?

Mr. HART. I yield 1 minute to the Senator from Kentucky.

Mr. COOK. I wanted to get into the record, in respect to the reliance of the Senator from Virginia on Dr. Teller,

that I spent 1 day with Dr. Teller in the presence of the junior Senator from Alaska, and the next day spent quite some time with Dr. Teller, together with the Senator from California, the Senator from Ohio (Mr. SAXBE), and the Senator from Kansas (Mr. DOLE).

I wish to express at this time, with reference to this reliance, that I came away less convinced after those 2 days of discussions with Dr. Teller than I was before.

I might further state for the record that I know of no time whatsoever that Dr. Teller was ever against the expenditure of massive funds, or ever against the deployment of any major missile system that the Defense Department wanted. He is the same distinguished scientist who said, about a month or so ago, that the was delighted that man could walk on the moon, because we might well use the moon as a source for atomic and hydrogen explosions in the future. I just wanted to get that into the record.

Mr. HART. Mr. President, I yield 5 minutes to the Senator from Kansas.

Mr. PEARSON. Mr. President, I wish to respond to a point that has been developed in this debate and reiterated many times. It is a minor theme, perhaps, rather than a major theme, but it has recurred very often in the colloquy on the Senate floor. It has not been reduced to a cliché; it is a point seriously made in a serious debate, but it takes the expression that the construction and deployment of the ABM is essential because we must keep our options open, or, expressed in another way, that we must give the President a second button.

I think every Member of this body would agree that it is desirable to have as many alternatives as possible, and have them available at all times. But the question arises as to whether or not the construction and deployment of the ABM really will keep our options diverse and usable. It may in fact close some of the avenues open to us. The decision to deploy may be one that will prevent us from taking other courses in the future; that will prevent us from increasing our Polar fleet, the strongest part of our deterrent; that will prevent or block off the prospect of hardening to a greater degree our missile sites, or going to mobile launches, or increasing our offensive capability, or even, in fact, relying upon the superiority in numbers we now have at all strategic force levels.

It does seem to me that it might be reasonable to assume that to continue on the course urged by the proponents here would overcommit us to a single type of response, rather than opening up more avenues or more alternatives to us.

I am troubled by the associated argument of keeping our options open, which, as I have said, takes the form of proposing that we give the President a second button. Under the Safeguard system, the perimeter acquisition radar, extending some 2,000 or 2,500 miles out, can pick up a missile coming across the globe at perhaps 17,000 miles per hour.

Mr. FULBRIGHT. Mr. President, may we have order?

The PRESIDING OFFICER. The Senate will be in order.

Mr. PEARSON. That, I think the authorities indicate, gives us a time of about 10 minutes to react. Our radar tracks it, runs it through a computer, makes a decision as to a possible target, relays this information to the missile site radar, where the tracking is continued, and the guidance system for the Spartan and the Sprint is put into motion.

If we have a blackout condition, it could take away 5 minutes. If we have an FOBS condition, it could limit the time to 3 minutes. If we have a launch in a submarine off the shore, it may be a little later time. It may be that under all these conditions, as a practical or sensible matter, we are not going to give the President another button to push, because there simply would not be time to do it.

He may be on a very valuable trip in Western Europe or Asia, such as President Nixon has just made with great advantage to this country.

But perhaps, really, what it will amount to will be similar to the very honest, courageous position that a distinguished Senator on this side of the aisle took some years ago in a campaign in which he faced up to the practicalities of nuclear exchange in Western Europe and indicated that it might be necessary to delegate some authority for the use of nuclear weapons. This is precisely what may well be the result, and, it seems to me, may be the only result, in this instance.

I bring this to the attention of the Senate in relation to the minor point relating to the second-button concept and the idea of keeping our options open.

Mr. MANSFIELD. Mr. President, I suggest the absence of a quorum, the time for the quorum call to be charged to both sides.

The PRESIDING OFFICER. The clerk will call the roll.

The assistant legislative clerk proceeded to call the roll.

Mr. HART. Mr. President, I ask unanimous consent that the order for the quorum call be rescinded.

The PRESIDING OFFICER (Mr. EAGLETON in the chair). Without objection, it is so ordered.

Who yields time.

Mr. HART. I yield myself 2 minutes.

Mr. STENNIS. Mr. President, may we have order?

The PRESIDING OFFICER. The Senate will be in order.

Mr. HART. Mr. President, as we approach the vote on this amendment, I think it is in order that it be made very clear that there is not a partisan division on this question, and there should not be a partisan division on an issue of this character.

A year ago, a Republican Senator from Kentucky and a Democratic Senator from Michigan sought to persuade the Senate to say "No" to a Democratic President who wanted to deploy an anti-ballistic-missile system. We were beaten. I think that even those who a year ago advocated that system now agree that it was a mistake.

In any event, they are now here with a new one, and this year a Republican Senator from Kentucky and a Demo-

cratic Senator from Michigan seek to persuade the Senate to say "No" to a Republican President who wants to deploy the same machinery that they advertised as great for city defense last year, but now say it is magnificent for defense of Minuteman missiles.

The division is clear on both sides. There are those on my side of the aisle who have a deep conviction that this is an unwise proposal. There are those on the Republican side who share that conviction. There are those on the Republican side who are convinced that our security requires that we go forward with deployment. There are those on my side who share that conviction.

Whatever the outcome, it ought not be read by the country or by nations that observe our actions and react to them as a partisan debate or a partisan issue. It involves people and sanity in a nuclear age.

The PRESIDING OFFICER. Who yields time? The time will be running equally on both sides.

Mr. TALMADGE. Mr. President, will the Senator from Mississippi yield me 5 minutes?

Mr. STENNIS. I yield 5 minutes to the Senator from Georgia.

Mr. TALMADGE. Mr. President, a few years ago, I was one of the Senators who voted against the ratification of the Nuclear Test Ban Treaty. One of the most compelling reasons why I voted against the ratification of that treaty was that the Russians had fired nuclear missiles at nuclear missiles. The United States had not. In other words, the Soviet Union at that time was dealing from knowledge. The United States of America at that time was dealing from ignorance. As a result of the knowledge the Soviet Union gained from those experiments, they have at least partially deployed an anti-ballistic-missile system around Leningrad and Moscow. They evidently thought it would work, from the experimentation they had done, or they would not have deployed this system.

At the present time, we have eminent scientists who say that the system will not work. We also have eminent scientists who say that the system will work. So the scientists themselves are divided on the issue. But we must also remember, Mr. President, that when we were discussing whether to build an atomic bomb, many scientists said, "No, don't build it; it won't work."

The same situation was true when it came to the thermonuclear bomb. The same situation was true when it came to the Polaris submarine. Think of what the defense posture of our country would be today had we not gone forward with the development of those weapons systems.

Assuming for the sake of argument that the system will not work, what have we lost? A few billion dollars. Assuming that the system will work, and we fail to utilize it, we are gambling with the security of this Nation. We are gambling with the lives of 204 million people in the United States. We are gambling with civilization itself.

Mr. President, when you have an issue where we are gambling the future of the

country on the one hand and gambling money on the other hand, as far as the Senator from Georgia is concerned, there is but one way to resolve the issue and that is in favor of our country continuing to exist and protecting our people.

We hear a great deal of talk about national priorities. What is the greatest national priority any nation can have? The greatest national priority is to exist, to continue. What is the greatest priority we can have in this Nation? It is to protect the lives of our citizens. That is the issue we are talking about as far as the Senator from Georgia is concerned, and on that issue I am unwilling to gamble the fate of our country.

Mr. FULBRIGHT. Mr. President, will the Senator yield to me for 5 minutes?

Mr. HART. I yield.

The PRESIDING OFFICER. The Senator from Arkansas is recognized for 5 minutes.

Mr. FULBRIGHT. Mr. President, I think the distinguished Senator from Georgia has presented in a very concise and a very effective manner the essence of the case for the ABM. I would only like to make a few observations about his presentation.

By and large, the scientists I have heard who oppose the ABM do not say it will not work under optimum conditions. Rather, they raise serious doubts that it will be effective in wartime conditions; that is, with the enemy actually exploding nuclear bombs over the radars, and so on. They raise that kind of question. They do not say it will not work under the ideal conditions that such things as the Apollo worked when there was no effort to thwart it.

My recollection is that those who opposed the hydrogen bomb, like Dr. Oppenheimer, did not say we could not make a hydrogen bomb. I think they were quite convinced we could. They had been the principal scientists in the development of the atomic bomb. Their position was that we did not need it, that it was a dangerous thing, and that on policy grounds we should not do it. I do not recall that they said we could not do it technically.

I did not say, Mr. President, you could not make an ABM which under optimum conditions would shoot down incoming missiles, especially if they come from Vandenberg Air Base. However, when it comes to programing a computer to deal with an almost infinite variety of situations that would be involved in a belligerent situation, at least as of now it is quite impossible even to program the computer, assuming you had a computer able to deal with that kind of complexity.

But that is not the main point. I agree with the Senator as to his priorities. The No. 1 priority is the preservation of the United States. In that sense I do not mean just physical preservation; I mean the society of which our Constitution is our basic charter. That is what we are really talking about. It is not just the physical existence of this piece of real estate, but the kind of society that I believe all Members of this body are devoted to.

This is where the critical difference comes in. I think the Senator and those

who advocate his position are talking about a specific means as being indispensable to the preservation of this system. This is where we part company. I believe, and I believe most of the Members who heard the testimony believe, there are better ways and more effective ways to protect our physical security than building Safeguard. We believe this is a very secondary or dubious way to do it. For example, the Senator from Missouri, who is one of the best qualified men in this body, who is a Senator who has been a Cabinet member as Secretary of the Air Force, with long experience in the armed services, and who is from a family having long experience in the armed services, has made very clear his views about the ineffectiveness of this particular system. He suggests that if this is a very major matter of protection of our physical security, we should have mobile Minuteman.

We have had not only the views of the Senator from Missouri, but we have had testimony, if one does not care what it may cost, that if we are prepared to spend \$10 billion, \$20 billion, \$100 billion then we are saying that this Safeguard system is about the most inefficient and least likely way to provide effective security that we can think of. We are not saying, "Do not have regard for the military security of the United States."

The PRESIDING OFFICER. The time of the Senator has expired.

Mr. FULBRIGHT. Mr. President, will the Senator yield to me for 2 additional minutes?

Mr. HART. I yield.

Mr. FULBRIGHT. Mr. President, in other words, the Senator from Missouri and I agree it would be much less expensive and much more effective if, instead of trying to protect the static Minuteman with the obsolete concept developed under the old Nike-Zeus and Sentinel systems, we had a mobile Minuteman system and moved them around, in the same way we move the Polaris around under the water. This would keep the enemy from knowing where they are and nullify the concept of destroying them, which is the job of the ABM.

We had testimony to the effect that defending the Minuteman, this particular ABM system is already obsolete. The ABM could easily be overcome with a multiplicity of weapons. Being static they can be targeted, and the accuracy of ICBM's is improving.

What we disagree about, and I do respect the judgment of the Senator from Georgia, is not the ultimate security of our country. We are saying that this system is not a proper system or appropriate system; that it could lead to incalculable cost. We believe we have had experience with other missile systems which have proved to be completely ineffectual and have been abandoned at great cost. Furthermore, we are concerned with other circumstances involving difficulties with our financial situation and our economy. We believe these circumstances should be taken into account when the Senate passes judgment in this particular case.

The PRESIDING OFFICER. Who yields time?

Mr. ERVIN. Mr. President, will the Senator from Mississippi yield to me for 3 minutes?

Mr. STENNIS. Mr. President, I yield 3 minutes to the Senator from North Carolina.

DEPLOYMENT OF ABM

Mr. ERVIN. Mr. President, Dr. Emil John Pawlowski, the eminent Massachusetts psychiatrist, who has visited relatives behind the Iron Curtain, is a good judge of the minds of men. In his recent book entitled "Path to Permanent Peace," he has made some trenchant observations which are highly relevant to the proposal now being debated by the Senate.

I invite the attention of the Senate to certain of these observations which appear on pages 95, 102, 103, and 104 of his book:

It is an admitted fact, but not accepted by all, that the Communists want to rule the whole world. Their policy has been to gain victory through subversion, and not from all-out war. However, if they thought they could beat the United States, their strongest enemy, without too much difficulty, they would in all probability wage a war against us. Many people in the United States do not recognize, or do not want to recognize, the seriousness of the Communist threat to our country and our way of life. They would hesitate to go to war unless we were openly attacked, and some, not even then. Perhaps the greatest deterrent to an all-out war between the Communists and the free peoples of the world is the atomic bomb. If it were not for the fact that both sides, including leaders, would lose in a nuclear war, we might have had a confrontation with Russia years ago. It is surely regrettable that the people of the world did not act early enough to have prevented Communism from becoming as strong as it is today.

A weak country is going to provoke immature, aggressive countries to try to exploit it. Even a country which might be of the same strength as that of an aggressor will invite attack from the immature, competitive, and jealous aggressor. It is necessary for a country to be strong, and to have the aggressor know that it is strong and will use its strength, if it wants to be left alone to live in peace. It must appear to the aggressor that it would be foolhardy to try to exploit the country.

In the case of the United States coping with the Communists, there seems to be no longer any danger that they could overwhelm us without being destroyed, too—if we maintain our superiority. We could lose our superiority, however, because of corruption and collapse within our country. If this country continues with its pathological cultural trends, condoning lack of discipline, dependency, laziness, moral decline, corruption, inadequate law enforcement, rioting, catering to the wealthy, unjustified labor strikes, bureaucracy, Socialism, and the stifling of people's opportunities for the utilization of their potentials in the search for security, there could, in fact, be internal weakening and collapse of the country. Whether or not the future generations of Communists might try to beat us in a war will depend upon our maturity, wisdom, and physical strength, and their maturity and wisdom. Had they believed that they could have conquered us without significant losses themselves, they, as aggressors, most probably would have tried to have done so by this time. We now have to repel their every aggressive action, all the while making ourselves overpoweringly

stronger than they. We must surpass them not only militarily, but also with our maturity and wisdom, our arts and sciences, our government and way of life, and in all other areas, including space exploration. It is not that we should seek to advance ourselves based on comparing ourselves with them, but rather to realize our potentials to the limit so that we can safeguard our existence and the existence of all other free peoples as dignified human beings. So long as they want to make us slaves we have to oppose them in every respect, no matter what they say or do to try to distract us, as in the way of proposing troop withdrawals and truce talks. We believe they are wrong in what they are doing, and we have to admit that we are really at war with all Communists. However, we do not want to fight an all-out war. Our strength should discourage them from attempting to fulfill their neurotic ambitions at this time. We have to believe, and let the Communists know, that we are not afraid of war, even nuclear war, and that we will fight to our deaths to preserve our way of life. We should not be intimidated by them. Only those people who are emotionally immature and insecure would say: "Better Red than dead."

Although I have had the privilege of sitting for many years on the Senate Armed Services Committee, I do not consider myself a defense expert, and least of all an expert on such a highly technical weapon system as Safeguard. But I do have some long-term familiarity with that particular program and I have had the opportunity to participate with my colleagues on the committee in their deliberations on a number of annual Defense authorization bills. On the basis of that experience and in consideration of the additional points of view brought out during the current debate, it is my judgment that the weight of the evidence clearly favors the deployment of the Safeguard system at this time.

In reaching this judgment I have weighed to the best of my ability all of the arguments pro and con on each of the major questions involved in this controversy.

First. Could the Soviets by the mid-1970's acquire a capability sufficient to endanger our strategic deterrent? The weight of the evidence clearly indicates that they could—if they continue on their present course and we take no further action now to increase our presently planned strategic offensive forces or to improve their survivability. There is general agreement that the Soviets could by the mid-1970's acquire a force of SS-9 ICBM's and submarine-launched missiles large enough virtually to destroy our entire land-based missile and manned bomber forces in a surprise attack.

Some have argued that our Polaris/Poseidon forces alone would be a sufficient deterrent. They point out that the 31 planned Poseidon submarines carrying 16 missiles each with 10 warheads per missile represents a force of almost 5,000 warheads. But they neglect to point out that only somewhat more than half of these submarines would be on a station at any one time, that not all of the warheads could be expected to reach their targets, and that the Poseidon warheads are very small as these things are measured.

But most important of all they overlook the point that it would be the height of

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folly, considering what is at stake, to depend for our deterrent upon only one of the three major elements of our strategic offensive forces, no matter how invulnerable it may appear to be today. We have witnessed major technological surprises in the past and common prudence would dictate that we must do everything possible to hedge against them in the future.

Second, Will the Soviets continue on their present course? I am convinced that no one knows the answer to this question, but until we have evidence to the contrary we must assume that they will. The survival of not only our own Nation but that of the entire free world depends upon our clear and continued ability to deter a Soviet nuclear surprise attack upon ourselves and our allies. In this area of the defense program there is absolutely no room for error; all doubts must be resolved in favor of the continued adequacy of our deterrent. That is another reason why I would consider it foolish to rely for our deterrent on only our Polaris/Poseidon forces, or on any other single element of our strategic offensive forces. I really cannot see how any prudent person can disagree with that basic principle.

Third, Would the deployment of the Safeguard system offer the best choice in insuring the continued survival of that minimum force required for deterrence. Let me acknowledge at the outset that there are other ways to achieve that objective, but none of them in my judgment would serve our purpose as well. It has been suggested, for example, that we increase the size of our strategic offensive forces—deploy more Minuteman or build more ballistic missile submarines. This course, I believe, would be highly provocative and undesirable at this particular time. It would inevitably stimulate the strategic arms race. Although we know full well that our strategic nuclear war policy is irrevocably based on deterrence, the Soviet planners, just as our own, must always consider capabilities and not just declared intentions. If we were to add to our strategic offensive forces at this time we would, in effect, be increasing our first-strike capabilities.

In contrast, the deployment of the Safeguard system would add absolutely nothing to those capabilities. I am sure that every Member of this body is aware that the Spartan and Sprint missiles are suitable for defense only and cannot be launched against the Soviet Union; and I am sure the Soviet planners know that, too. So there is a very great difference between the deployment of a defensive system such as Safeguard and the deployment of additional offensive weapons such as Minuteman missiles or ballistic missile submarines.

It has also been suggested that we move our land-based missiles into harder silos, instead of protecting them with ABM's. The Defense Department has already undertaken the development of such silos, but there are distinct physical limits to hardening. Furthermore, with continuing improvements in the accuracy of Soviet offensive missiles even these silos could become vulnerable to large warheads. Thus, it may become neces-

sary both to super harden and to defend those missile silos if we want to maintain a survivable land-based missile capability in the future. And, if we wish to maintain a survivable manned bomber capability, it may also be necessary to disperse further our alert bomber forces and defend them with ABM's against a surprise attack by Soviet ballistic missile submarines.

Fourth, Will the Safeguard system work? This is perhaps the most controversial aspect of the Safeguard proposal. The experts themselves appear to be divided on this question. But it seems to me, on balance, that the weight of the evidence favors the conclusion that the Safeguard system will work well enough for the purposes intended. The Defense Department has been working on ABM defense for almost 15 years. A vast amount of knowledge and experience has been acquired. The major components of the system have been developed to a point where their characteristics and capabilities are well understood. Moreover, the objective here is to insure that a sufficient portion of our strategic retaliatory forces survive to enable us to strike a decisive retaliatory blow even after absorbing a Soviet surprise attack. The Safeguard system can achieve this objective even if it works at less than 100-percent effectiveness.

It has been suggested that the Soviets could overcome the presently planned Safeguard deployment by increasing the number of their offensive missiles. This is undoubtedly true, but if the Soviets choose to run this race we have no alternative but to run it with them—if we are determined to maintain our strategic deterrent in the future. Admittedly, it is becoming more and more difficult to maintain it, but this does not mean we must throw up our hands in despair. We have succeeded in deterring a Soviet nuclear attack thus far, and with proper foresight and firm determination we can continue to do so.

Fifth, Will the deployment of Safeguard endanger the forthcoming talks with the Soviets on the limitation of strategic armaments? I can find no evidence that it would. The Soviets have already deployed an ABM system around Moscow and certainly that is no impediment to us. The Soviet leaders themselves make a clear distinction between offensive and defensive systems. They do not consider their ABM system a threat to us, and from what they have said I would conclude that they would not consider our deployment of Safeguard a threat to them. Furthermore, the figures published by the Defense Department clearly show that the deployment of a thin ABM defense, whether Sentinel or Safeguard, would reduce our fatalities from an all-out Soviet attack by only about 10 to 20 percent—from 110 to 120 million to 100 million. Therefore, their deterrent would be clearly unaffected by our decision to deploy Safeguard.

Mr. President, I have touched upon only the major issues related to the Soviet threat to our strategic offensive forces. There are two other purposes for which Safeguard is proposed—defense of

our people against the potential Chinese Communist ICBM threat and defense against an accidental launch from any source. President Nixon has just recently reassured our Asian friends and allies that the United States will protect them against nuclear aggression. I submit that his hand would be greatly strengthened in this regard by the deployment of Safeguard. He would then be in a position to make good on his promise without risking the destruction of American cities once the Chinese Communists have achieved an ICBM capability. Repeated analyses by the Defense Department over the last few years have clearly established the fact that a thin ABM defense over the entire Nation could provide a very high level of protection for our population against the kind of ICBM threat Communist China is expected to be able to mount in the 1970's. And this same system could protect us against an accidental launch from any source.

For all of these reasons, the deployment of Safeguard should be started now. The program proposed by President Nixon is quite reasonable. Instead of the \$1.8 billion requested in the January budget, he is asking for less than \$800 million. And of that amount, more than half is for research and development, which I understand has the support of most of the Members of this body.

So what is at issue here is less than \$400 million, most of which is for procurement. And may I remind the Senate that the production program has already been started with the approval of the Congress last year. If we fail to approve additional funds for this purpose now, the ongoing production program will have to be terminated, entailing the loss of several hundred million dollars and a delay in deployment of at least 2 years. It seems to me that it would be far more prudent and sensible at this particular stage to make the additional investment of less than \$400 million and keep the program going for another year. By that time we should be in a much better position to evaluate the prospects for an agreement with the Soviet Union on the limitation of strategic armaments, as well as the potential Chinese ICBM threat.

Mr. President, I ask unanimous consent to have printed in the RECORD as a part of my remarks a convincing article entitled "ABM and the Liberals," written by Stewart Alsop which appears in the issue of Newsweek bearing a future date, namely, August 11, 1969.

There being no objection, the article was ordered to be printed in the RECORD, as follows:

ABM AND THE LIBERALS
(By Stewart Alsop)

WASHINGTON.—During the long debate on the ABM, it became more and more obvious that the anti-ABM senators and their allies in the liberal-intellectual community were not really attacking a weapons system—they were attacking a symbol. It also became more and more obvious that they had chosen the wrong symbol.

The attack on the ABM was basically a way of expressing the furles and frustrations generated by the war in Vietnam. But the ABM was in several ways a very bad symbol of what the liberals wanted to attack. As a

result, they were forced to take positions which were both illogical and illiberal.

The liberals' first line of attack was that the system wouldn't work; and that even if it did, there was no need for it, because the Russians could not build the kind of offensive missile force which could really threaten our Minuteman retaliatory force. Neither senators, nor columnists, nor scientists from wholly different fields who like to see their names in the papers are capable of discussing certain complex technical subjects intelligently. But even in this arcane field, common sense is still useful, and in recent weeks two leading scientists made remarks to this reporter which sounded like common sense.

Some time before Neil Armstrong and Edwin Aldrin performed their moon-walking miracle, Dr. John Foster, chief Defense Department scientist, remarked that "of course, ABM is a much easier proposition, technically, than the moonshot." Surely this is common sense. Surely if we can put men on the moon we can build a workable missile defense.

COMMONSENSE

Dr. Albert Wohlstetter, a widely respected specialist in the nuclear-strategic field, made the other common sensible remark. When the ABM opponents say the Russians won't be able to build the kind of missile force which could knock out our Minuteman complex in a first strike, Dr. Wohlstetter remarked, they are assuming that the Russians several years from now won't be able to do what we know how to do right now. This, he added sensibly, is not a safe assumption to make.

The liberals' second line of attack has been that the ABM is just another expensive boondoggle of the "military-industrial complex." This line was best expressed by Tom Wicker, able columnist for the anti-ABM New York Times. The ABM, Wicker wrote, is an example of the "unlimited military expenditure in the quest of security," which has led the military to demand "more and more weapons . . . and more and more money to support them."

The notion that more and more money has been spent for more and more strategic weapons is an article of faith among the anti-ABM liberals. But it just doesn't happen to be true. In fact, as Dr. Wohlstetter points out, we are actually, allowing for inflation, spending about half as much for strategic forces now as we were in General Eisenhower's last year as President—\$13.6 billion in 1959, as against an estimated \$8 billion for 1970. The money has gone, not into more and more strategic weapons, but into the war.

ABM A RESPONSE

The liberals' third line of attack is that the ABM is aggressively "escalatory." This has been a hard line to maintain, simply because the wholly defensive ABM system could not hurt a single hair of a single Russian head. As Russian Premier Kosygin has said, such defensive weapons "are not the cause of the arms race." The ABM is, of course, a response to the rapidly growing (offensive) force of multi-megaton, multi-targeted Soviet S-99 missiles. The people who have really been spending "more and more money" for strategic weapons are the Russians. On this point the "intelligence community" is in a rare state of unanimity.

The last, and oddest, liberal line has been that the best response to the Russian offensive missiles is not defensive missiles but more American offensive missiles. If it turns out that the SS-9s are a real threat to the Minutemen, then build more Minutemen. And if nuclear war threatens, then all we have to do is "empty the holes"—fire our missiles before the Soviet missiles could knock them out. Thus have the liberals become rather surprisingly, advocates of the "massive retaliation" theory of the late John Foster Dulles.

The trouble with the theory that it would give a future President no choice between capitulation and a nuclear war which, according to the best estimates, would kill about a quarter of a billion Americans and Russians. The whole point of the ABM project is not simply to maintain what Winston Churchill called "the balance of mutual terror," but also to give a future President what John Kennedy called "a choice between Armageddon and surrender."

Obviously, there would be no choice if our cities were attacked. But the SS-9s are designed to hit the Minuteman complex, not the cities. The simple existence of a missile defense would make a "counterforce attack" on the Minuteman complex far less likely. If it came, a future President could choose to ride it out, in the knowledge that he retained the bargaining power inherent in a surviving retaliatory force.

THE ERRING GENERALS

Surely it is rather odd that the liberals should wish to deny this option to a future President. The main reason is that many liberals simply want a stick—any stick—with which to beat the "military-industrial complex."

Undoubtedly, the attitude of Congress, and of recent Presidents too, has been much too reverent toward the military. Almost all generals, as this reporter pointed out before it became fashionable to do so, are almost always wrong about all wars. This is so not because generals are bad people (most of them are able and honorable men) but because the process of getting to be a general endows a man with a built-in bias about wars. There has been no war in recent history about which almost all American generals have been wronger than the war in Vietnam.

Moreover, almost all generals are wasteful, and no generals are more wasteful than American generals, partly because America is rich. But the main reason generals are wasteful is that wars are wasteful. The worst of war's waste is in human lives, of course, for in all wars young men, who have done nothing to deserve death, die.

A war which is not won is intolerably wasteful. This explains the passion which has gone into the attack on the ABM, for it is essentially a protest against a tragic, unwon war. But it is simply not logical to protest against the war, and the generals who were wrong about it, by attacking the ABM. It is not logical to protest the loss of some 37,000 American lives by denying to a future President the option he may desperately need if he is to have a chance of saving 250 million lives. It is not liberal either.

Mr. FULBRIGHT. Mr. President, will the Senator yield for a question on his first remark?

Mr. ERVIN. I do not have any time to yield. The Senator from Arkansas might get time from the other side.

Mr. FULBRIGHT. I would like to make an observation on the Senator's first comment.

Mr. STENNIS. Mr. President, we are going to reach a point, if I may respond, where those who wish to interrogate speakers will have to get time from their own side.

I am glad to yield 2 minutes to the Senator from North Carolina, if he so desires.

Mr. FULBRIGHT. If the Senator will just yield for an observation or perhaps a question.

Mr. STENNIS. Mr. President, I yield 2 minutes to the Senator from North Carolina, if he so desires.

Mr. ERVIN. Yes, Mr. President, I yield to the Senator from Arkansas.

The PRESIDING OFFICER. The Senator from North Carolina is recognized for 2 minutes.

Mr. FULBRIGHT. The question raised by the Senator is what constitutes the strength of the United States. That is the question at issue. The Senator assumes that the only criterion of strength in the community is the number of weapons it owns. The point that those of us who oppose the ABM system make is that when we look at the difficulties this country is now experiencing, all the way from city riots, reflected even in our own Capital City recently, and in all the major cities nearby, as well as student riots, crime in the streets, and so forth, we are saying that to expend over \$1,000 billion on weapons is weakening this country and is much more likely to make it subject to domination either by Fascist or Communist countries—

Mr. ERVIN. I believe the Senator from Arkansas is making a speech on my 2 minutes.

Mr. FULBRIGHT. Does not the Senator agree that just armaments alone are not the only criterion which makes our country strong?

Mr. ERVIN. Yes, it requires men who have the will to protect liberty as well as armaments to protect this country in the dangerous world in which we live at this moment. I am not willing to jeopardize the safety of my country by voting against the deployment of a defensive weapons system which is designed merely to save from destruction the retaliatory power of our Minuteman missiles.

Mr. President, I yield the floor.

Mr. FULBRIGHT. If the Senator will yield me 1 further minute—

Mr. HART. Mr. President, I yield 1 minute to the Senator from Arkansas.

The PRESIDING OFFICER. The Senator from Arkansas is recognized for 1 minute.

Mr. FULBRIGHT. Mr. President, I still submit that the Senator is basing his comments on the assumption that the only source of strength and certainly the prime area of the concept of strength and security lies in armaments.

I say that armaments are only one aspect of it. I am not sure, under present conditions, that it is the most important one, because on the best authorities we have, we know that the strength of Russia and the strength of the United States where armaments are concerned is that each have enough to destroy the other more than once—in fact, anywhere up to 10 times over.

I say that the strength we now lack is in the unity of our people. What we need now is to reconcile the young people of this country, the city people of this country, and the rural people of this country, to the idea of returning the United States to what it used to be under more normal conditions.

The PRESIDING OFFICER. The time of the Senator from Arkansas has expired.

Mr. ERVIN. Mr. President, will the Senator from Mississippi yield me 30 seconds?

Mr. STENNIS. Mr. President, I yield 1 minute to the Senator from North Carolina.

The PRESIDING OFFICER. The Senator from North Carolina is recognized for 1 minute.

Mr. ERVIN. Two things are required to protect this Nation's liberty in this precarious world.

First, a people who are willing to keep their hearts in courage and patience and lift up their hands in strength.

Second, the weapons necessary to enable them to do these things.

It is the supreme duty of the Congress to make such weapons available to our country.

Mr. SYMINGTON. Mr. President, will the Senator from Michigan yield me time?

Mr. HART. Mr. President, I yield 3 minutes to the Senator from Missouri.

The PRESIDING OFFICER. The Senator from Missouri is recognized for 3 minutes.

Mr. SYMINGTON. Mr. President, later on I shall make a short statement about what I believe is a mistake from the standpoint of national security; namely, deployment now of this Safeguard system. I am sorry the distinguished and able Senator from Georgia has left the Chamber as I would comment briefly on what he said about a previous decision.

It was in 1949 that, to the surprise of many people, the Soviets exploded their first nuclear weapon. It was a mission of the Air Force at that time to watch the air and winds therefore we are the first to know of it.

The question of how far we went with a hydrogen bomb was a political decision largely, not a military decision.

What worries me is the emphasis by ABM proponents about the vast technological capacity of the United States, which no one could deny, as a reason for going ahead with the system.

They talk about the glorious achievements of Apollo 11, which are so true; but I would hope they would go to a Cape Kennedy launching pad and see the type and character of effort being made there by our foremost scientists and engineers in order to accomplish one particular mission at a planned time and over a long period of weeks.

If they would do that, I doubt they would compare such a superb accomplishment with what might happen, all over the United States on an afternoon, comparable to December 7, 1941, no advance notice, with all these holes in the ground manned by sergeants, corporals, enlisted men, and junior officers.

The PRESIDING OFFICER. The time of the Senator has expired.

Mr. HART. Mr. President, I yield 2 additional minutes to the Senator from Missouri.

The PRESIDING OFFICER. The Senator from Missouri is recognized for 2 minutes.

Mr. SYMINGTON. Everything would have to work adequately so as to succeed in defending the country.

I have studied, to the best of my ability, the tremendous complexity of this system. We know one of the radars has never been built, and that the software to go into the computer has not yet entered the computer because it is admitted to

be the most complicated computer in the history of mankind.

I would ask those who bring up the technological achievement argument to consider that we have no better laboratories than our automobile laboratories where they project new automobiles in the laboratory which are, in essence, perfect. But there have been major campaigns waged against these same automobile companies because of inadequacies in actual operation, a very small percentage of the fine cars put out.

I think this is comparable to the problem of hundreds of missiles which would have to operate suddenly, and there can be no such percentage of failure.

The PRESIDING OFFICER. Who yields time?

Mr. HART. Mr. President, I suggest the absence of a quorum, with the time to be divided equally on both sides.

The PRESIDING OFFICER. Is there objection? The Chair hears none, and it is so ordered.

The clerk will call the roll.

The bill clerk proceeded to call the roll.

Mr. HART. Mr. President, I ask unanimous consent that the order for the quorum call be rescinded.

The PRESIDING OFFICER. Without objection, it is so ordered.

Mr. HART. Mr. President, I yield 20 minutes to the able Senator from Massachusetts (Mr. BROOKE).

The PRESIDING OFFICER. The Senator from Massachusetts is recognized for 20 minutes.

THE ABM DECISION—DEADLOCK OR ACCOMMODATION?

Mr. BROOKE. Mr. President, the conclusion of this vital debate approaches. All of us sense that the decision before us is a momentous one, and the prolonged discussion of this matter is fully justified by the significance of the issue. Many Members have offered their analyses and advice on this question, and I do not presume to review all aspects of the subject at this late date. Rather, I propose to touch on only a few of the more critical features of the decision we face.

After much study, the conclusion to which I have been drawn is firm. I do not believe that the United States should commit itself to deployment of an antiballistic-missile system at this time.

This conclusion is based on a broad range of considerations. In my judgment, additional work should be done on the proposed Safeguard technology before any commitment to deploy a system is made. But the more important factors are not technical or economic. The fundamental issue posed by Safeguard concerns the future course of the arms race, with all that implies for the security and well-being of both ourselves and the Soviet Union.

Before going forward with deployment of such technology, we should first explore the many dimensions of strategic weaponry in the proposed strategic arms limitation talks. The central question for those negotiations is clear: Are the United States and the Soviet Union prepared to recognize the requirements of

mutual deterrence? Are they prepared to acknowledge and act upon the premise that neither side can engage in strategic deployments which jeopardize the capacity of the other to retaliate?

If agreement can be achieved on this fundamental principle of security in the nuclear age, there should be real possibilities for specific arrangements to stabilize the balance of forces between the two great powers. If there is no such agreement, I think we will enter the most dangerous competition in arms in the history of mankind. This is especially true with regard to the developing capability of both countries to deploy multiple warhead missiles capable of striking more than one target.

To President Nixon's great credit, his revision of the former Sentinel ABM proposal was based on a recognition of the realities and the requirements of mutual deterrence. In his March statement he stressed his awareness of the risks of provocative innovations in the strategic forces, and specifically rejected the options of deploying either a heavy city defense or more offensive weapons. Either action might appear to the Soviet Union as a threat to its retaliatory capacity.

No previous President has made so explicit a formulation of mutual deterrence as the pillar of American policy. If he acts consistently on this basis, and if the Soviets are prepared to do likewise, Mr. Nixon will have an unparalleled opportunity to curb the arms race and to negotiate a reasonable strategic arms agreement with the Soviet Union.

The long debate on ABM has left no doubt that such an agreement is the preferred objective of the vast majority of Senators and citizens. There are other points of consensus, too, which stand out in sharp relief to the division and controversy surrounding this issue.

There is consensus that the United States should continue intensive research and development on ABM systems, for possible use either in the event of mutual agreement to deploy such weapons or in the event of failure to reach any agreement on reducing the impending threat to our retaliatory forces. Such studious critics of Safeguard as Hans Bethe and Wolfgang Panofsky have made a point generally accepted in the technical community: Hard-point defense appears technically feasible and in principle could be a sensible response to a Soviet deployment of accurate MIRV's capable of attacking our Minuteman force. So there is no disagreement over the desirability of continuing a vigorous program to perfect such technology.

As a measure of this consensus, there is widespread willingness in the Senate to authorize for research, development, and testing the full amount requested by the administration for fiscal 1970, including those moneys requested to start deployment of the Safeguard weapons system. The central disagreement concerns the question of committing the United States now, in the immediate prelude to the expected SALT talks, to deploy this ABM system.

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It is a common tendency in a hard-fought debate to lose sight of the qualifications and reservations attached to arguments and to treat judgments as more conclusive than they are in fact. The debate over the Safeguard system is no exception. My own examination of the technological pros and cons, drawing on a broad variety of technical opinion, has led me to a decidedly mixed verdict.

The technology involved has been very extensively studied. I believe the system is probably better than its harshest critics are willing to acknowledge, but not demonstrably good enough to justify a commitment to deploy. Most of the first-blush criticisms, such as its capacity to handle the blackout problem, have been thoroughly analyzed and it appears that they have been adequately resolved in theory. But it is admitted by all that major technical uncertainties remain to be resolved.

Three such uncertainties stand out: First, are the radars so vulnerable that the system can easily be defeated? Second, can the computers and their immensely complicated software be made to perform to the necessary standards? Third, can the many components be successfully integrated into a working, reliable system?

It is alleged that smaller, harder, cheaper, and more numerous radars would be preferable for the hard-point mission. But there are obvious difficulties in obtaining the desired performance from such simplified radars, and it is certain that it would be some time before such technology could be brought from the concept stage to working hardware.

The large, relatively soft, high-capacity radars proposed for Safeguard are closer to readiness than the alternatives being suggested, but that is of little value if they can be easily destroyed.

Whether their admitted softness to blast effects is a crucial vulnerability depends on whether they can be effectively defended, since even very large warheads would have to penetrate to fairly close ranges of a few miles to deliver such destructive overpressures. The survivability of the radars could be greatly enhanced, albeit at major costs, if additional radars are deployed beyond those now proposed. Redundant radars would permit the system to employ the so-called preferential mode of defense, protecting only certain radars while an attacking force would have to target all missile site radars. Speaking in general and on the assumption that the system worked as planned, preferential defense could be a large advantage to the system and could economize defensive missiles in roughly a 1-to-4 ratio to the offense. On balance, the vulnerability of the radars must be recognized as a very serious problem, although one which may be soluble.

The second major area of technological uncertainty, the computers and their programming, can also not be resolved definitively at this time. The task of perfecting these components is a demanding one, although systems approaching the scale of the Safeguard computers have been produced and are functioning.

The computer-software problem merges into the overall question of whether the myriad components can be assembled into a system that meets the incredibly great demands imposed on any ABM, even one designed exclusively for hard-point defense. No amount of paper analysis can resolve this question. It is, I submit, the essence of the technological doubts which have been raised by the Safeguard scheme. Moreover, it is the issue which will plague any ABM system.

All of these problems argue that, if the Safeguard system or a variant thereof is to be deployed at some time, the first order of business is a large-scale test and evaluation to determine the operational feasibility of such a system.

But the basic dilemmas affecting our decision are not really technological; they are political and strategic. The Senate and the House, in conjunction with the President, must weigh the various risks to our national security and determine the most prudent course. In this evaluation, military and technical estimates mingle with guesses and instincts about Soviet intentions, about the nature and feasibility of arms control negotiations, and about the impact on those negotiations of the decision we are about to make.

Will a decision to deploy Safeguard be a boon to the SALT talks, by demonstrating support for the President and a determination to protect our deterrent in case those talks fail? Or will such a decision prove a detriment to the negotiations, injecting an additional element of threat into an already tense situation? The President based his recommendation, one surmises, largely on the view that proceeding with ABM at this time would both encourage the Soviet Union to negotiate in earnest and provide a valuable fallback capability in case the talks should fail to produce results.

On this matter judgments can and do differ. I consider it arguable whether the Safeguard system would in fact induce the Soviets to negotiate more expeditiously. Whether it does depends heavily on unknown and largely unpredictable psychological factors in the Soviet leadership, as well as on the balance of contending forces within the Moscow hierarchy. To some Soviets the U.S. decision to proceed with ABM and other weapons may seem a valid reason for urgent diplomacy; to others it may be cited as a challenge to be met and a cause for delaying genuine negotiations.

On the record of Soviet attitudes toward defensive systems, it seems even more probable that U.S. deployment of an ABM, particularly a thin capability intentionally designed to leave American cities hostage to Soviet retaliation, would be a matter of relative indifference. However, the President obviously considers the proposal an important ingredient in his approach to the SALT talks, and his judgment deserves careful consideration in our assessment.

To be skeptical of the positive value of ABM as an incentive to negotiations is not to conclude that a defeat for the President on this issue is likely to promote fruitful discussions. Indeed, it

would be my view that either a rejection or an acceptance of the administration's proposal by a narrow margin could weaken the country's negotiating posture in the SALT talks.

Deep domestic division on matters at the heart of a diplomatic venture has never been an asset to the United States or any other democracy. It could well be that such evident cleavages in our body politic would tempt the Soviets to try to exploit the President's political vulnerability on this score by various maneuvers in the SALT talks.

The result could be diplomatic stalemate, on issues which must be promptly addressed with a minimum of propaganda, if we are to turn down the arms race and find a more secure basis for our strategic relationships.

It is this line of reasoning which our revered senior colleague from Vermont, Senator ARKEN, expressed so directly and vividly in his remarks some days ago. This Nation has a large interest in avoiding a razor-thin decision on such paramount questions. That is why I feel confident that Senator ARKEN captured the sentiment of both the Senate and the Nation in urging the President to modify his proposal. It is abundantly clear that there will be no consensus on the present recommendation. At this stage, while the outcome in the Senate is somewhat uncertain, we all know that there will not be a large majority, if indeed there is any majority at all, for deployment of Safeguard.

Our vote later today on the Cooper-Hart amendment will leave no doubt as to the opposition in this body to an immediate decision on deployment of the Safeguard system. I had hoped that prior to reaching this confrontation the administration would recognize the facts of the situation and seek a reasonable arrangement to defer that decision. It has failed to do so, despite numerous overtures from those opposed to deployment.

I am confident that the vote on this amendment will make its point with historic force: the President cannot proceed on the course he has proposed without adequate support in the Senate. Whatever the outcome of today's vote there will remain an urgent need to build a consensus on national policy concerning the ABM. So, in casting our vote today, all of us should be looking to this larger task.

In looking beyond this vote, our esteemed colleague from New Hampshire has already sketched out the essential elements of a reasonable accommodation. He has made clear that, whether the present amendment passes or fails, he intends to offer his proposal later this week.

Senator MCINTIRE'S amendment would explicitly reserve to the Congress for later decision a commitment to deploy an ABM weapons system. It would specifically foreclose, pending later action, the installation of any operational missiles and the acquisition of any sites for deployment of such a system. Thus this plan would satisfy the central political point of concern to those of us who wish to defer any such decision. But at the same time this proposal would permit

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a start on testing and evaluation of the radars, computers, and associated electronics. It would authorize such testing at sites which could, if the progress of the technology and the evolution of international relations warrant, later become operational. Thus, it would meet the stated objective of the President to preserve the option of early deployment of an ABM defense for a portion of the Minuteman force.

I find much to commend this suggestion. The Soviet Union follows the debates in this Nation. They would scarcely fail to comprehend the measure of restraint shown by such a moderate decision in the Senate. And it should be especially evident to Moscow that further decisions on actual deployment of an ABM system will hinge directly on the results of the SALT talks. If any decision on this matter is likely to influence the Soviets favorably in the SALT talks, I would judge this combination of prudent preparation for possible deployment and obvious restraint short of immediate deployment would be most likely to do so.

Furthermore, by deferring any decision to deploy, but permitting test and evaluation of the electronic heart of the proposed system, the most critical technological questions may be worked out. If they are resolved satisfactorily, if the radars, computers, software, and other elements can be integrated effectively, our subsequent decisions can be made with higher confidence. If, in the meantime, improved radar technology and possibly smaller, less expensive missiles can be perfected, it may be possible to employ them. In any event, the overriding systems question, the issue applicable to any ABM system—namely, can such elements be put together in a working system—can be addressed in a more realistic way.

Shaking down and testing the technology now closest to operational status should significantly improve our capacity to pursue the next generation of such technology, if need be. I must say that I have always been troubled by the argument of those who answer the proponents of Safeguard by asserting that, first, the system will not work and, second, we will not let you prove whether or not it will work. Judgments vary on the workability of this system, and it behooves us neither to commit to its deployment, nor to constrain efforts to test it out short of actual deployment.

It is this kind of accommodation to which I believe the majority of the Senate is groping.

The remarkable leadership shown by Senator COOPER and Senator HART, who have been in the forefront of this effort for over a year, has paved the way for a sensible resolution of this matter. All Americans are in their debt. In advancing their amendment they have provided a clear focus for those of us who oppose a commitment to deploy an ABM at present. If an accommodation is eventually reached, their efforts will be largely responsible. If it is not possible to do so, the vote for their amendment, which I and many others will cast, will constitute the closest thing to a vote of no confidence

on an issue of national security in recent American history, probably since the Senate's rejection of the League of Nations' Covenant.

That is an outcome devoutly to be avoided, if possible.

The PRESIDING OFFICER. The time of the Senator has expired.

Mr. BROOKE. Mr. President, I ask for 5 additional minutes.

Mr. HART. Mr. President, I yield 5 additional minutes to the Senator from Massachusetts.

The PRESIDING OFFICER. The Senator from Massachusetts is recognized for 5 additional minutes.

Mr. BROOKE. Mr. President, a hazard in any debate of great moment is that issues of wisdom become transformed into matters of fundamental principle. We face today not a question of principle, but a complex matter of judgment. We are united on the central issues of principle. We are agreed that the security of the United States must be preserved. We are agreed that arms control negotiations with the Soviet Union should be pursued. We recognize that the ABM issue, as a major element in the thermonuclear balance, touches the peace and well-being not only of Americans but of all men on earth.

The Senate, then, must resolve this issue not in terms of some ideological commitment or aversion to the ABM, but in light of how best to serve the overriding concerns we all share in this realm.

The lesson of the last year's great debate on the ABM is, I believe, a decisive one. It is that Congress is beginning once more to recognize its responsibility and to assert its authority on the crucial questions of peace and security. The intense debate over the city-oriented Sentinel defense has already accomplished much of its purpose. The profound concerns which that proposal raised in this body and in the Nation undoubtedly contributed to its revision. It is already apparent that military systems can be changed or dropped, that Congress and the people can exert effective influence in these matters.

That seems a modest enough accomplishment for a system of self-government. But where questions are so inherently complex, where issues are so technical and information so shrouded in secrecy and uncertainty, it is no trivial feat for the Senate to perform as it has in developing the policy implications of ABM. The decision is still in doubt, but I believe the Nation has been well served by the manner in which the Senate has approached it. I hope that the Nation and the world will continue to be well served by the way in which we resolve it.

Mr. COOPER. Mr. President, will the Senator yield 1 minute?

Mr. HART. Mr. President, I yield 1 minute to the Senator from Kentucky.

The PRESIDING OFFICER. The Senator from Kentucky is recognized for 1 minute.

Mr. COOPER. Mr. President, as always the Senator has made a very reasoned and balanced speech on the issue. There is much more that I could say if time

would permit it, because of the efforts of the Senator in this field, particularly relating to MIRV.

The Senator has stated the chief point correctly. It is a question of Congress recognizing its responsibility and asserting its authority on the crucial questions of peace and security, and the fact that we should resolve this issue not in terms of some ideological commitment, but in light of how best to serve our overriding concerns at this time.

Mr. BROOKE. I thank the Senator from Kentucky.

The PRESIDING OFFICER. Who yields time?

Mr. STENNIS. Mr. President, I ask unanimous consent that the time consumed in a quorum call be divided equally between both sides, and I suggest the absence of a quorum.

The PRESIDING OFFICER. Is there objection? The Chair hears none, and it is so ordered.

The clerk will call the roll.

The assistant legislative clerk proceeded to call the roll.

Mr. MANSFIELD. Mr. President, I ask unanimous consent that the order for the quorum call be rescinded.

The PRESIDING OFFICER (Mr. McGovern in the chair). Without objection, it is so ordered.

UNANIMOUS-CONSENT REQUEST

Mr. MANSFIELD. Mr. President, with the concurrence of the distinguished minority leader; the manager of the bill, the distinguished Senator from Mississippi; the authors of the pending amendment, the Senator from Kentucky (Mr. COOPER) and the Senator from Michigan (Mr. HART); and the distinguished senior Senator from Maine (Mrs. SMITH)—and I believe I speak with their full concurrence when I make the following unanimous-consent request—I ask unanimous consent that at 2 o'clock the amendment submitted by the distinguished senior Senator from Maine (Mrs. SMITH) to the amendment be laid before the Senate and made the pending business; that there be a time limitation of not to exceed 1 hour, the vote on the amendment to occur at 3 o'clock; and that the time between 2 o'clock and 3 o'clock be equally divided between the distinguished senior Senator from Maine (Mrs. SMITH) and the distinguished senior Senator from Mississippi (Mr. STENNIS).

The PRESIDING OFFICER. Is there objection?

Mr. FULBRIGHT. Mr. President, reserving the right to object, on an amendment to the Cooper-Hart amendment, does not the Senator from Kentucky (Mr. COOPER) control the time? I raise this point as a question.

Mr. MANSFIELD. That can be worked out.

Mr. STENNIS. Mr. President, reserving the right to object—and I shall not object—perhaps the distinguished majority leader could make a statement in explanation as to where that would leave the Senate after the Smith amendment is voted on, if it is not agreed to.

Mr. MANSFIELD. Mr. President, will the Senator yield?

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Mr. STENNIS. I yield.

Mr. MANSFIELD. Mr. President, we would allow a little leeway, if necessary, to put in a quorum call to make sure the great majority of Members are in the Chamber around 3 o'clock when the Smith amendment would be disposed of. Then, the time taken out of the original agreement up to 1 hour would be used subsequent to the debate on the Smith amendment, before voting on the Cooper-Hart amendment.

Mr. STENNIS. Mr. President, approaching the matter the other way, whatever time each side has remained on the Cooper-Hart amendment when the Senator from Maine starts making her presentation on her amendment, would be remaining and available for use after the Smith amendment is disposed of, provided it is not agreed to.

Mr. MANSFIELD. The Senator has stated the situation far better than I could, and that is the way it would be.

Mr. PASTORE. Mr. President, reserving the right to object, I wish to inquire how much time is remaining on the Cooper-Hart amendment.

Mr. MANSFIELD. Roughly, 1 hour and 45 minutes.

Mr. HART. No.

Mr. PASTORE. Mr. President, once the hour is taken out for the Smith amendment, how much time will be allowed for the Cooper-Hart amendment?

Mr. MANSFIELD. One hour.

Mr. PASTORE. What is the remaining time? That is my question.

Mr. HART. Mr. President, may I inquire how much time remains on the pending amendment?

The PRESIDING OFFICER. The time remaining is from now to approximately 4 minutes after 3.

Mr. FULBRIGHT. How is the time divided?

Mr. STENNIS. Mr. President, may I inquire how much time is remaining on the Cooper-Hart amendment for the proponents of the amendment?

The PRESIDING OFFICER. The proponents have 44 minutes remaining.

Mr. STENNIS. Mr. President, how much time is remaining for those who oppose the Cooper-Hart amendment?

The PRESIDING OFFICER. The opponents have 62 minutes remaining.

Mr. STENNIS. Mr. President, a further parliamentary inquiry.

The PRESIDING OFFICER. The Senator will state it.

Mr. STENNIS. Mr. President, if we continue the debate, these figures would change according to how each side would make use of their time between now and 2 o'clock. Is that correct?

The PRESIDING OFFICER. The Senator is correct. The time remaining after 3 o'clock would depend on how each side uses its time between now and 2 o'clock.

Mr. MANSFIELD. Mr. President, in view of the developments, I ask unanimous consent, except for the 2 minutes which will be yielded to the distinguished junior Senator from Vermont (Mr. Prouty), that at the conclusion of his remarks, and all remarks thereto, the Senate stand in recess until 5 minutes of 2 o'clock, at which time a quorum call, we hope, will bring all 100 Senators to the Chamber.

The PRESIDING OFFICER. Is there objection? The Chair hears no objection, and it is so ordered.

Mr. STENNIS. Mr. President, I yield 3 minutes to the Senator from Vermont (Mr. Prouty).

The PRESIDING OFFICER. The Senator from Vermont is recognized for 3 minutes.

Mr. PROUTY. Mr. President, the crevice in this debate has spread out from here across the land and become a chasm of misunderstanding.

Tragically, outside this body the intricacies of the ABM issue were distorted by simplification. Labels and slogans prevailed over definitive analyses.

As the breadth of the gorge widened and antagonists drew further apart, their voices raised. Reason was lost in a barrage of invective. The essence of the pending vote disappeared in a fury of hyperbole.

At some point the acronym "ABM" lost its identity with a weapons system. It became instead a symbol of diverse dissatisfactions.

"Stop the ABM" became a frenzied incantation against the Defense Establishment, a form of punishment for miscalculation and mismanagement.

To others the ABM became a symbol of patriotism, the last bulwark of our Republic.

Where once there was an issue—to proceed with Safeguard as the President recommended or to modify his proposal—now there are a multitude of diverse causes rallying around a symbol.

Sadly, today many champions of these causes envision this Chamber as Armageddon with the forces of good and evil arrayed for the final battle.

I look to these people whose hopes and fears were conscripted into what they thought was to be the last struggle. For them, I condemn the delusion of simplifications, labels, and slogans.

Whatever position soon prevails, the greater consequences may lie in the folly of rallying to symbols rather than substance, of following slogans rather than reason. History is replete with proof that a nation's internal delusions may be more disastrous than external collusions.

Mr. MANSFIELD. Mr. President, to clear the record, the time between now and 5 minutes to 2 o'clock is not to be taken out of either side, is that correct?

The PRESIDING OFFICER. Without objection it is so ordered.

Mr. MANSFIELD. Second, I ask unanimous consent that the distinguished senior Senator from Maine (Mrs. SMITH) be recognized at 2 o'clock p.m.

The PRESIDING OFFICER. Is that for the purpose of calling up her amendment?

Mr. MANSFIELD. Yes, Mr. President, for the purpose of calling up her amendment. As a matter of fact, I ask unanimous consent that the distinguished Senator's amendment to the amendment be laid down now and made the pending business.

The PRESIDING OFFICER. Is there objection? The Chair hears none, and the clerk will state the amendment.

The ASSISTANT LEGISLATIVE CLERK: In lieu of the matter proposed to be added

by amendment numbered 101, add the following:

Sec. 402. None of the funds authorized by this or any other Act may be used for carrying out, after the date of enactment of this Act, any research, development, testing, evaluation, or procurement of the anti-ballistic missile system known as the Safeguard system, or to carry out any research, development, testing, evaluation, or procurement of any part or component of such system.

Mr. HART. Mr. President, for purposes of clarification with respect to the time, do I understand correctly that the time between now and 5 minutes to 2 o'clock p.m., will not be charged to either side?

The PRESIDING OFFICER. The Senator is correct.

Mr. HART. And the time not yet used by either side will remain available to both sides when the Senate resumes at 3 o'clock p.m.?

The PRESIDING OFFICER. That is the understanding of the Chair.

Mrs. SMITH. Mr. President, I ask for the yeas and nays on my amendment.

The yeas and nays were ordered.

RECESS UNTIL 1:55 P.M.

The PRESIDING OFFICER. Without objection, the Senate will now stand in recess until 5 minutes before 2 o'clock p.m.

(At 1 o'clock and 24 minutes p.m., the Senate took a recess until 1:55 p.m. today.)

At 1:55 p.m., the Senate reassembled, when called to order by the Presiding Officer (Mr. McGovern in the chair).

ACM
AUTHORIZATION OF APPROPRIATIONS FOR FISCAL YEAR 1970 FOR MILITARY PROCUREMENT, RESEARCH AND DEVELOPMENT, AND FOR THE CONSTRUCTION OF MISSILE TEST FACILITIES AT KWAJALEIN MISSILE RANGE, AND RESERVE COMPONENT STRENGTH

The Senate resumed the consideration of the bill (S. 2546) to authorize appropriations during the fiscal year 1970 for procurement of aircraft, missiles, naval vessels, and tracked combat vehicles, and research, development, test, and evaluation for the Armed Forces, and to authorize the construction of test facilities at Kwajalein Missile Range, and to prescribe the authorized personnel strength of the Selected Reserve of each reserve component of the Armed Forces, and for other purposes.

The PRESIDING OFFICER. The Senator will be in order.

Mr. MANSFIELD. Mr. President, I suggest the absence of a quorum.

The PRESIDING OFFICER. To which side does the Senator want the time charged?

Mr. MANSFIELD. Neither side, and with the understanding that the Senator from Maine (Mrs. SMITH) has the floor.

The PRESIDING OFFICER. Without objection, it is so ordered.

The clerk will call the roll.

The legislative clerk proceeded to call the roll.

Mr. MANSFIELD. Mr. President, I ask unanimous consent that the order for the quorum call be rescinded.

The PRESIDING OFFICER (Mr. TYDINGS in the chair). Without objection, it is so ordered.

Mr. MANSFIELD. Mr. President, I ask the Chair to order the Sergeant at Arms to clear the Chamber except for those attachés who have business on the floor. Senators would like to hear what is going on and not have to fight their way through a press of manpower in getting into the Chamber.

The PRESIDING OFFICER. The Sergeant at Arms will clear the Chamber, in accordance with the request of the Senator from Montana.

Who yields time?

Mr. MANSFIELD. Mr. President, I believe that the distinguished Senator from Maine, who has a half hour, has the floor.

The PRESIDING OFFICER. The Chair recognizes the Senator from Maine.

How much time does the Senator desire?

Mrs. SMITH. Such time as necessary.

Mr. President, I am told that this morning my amendment was attacked on the claim that it went too far, for it would adversely affect the Nike X advance development.

Let me set the record straight. This simply is untrue. The adoption of my amendment will not affect Nike X advance development. The bill has \$141 million for Nike X under a separate account. This amendment was approved by our committee and has nothing to do with the Safeguard system.

In addition to the R. & D. for Nike X advance development, the Army seeks \$3 million for anti-ballistic-missile activities in research and development funds at White Sands Missile Range. This also has nothing to do with Safeguard.

Mr. President, I offer this amendment in the nature of a substitute to the Hart-Cooper amendment because I believe that the proposed Safeguard anti-ballistic-missile system is too vulnerable and too costly and would be a waste of resources at a time when we must carefully determine our national priorities.

Even the advocates of the Hart-Cooper amendment have at length expounded on their opposition to the Safeguard ABM system. Yet, the Hart-Cooper amendment is a partial approval of the Safeguard ABM system in that it proposes a compromise authorization for research, development, testing, evaluation and normal procurement incident thereto for the Safeguard ABM system.

I do not approve of such a compromise and such authorization for the Safeguard ABM system. It would be a "foot in the door" authorization for a system in which I have no confidence.

Why waste funds on research and development of a system in which you have no confidence? To do so is to beg the question.

Why not face the issue directly instead of obliquely? If you have no confidence in the Safeguard ABM system, then why vote for any kind of authorization for it in any manner?

Why vote for authorization of research and development of a system in which

you have no confidence? Why vote to develop a system in which you have no confidence? Why vote to develop a system when you are opposed to deployment of such a system?

Mr. President, on the proposed ABM system, I find myself torn between the desire to grant to the President of the United States and the leader of my political party that which he feels is necessary and my own conscience that it is not only not necessary but would be an unwise application of resources.

The United States is the most resourceful Nation in the world. But our resources are not unlimited. We must face up to the fact that there are limits and that those limits dictate a conscientious effort to establish priorities.

As I see it, the purpose and mission of the proposed ABM basically is deterrence—to deter Russia from a miscalculation of attacking the United States because we would have sufficient defenses for our missile sites.

To the contrary, I think offensive strength is the better deterrent and as such rates national security priority over the proposed ABM system. For what really deters Russia from attacking us is our offensive arsenal.

That is what the Soviets respect the most—that is what has stayed their hand during each confrontation starting with the first Berlin crisis on through the Cuban missile crisis—that is what has preserved the peace for two and a half decades—and it is that which is most likely to cause the Soviets to engage in meaningful talks on arms limitations.

I keep hoping that arms limitations talks will ultimately be productive—that the Soviets will be reasonable, sincere, and constructive—that we can bequeath a peaceful world to succeeding generations—that we can find accommodation with honor and security for each other and for the world.

But I am like the "show me" Missourian as I have watched the Soviets achieve a power status of first class magnitude by developing devastating weapons in complete secrecy—boastfully parading them on so-called peaceful May Day repeatedly in great surprise to our best intelligence forces—and totally rejecting inspection procedures whether it be on the limited test ban or on nonproliferation of nuclear weapons.

And, Mr. President, I am convinced that the proposed Safeguard ABM system would be woefully inadequate against a massive Soviet attack on our country should the Russians decide to attack. Make no mistake about it, if the Russians decide to attack it will be a massive attack with full utilization of all of their devastating weapons on cities as well as missile sites.

There are those who seem to think that both the United States and Russia have reached a technological plateau and in this thinking tend to doubt the probability of the development of a system superior to the proposed ABM system.

I do not share this view. I do not think that either of the two countries has reached a technological plateau. Instead I think that technology is pro-

gressing so rapidly and that the state of the art is changing so swiftly that the proposed ABM will be obsolete and outmoded before it is ever put in place.

I do not want our Nation and our people to have a \$40 billion or \$20 billion or even a \$10 billion obsolete white elephant ABM system on our hands.

I am without scientific knowledge, training, or ability. I certainly cannot speak with authority. But I certainly can speak with conviction—and I am convinced that the proposed ABM would be not only a tragic waste of money but even more tragically a self-deluding maginot line false sense of security.

Instead I have greater confidence and faith in the ability of our scientists to develop a far more effective and far less costly system than the proposed ABM system.

I am sure that it is no breach of security when I say that I have great hopes that before too long a sufficiently powerful laser will be developed for the defense not only of our missile sites but as well of our people and our cities.

I have been dubious about the practicability of the proposed ABM system ever since it was first proposed. Frankly, it lacked credibility to me—both the system and the rationale for it.

I do not believe that we need have any fear of a nuclear attack on this country by Red China for many, many years. Red China simply does not have the capability to wage nuclear war against us and would not have for many, many years.

While I think the Russian Kremlin leaders—as differentiated from the Russian common man and woman—would destroy the United States without hesitancy if they thought it was to their advantage and they could do it without any great risk to Russia, I cannot see the men in the Kremlin contemplating that now.

Why? Because I am sure that the increasing defiance of law and authority in the United States by growing dissent that has degenerated into violence and the open advocacy of, and militancy for, anarchy—that this trend is increasing the confidence of the men in the Kremlin that they, and their system of communism, can complete a Communist conquest of the United States without the necessity of firing a shot.

Why then should they devastate the resources of this Nation with nuclear attack? Why would they want to destroy the American resources that they so avidly covet?

Why would they want to have the tremendous problem of rehabilitating and reconstructing a nuclear devastated country when they are growing so confident from trends here that their own advocates among Americans will ultimately deliver this country to them?

No, Mr. President, I simply cannot buy the rationale of fear of the men in the Kremlin advanced in advocacy of the proposed ABM. I simply do not find it credible. And I have so told President Nixon.

For these reasons, I do not believe that we have to precipitously rush into a most dubious ABM system for fear that Russia is on the verge of attacking us—I do not

believe that there is an imminent threat of such urgency as to preclude us from trying to develop a more effective and less costly system than the proposed ABM system within not too distant a future.

Reaching the decision that I have on the ABM has not been easy. As the ranking Republican on the Armed Services Committee, it is neither pleasant nor easy to oppose the Republican President on this issue.

In the past I opposed a Democratic President when he proposed the ABM. I opposed him on the proposed thin system—on the Sentinel system—because I felt it would be obsolete before it could be put in place—and because I felt that the claim that it was for defense against Red China was not credible.

I have felt a personal obligation as the top Republican on the Committee on Armed Services to try to see my way to supporting the Republican President on this issue—and I have listened intently in trying to find the proposed Safeguard ABM system to be sufficiently improved over the Sentinel ABM system and sufficiently credible to change and support the leader of my own political party.

But I remain unconvinced—and I cannot see my way to change my position because it is now a Republican President making the proposal instead of a Democratic President.

I respect the sincerity of those who have opposed the President on some of his selections for high Federal office and have successfully blocked him on those selections. I would hope that there would be a reciprocity of respect for my own sincerity in this ABM issue. I know that there is from President Nixon.

The more I study the history of the proposal of an ABM system the more evident becomes the lack of credibility and consistency of the rationale for it.

First, a thick ABM system was proposed on the basis of defending against Russia. Then when opposition developed to the proposed thick ABM because of its great cost, the shift was made to a thin ABM system on the basis of not defending against Russia but against Red China and on the rationale of cost effectiveness.

Thus, the first shift—from thick to thin—from defense against Russian attack to defense against Red Chinese attack.

Then sites were selected and plans started on the thin ABM sites in the defense of cities and population centers.

But then another rebellious tea party broke out in Massachusetts on the part of irate citizens of the locality of a proposed site in Massachusetts—and the political fat was in the fire.

And then came another shift in the theory and rationale of the ABM—the shift from the defense of cities and population centers to defense of the missile sites.

What has not been so apparent to many is another very decided shift—for now the talk in support of the proposed thin Safeguard ABM system is not for defense against Red China but rather for defense against Russia.

Mr. BYRD of West Virginia. Mr. President, may we have order in the galleries?

The PRESIDING OFFICER. Visitors in the galleries are guests of the Senate and will be in order. Please keep the gallery doors closed. The Senate may proceed.

Mrs. SMITH. Mr. President, thus, the rationale for an ABM system has made the full circle in shifting on the factor of whom it is proposed to defend against for first it was the thick system to defend against Russia then it shifted to the thin Sentinel system to defend against Red China and now it is back to the thin Safeguard system to defend against Russia.

This shifting on against whom to defend—first Russia then Red China and then back to Russia—coupled with the shifting on what to defend—first the cities and population centers and now the missile sites—not only taxes one's credulity but even challenges one's imagination as to what the next shift will be by the advocates of the ABM.

Mr. President, I have read that retaliatory action has been taken against some of us who oppose the ABM system. I find that difficult to believe because no such action against me has even been hinted. Instead I have found President Nixon and members of his staff to be very patient and courteous and understanding about my opposition to the ABM.

On the other hand, Mr. President, it has been charged that opposition to the ABM is being used just to try to stop President Nixon. I think that is an unfair charge. In opposing the ABM, I am certainly not trying to stop President Nixon any more than are those in his own party who have opposed some of the administrative policies of his administration.

Mr. President, let me make it crystal clear that while I do not believe in the ABM, I do believe in America.

I do believe in our form of Government—but I do not believe in the ABM.

I do believe in our Republic—but I do not believe in the ABM.

I do believe in free enterprise—but I do not believe in the ABM.

I am for our American way of life—but I do not believe in the ABM.

The ABM is not an acid test of patriotism.

Mr. FULBRIGHT. Mr. President, will the distinguished Senator from Maine yield?

Mrs. SMITH. I yield.

Mr. FULBRIGHT. I wish to commend the distinguished Senator from Maine for one of the most perceptive speeches I have heard on the subject of the ABM. As the ranking minority member of the Committee on Armed Services, with a long history of interest in this matter, which she has outlined so lucidly, I think her speech makes one of the most persuasive cases I have heard anyone make with regard to this extremely important question.

I wonder whether I might ask the distinguished Senator this question: As the Senator knows, I have supported the Cooper-Hart amendment, but I share practically everything the distinguished Senator has said about the ABM, particularly the Safeguard ABM.

As I understand it, the distinguished Senator's amendment is confined to the Safeguard ABM—I am only inquiring

now, I am not trying to put words in her mouth—let me ask my question a different way—is the Senator opposed to research and development in the field of radar development and computers, neither of which have been developed? In other words, I wonder whether the Senator really wishes to prohibit research in the general area of sophisticated radars and computers. To make it more specific, would it be acceptable to the distinguished Senator to provide for research and development on advanced radars and computers suitable for a sophisticated weapons system?

Would such research be inconsistent with the distinguished Senator's thought in her amendment?

Mrs. SMITH. The Senator from Maine would thank the distinguished chairman of the Foreign Relations Committee and in answer to his question would say that he may recall at the beginning, I said there was \$141 million for the Nike X in the bill which I have supported and continue to support. No, my opposition to research and development is only insofar as the Safeguard system is concerned.

Mr. FULBRIGHT. I appreciate that very much. I am sympathetic with the distinguished Senator's statement on this subject. I am committed, of course, to support the Cooper-Hart amendment because I felt, up until now at least, that it was the only practicable way we might be able to restrain deployment of the ABM.

In all candor, I feel compelled to support the distinguished Senator's amendment with that understanding, because I think it has a great deal of merit to it. However, if that should fail, I will also be bound to support, as I am committed to support, the Cooper-Hart amendment because that is the only alternative I will have. But I appreciate very much the amendment of the distinguished Senator. I think that she has made one of the finest contributions to this debate that has been made so far.

Mrs. SMITH. I thank the distinguished Senator from Arkansas very much for his kind remarks.

The PRESIDING OFFICER. The galleries will please be in order. Visitors in the galleries are guests of the Senate, and the galleries will be in order.

The Senator from Maine has the floor.

Mr. AIKEN. Mr. President, will the distinguished Senator from Maine yield?

Mrs. SMITH. I yield.

Mr. AIKEN. Mr. President, I want to commend the distinguished Senator from Maine for having given the most logical and courageous speech which has been heard on this floor for a month.

Mrs. SMITH. I want to thank my distinguished colleague and friend from Vermont.

Mr. President, will the Chair please advise me as to the time remaining to me?

The PRESIDING OFFICER. The distinguished Senator from Maine has 4 minutes remaining.

Mrs. SMITH. Mr. President, I should like to hold that time.

Mr. STENNIS. Mr. President, as manager in charge of the time in opposition

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to the amendment offered by the distinguished Senator from Maine, I would want to be certain that insofar as possible those who wish to speak be recognized.

I yield to the Senator from Kentucky for such time as he may need, say, 6, 7, or 8 minutes.

Mr. COOPER. Mr. President, I should like to be recognized for 5 minutes.

The PRESIDING OFFICER. The Senator from Kentucky is recognized for 5 minutes.

Mr. COOPER. Mr. President, before I address myself to the amendment offered by the distinguished Senator from Maine, I should like to say that I do not believe a more eloquent speech has been made—

Mr. PASTORE. Mr. President, we must have order in the Senate if we are to hear the Senator from Kentucky.

The PRESIDING OFFICER. The point of the Senator from Rhode Island is well taken. Senators themselves must be in order if we are to preserve quiet in the Chamber. The Senate will please be in order.

The Senator from Kentucky may proceed.

Mr. COOPER. Mr. President, as I said before, before addressing myself to the amendment offered by the distinguished Senator from Maine, I should like to say that I do not believe we have heard a more eloquent speech during this debate than the one just made by the distinguished Senator from Maine. I agree wholly with her appraisal of the assumed threat which has been made the basis for the proposed ABM system. I like her concept of true security for this country.

We respect the distinguished Senator from Maine for her knowledge of defense and security matters from long experience as the ranking Republican member of the Armed Services Committee, we respect her also for the integrity, courage, and conscience which she has demonstrated so many times on the floor of the Senate.

Mr. CASE. May I associate myself with the sentiments just expressed by the distinguished Senator from Kentucky.

Mr. COOPER. Mr. President, I should like to address now myself to her amendment which is wholly consistent with the position she has taken during the years we have been discussing an ABM system.

I know that other Members of the Senate have told the Senator from Michigan (Mr. HART) and me that they would prefer that our amendment would halt all research and development and procurement respecting the Safeguard system. Some will undoubtedly vote for Senator SMITH's amendment.

I find that the amendment of the Senator from Maine and the Hart-Cooper amendment are in agreement in several ways.

We who support the Hart-Cooper amendment, are in agreement with the position of the Senator from Maine (Mrs. SMITH) that the Safeguard ABM should not be deployed. We believe that it is not likely to prove an effective system for our country and will not enhance our security.

The amendments differ upon the question of providing funds for research and development, testing and evaluation. Our amendment seeks to determine if it is possible to build an effective system which might be needed if the grim threat which has been laid before the Senate day after day ever becomes a reality.

Listening to the colloquy between the chairman of the Foreign Relations Committee and the Senator from Maine, it occurred to me that our amendments may not be as far apart as it might seem. Her amendment refers only to Safeguard, and provides that no funds authorized by this or any other act may be used in any way with respect to the Safeguard system. Therefore the amendment might be interpreted to authorize continued research, development, evaluation, and testing only with regard to the design of the Safeguard system.

I ask a question to determine, if I can, if we are in agreement. Does the Senator's amendment prohibit any funds to be used in connection with any anti-ballistic-missile system, or is the Senator's amendment directed solely to funds for the Safeguard system?

Mrs. SMITH. The Senator from Maine will say, no, it is not unlimited. It is only to the Safeguard system.

Mr. COOPER. If the Senator's amendment should be amended so that it would provide funds for testing, evaluation, research, and development could be used in an effort to design a more effective anti-ballistic-missile, and amended to provide that funds could be used for that purpose. Would such an amendment be consonant with the purpose of the Senator from Maine?

Mrs. SMITH. My amendment is confined to the Safeguard only, as I have said; and also, the distinguished Senator from Kentucky will recall that I said that there is \$141 million in the bill for advanced development of anti-ballistic-missile systems, which I support.

Mr. COOPER. It has been suggested—and I cannot answer for other colleagues—that the Senator's amendment should be modified to provide that funds available in this bill or made available by prior acts could be so used—

The PRESIDING OFFICER. The time of the Senator has expired.

Mr. COOPER. May I have 2 minutes?

Mr. STENNIS. Yes. I yield the Senator 2 minutes.

Mr. COOPER. Could be so used as I have suggested to design a system which might be effective. I ask, if that were done, would such an amendment be acceptable to the Senator from Maine?

Mrs. SMITH. I think the statement I have already made on the \$141 million would be the answer to the Senator's question. I would even be willing to increase that amount.

Mr. COOPER. Would the Senator be willing to increase the amount to the sums which are proposed in the bill before us?

Mrs. SMITH. On what items?

Mr. COOPER. Only for research, development, testing, and evaluation of a system other than the proposed Safeguard anti-ballistic-missile system.

Mrs. SMITH. I am agreeable to increasing the funds for the Nike X system.

Mr. COOPER. I shall discuss the matter with my colleague the Senator from Michigan, and others to see if there is a possibility of bringing our amendments into some common ground; but if we cannot, again I want to say that the distinguished Senator from Maine has brought light upon this issue. I know there will be Senators who support our amendment, who, I believe, will vote for the amendment of the Senator from Maine. I would point out that there are only two opportunities to prohibit the deployment of the Safeguard anti-ballistic-missile system. The first opportunity will come on the vote upon the amendment of the Senator from Maine.

The PRESIDING OFFICER. The time of the Senator has expired.

Mr. COOPER. May I have 1 minute?

Mr. STENNIS. I yield 1 minute more.

Mr. COOPER. If the amendment should fail, then I would hope that Senators who vote for the amendment of the Senator from Maine will recognize that the last opportunity to prohibit the deployment of the system—which is doubtful, which will not enhance our security, and which will inhibit our peace talks—will be on the vote on the Hart-Cooper amendment.

If we do not vote either for the amendment of the Senator from Maine or for the Hart-Cooper amendment, it will be understood by the administration that twice on this day the Senate of the United States has approved the deployment of the Safeguard anti-ballistic-missile system.

I have no quarrel—I am sure the Senator from Michigan (Mr. HART) does not—for any Senator who votes for the amendment of the Senator from Maine, but I do hope that those who do, know that it will be consistent and logical to vote for the Hart-Cooper amendment, if the amendment of the Senator from Maine should fail.

Mr. HART. Mr. President, will the Senator yield me 1 minute?

Mr. STENNIS. I yield 1 minute to the Senator from Michigan.

Mr. HART. I just want to say that I have listened to our colleague from Kentucky, coauthor of the amendment. I agree fully with everything he has said. As he has indicated, any Senator may well vote for the Smith amendment, but let us not blink the fact that if that amendment fails and the Cooper-Hart amendment is rejected, the Senate will have written the ticket and we deploy. If any Senator thinks that is the ultimate disaster, he should support one or the other of these amendments.

Mr. STENNIS. Mr. President, may I inquire how much time remains in opposition?

The PRESIDING OFFICER. The Senator from Mississippi has 19 minutes.

Mr. STENNIS. Mr. President, I yield 4 minutes to the Senator from Tennessee (Mr. GORE).

The PRESIDING OFFICER. The Chair recognizes the Senator from Tennessee for 4 minutes.

Mr. GORE. Mr. President, this has been one of the most hotly contested

issues, one of the most important issues, in the history of the Senate. We struggle for the moment in the balance. It may be possible to achieve a majority will. Indeed, as the eloquent speech of the distinguished senior Senator from Maine (Mrs. SMITH) illustrates, the majority will of the Senate now appears against deployment of the ABM. I believe this to be true. If that be true, surely there is a way—parliamentarily—for this majority to express itself and to work its will. This is why I address the Senate, and more particularly the distinguished senior Senator from Maine, with whom I have had the honor to serve in both houses of Congress.

The Senator has significantly, if not modified, her stated intention which could be interpreted as in contravention of her amendment. The amendment, if I may take a moment to call attention to it, would prohibit research, development, testing, evaluation, or procurement of "any part or component of such system." As the Senator from Arkansas (Mr. FULBRIGHT) has pointed out, a significant component of an ABM deployment is radar. Another, and a most sensitive component, is computerization.

These systems are necessary in other weapons systems, both nuclear and non-nuclear. The able senior Senator from Maine has said that she favors—indeed, she says she has previously voted for—procurement and further research and development in these fields. This is very close to the will and the wish of the senior Senator from Tennessee.

But the only way the amendment can be made explicit is for the senior Senator from Maine to modify her amendment. Should the distinguished senior Senator from Maine be willing to modify her amendment so as to permit research, development, and evaluation of computer systems and radar systems, systems common not only to all models of anti-ballistic-missile systems, but to other missile systems, then widespread support of the amendment of the distinguished Senator from Maine might be possible.

The PRESIDING OFFICER. The Senator's time has expired.

Who yields time?

Mr. STENNIS. Mr. President, I yield 2 minutes to the Senator from Texas.

Mr. TOWER. Mr. President, I never cease to be impressed with the tremendous courage of the distinguished senior Senator from Maine. I can remember a time when, on this floor, she cast a vote against the ratification of the test ban treaty. There were very few of us who voted against that treaty. I can remember other occasions when she has asserted her great independence. I can state, at least for this proponent of the ABM system, that I shall always hold her in high regard for making such a positive, hard-hitting statement. She has, certainly, my deep admiration, and I shall continue to be proud to serve under her leadership as the ranking minority member of the Armed Services Committee.

The PRESIDING OFFICER. Who yields time?

Mr. STENNIS. Mr. President, I yield 2 minutes to the Senator from Illinois.

Mr. PERCY. Mr. President, I shall vote against the substitute offered by the distinguished Senator from Maine, and I should like to explain why. I do so because I am committed to continued research and development in the field of anti-ballistic-missile systems. But I should like to join my fellow Senators in expressing our admiration to the Senator from Maine for her courage and her foresight; and, although she has disclaimed any particular technical or scientific competence, I think she has demonstrated that she has something that perhaps the rest of us cannot share—womanly intuition—and also something I hope we all possess, exceedingly good judgment.

I only hope that if her amendment and any modifications thereof fail, she and others will support the Cooper-Hart amendment, because this would be far more than half a loaf—the cost of continuing research and development as against the estimated \$40 billion figure that has been mentioned by some for deployment would be only 1 percent; so I think that she and others would achieve a 99-percent loaf in supporting the Cooper-Hart amendment.

Mr. COOK. Mr. President, will the Senator yield?

Mr. PERCY. I do not have control of the time.

Mr. STENNIS. I yield the Senator from Illinois an additional minute, if the Senator from Kentucky wishes to respond.

Mr. COOK. I associate myself with the remarks of the Senator from Illinois.

The PRESIDING OFFICER. Who yields time?

Mr. STENNIS. Mr. President, I yield myself 1 minute.

No one could possibly appreciate the fine sentiments of the Senator from Maine any more than I do, not simply because of our present situation, but because I have been there, as a member of the committee, all these years since the Senator from Georgia has been senior member of one group and the Senator from Maine, now the ranking member, formerly next to the ranking member, before the retirement of the former Senator from Massachusetts, Mr. Saltonstall.

I have seen honesty on both sides as the situation developed, one system after the other, with reference to missile development; and I appreciate so much her sentiments as well as, at the same time, the sentiments of the Senator from Georgia, the former chairman of the committee, who has worked so assiduously on the same proposition.

I know that this year, everything she says apropos of this matter—

The PRESIDING OFFICER. The Senator's time has expired.

Mr. STENNIS. I yield myself 1 additional minute—is not only true, but goes beyond bare truth. It has sincerity and deep concern behind it.

Of course, I would not support her in this amendment, because the vital issue here is with respect to the necessary, and I think absolutely necessary, further research.

Mr. JAVITS. Mr. President, will the Senator yield me 1 minute?

Mr. STENNIS. Yes; I shall be glad to yield to the Senator from New York in a moment, if my time has not expired. However, let me add this thought:

Mr. President, I have felt all the while that the real issue here is reflected by the Cooper-Hart amendment, and that that is the one that has been debated and should be decided.

I yield now to the Senator from New York.

Mr. JAVITS. Mr. President, I agree with the Senator from Mississippi that the Cooper-Hart amendment is the issue. It has been debated, and should be decided, because that issue is the symbolic as well as the practical one: Will or will not the Senate assert its power over this highly sophisticated escalation in the nuclear arms race?

I pay the Senator from Maine all homage for her position. While it is true we could exclude the Safeguard system, why exclude the ABM itself? It is as eligible for research as any other system. Later on in the day, it may possibly come to something. But I agree with the Senator from Mississippi that the issue before us is symbolic. The whole world regards the Cooper-Hart amendment as the issue, and our stand on that issue is the thing that will determine the policy of this country, perhaps for years to come.

Mr. STENNIS. Mr. President, I yield 3 minutes to the Senator from Missouri.

Mr. SYMINGTON. Mr. President, in my opinion, this relatively short talk by the distinguished senior Senator from Maine is just another reason for my being very proud to serve with her in the Senate. She is logical, she is persuasive, and she, as usual, evidences extreme intelligence with respect to the matter at hand.

I do have some hesitation to vote for her amendment, however, because some of the advocates have emphasized the importance of matching the Soviets in this field.

In this connection, in this country we were chasing missiles with the Nike-Hercules, and later with the Nike-Zeus, and then with the Nike X, and now, in effect, we have combined the Nike-Zeus with the Nike X in what was once called the Sentinel system, and is now called the Safeguard system; in summary, four efforts.

In the Soviet Union, there was an ABM system which they developed around Leningrad, well after we started work on our ICBM systems. Then later there was the Galosh system, which the Soviets have certainly decided not to go ahead with as planned, and now, they, too, are researching a further system which is comparable to our research and development in this ABM field.

There has been no deployment of that system on their part, and there would be, I hope, no deployment of this system at this time. Inasmuch as we all agree that the most important single blessing that could happen for mankind is some form of meaningful control of nuclear weapons and all they connote, I would hope that we could reach agreement on this roughly same plateau. That is the only reason I would vote against the amendment the distinguished senior Senator from Maine

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has proposed. I am for the Cooper-Hart amendment.

Mr. STENNIS. Mr. President, I had promised to yield to the Senator from Alaska. I now yield 1 minute to the Senator from Alaska (Mr. STEVENS).

Mr. STEVENS. Mr. President, I have not participated in the debate. However, I think that we all owe a debt to the distinguished senior Senator from Maine.

She has presented the issue that has been presented by our mail—at least by my mail. My constituents are either for or against the ABM system. That is what she has presented to the Senate and to our people.

I think that the people from Alaska, as stated by the junior Senator from Alaska, are at least 2 to 1 for the ABM system.

For that reason, I shall vote against the amendment of the senior Senator from Maine and also the Cooper-Hart amendment.

Mr. STENNIS. Mr. President, I yield 1 minute to the Senator from Kansas.

The PRESIDING OFFICER. The Senator from Kansas is recognized for 1 minute.

Mr. DOLE. Mr. President, while I do not support the amendment of the distinguished senior Senator from Maine, I certainly commend her.

As the Senator from Alaska (Mr. STEVENS) has just stated, the Senator from Maine has cleared the air with respect to the ABM vote.

Our mail is either anti- or pro-ABM. And each Senator now has the chance to vote for or against the ABM. The Senator from Maine has given each of us a clear-cut opportunity to express our position.

Mr. STENNIS. Mr. President, I yield 1 minute to the Senator from New York.

The VICE PRESIDENT. The Senator from New York is recognized for 1 minute.

Mr. GOODELL. Mr. President, I appreciate the very sincere and deep conviction of the distinguished senior Senator from Maine on this issue.

I regret under the circumstances we face that I must oppose the amendment of the Senator from Maine. I intend to vote for the Cooper-Hart amendment.

Mr. President, after months of hard review in committees of the Senate, after long hours of debate in this Chamber, after weighing the many views of citizens concerned over this important issue, the time has come to make a decision.

The question before us can be stated briefly: Should Congress authorize the deployment of missile defense of two Minuteman complexes along with Kwajalein construction and Safeguard research and development at a cost of \$759 million for fiscal year 1970?

This question, however brief; this proposal, however limited in initial objective, is complicated by the enormous issues that it introduces.

Nuclear war is the problem we are being asked to face. The Pentagon has told us to think the unthinkable and to guard against it.

Since nuclear weapons came into being, our aim has been to guard against their use in war. What has emerged then are several principles to guide

against the horror of nuclear war. One is assured destruction capability. This calls for a military might capable of inflicting an unacceptable degree of damage upon any aggressor. It warns a potential enemy that nuclear aggression means suicide to the aggressor. The other principle is damage limiting capability. This calls for a military might capable of minimizing the effect of enemy weapons that could damage us.

These guides are familiar to us. Throughout the years, they have served to justify a vast buildup in weaponry with destruction potential capable of world annihilation.

Our capability has reached a point where we must now ask: How much destruction power is enough?

Varying estimates have been made on the current status of the nuclear arms race. What appears as constant in each is overkill.

Still, the Pentagon asks that we deploy an ABM. Still the Pentagon has plans for the multiple independently targeted reentry vehicle—MIRV. With MIRV, one missile can destroy several different targets such as enemy ICBM sites. With MIRV, the side that would strike first would have an advantage since one ICBM might be able to destroy several unfired ICBM's in place.

It has been pointed out in the course of debate, that if MIRV is deployed, it will be difficult for nuclear nations to know how many warheads another has. It will be difficult to know what country is where in the nuclear arms race.

Mr. President, if ABM and MIRV go unchecked, we will be in an arms race of proportions unknown in weapons history. We will be racing not only with the Russians and Red China but with ourselves as well.

Today, we are to decide whether to deploy the Safeguard ABM.

No matter what the limited scale of Safeguard which has been proposed, we simply cannot assume that there will be no Soviet response.

I fear what is in store is the inevitable action-reaction cycle.

A natural response to an ABM deployment by the United States would be further Soviet MIRV development and possible deployment.

In turn our own efforts in MIRV capability would increase.

Then will both sides look to deploying land-mobile missiles?

Mr. President, escalating new elements of uncertainty can only weaken the stability of deterrence with resulting peril to the security of our country.

Rather than fill a "deterrent gap" as the Pentagon claims it will, ABM could unleash a weapons race spiralling beyond the possible control by nations.

Mr. President, the burden of proof for an ABM rests on the Pentagon. We have been told that it is needed to plug a "deterrent gap." Yet to date, there has been no confirmed evidence that such a gap exists. Over the years, we have been told of a "bomber gap"; then of a "missile gap." We found out later that there had been errors in estimates of Soviet strength and that the military strength of the United States had all along been in fact superior.

Unilateral armament is the net effect of so many of the Pentagon's programs. "Confirmed" and "possible" estimates of potential enemy capability in war planning seem to give way to what war-game strategists think is "possible." For the "possible," and for just another option in contingency planning, we have spent billions on weapons. Far too often, it appears that funds for weapons are merely spent on an arms race against ourselves.

So it is that over the years we have spent billions of dollars to fill gaps that have not existed. Weapons have come and gone. Billions of dollars have been spent on developing weapons destined to be obsolete on the production lines due either to challenges of comparative technological development or simply that a new idea seemed more promising in terms of military effectiveness. Initial cost estimates of military hardware have been left behind as extra costs have spiralled.

Large cost increases over initial cost estimates are still with us. The complete Safeguard is currently estimated to cost \$11 billion; but it could be much more.

The arms race is still with us. If the Soviet response to Safeguard is to place MIRV's on the SS-9, will the ABM be obsolete? Will the Pentagon request a safer guard against estimated Soviet capability by requesting a thickened ABM? Cost for this type of ABM is beyond estimate.

Mr. President, the ABM debate has meant many things to each of us. Concern over ABM has spread over offensive weapons, such as MIRV's and the effects of both on SALT the strategic arms limitation talks. Concern has extended to the entire Defense budget which now totals \$80 billion or over half of the Nation's \$144 billion controllable budget. There is growing feeling that with more commonsense, defense spending could be reduced without risk to national security and with savings in the billions.

Many of us feel that military spending decisions must be considered in the context of unmet human needs in our cities and in areas of rural poverty. We simply cannot afford to let our domestic priorities be distorted by limitless spending on costly military hardware of questionable usefulness.

There is growing skepticism over the way in which the Pentagon presents its requests for funds. Over and over again, military requests are presented as defensive-sounding programs when actually they are perilous and provocative taking us up several more rungs on the "balance of terror" ladder.

Concern over ABM has spread to the question of popular control over Pentagon requests with an insistence that Congress carefully review military programs in terms of such questions as: Do we really need this program? And why are we pursuing this course of weapons program?

What is significant in all of this is that ABM has meant one thing to all of us. ABM has moved our thinking beyond what science has done; and beyond what the military wants to do with science and weaponry. ABM has moved our

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thinking to what America must do now for its future and that of humanity.

Security of this Nation, both at home and among nations, is and must continue to be our first and foremost priority in protest and in policymaking. It will not be achieved by the military scientists or in stages of false security derived from an ABM system.

Time still remains to take the risks of peace: in economic competition among nations, in social development within nations, in binding arms control agreements, and in international cooperation. Time still remains to pool the tremendous resources of scientific talent, both at home and throughout the world, to convert knowledge to kill to knowledge to preserve; to redirect creativity from warlike purposes to peaceful purposes; and to free the energies of man from a threatened world to a more livable world.

For these reasons, I shall vote against deployment of the Safeguard ABM in the next year.

Mr. STENNIS. Mr. President, how much time does the opposition have remaining on the amendment?

The VICE PRESIDENT. Each side has 4 minutes remaining.

Mr. STENNIS. Perhaps the Senator from Maine wishes to use some time.

The VICE PRESIDENT. Does the Senator from Maine wish to use some time?

Mrs. SMITH. Not right now.

Mr. STENNIS. Mr. President, I yield 1 minute to the Senator from Colorado.

The VICE PRESIDENT. The Senator from Colorado is recognized for 1 minute.

Mr. DOMINICK. Mr. President, I thank the Senator from Mississippi.

With all deference and fondness for my distinguished leader on the Armed Services Committee, I must say that I do not see how we can fruitfully support the amendment.

It is my own feeling that, with the threats that face us, we have to maintain the credibility of our second-strike retaliatory force and, unless we can do something of this nature, we will be forced, as I think the Senator from Maine herself has said, to put in a lot more offensive weapons which, in my opinion, would be more provocative in terms of increasing the arms race and would be less satisfactory in terms of public reaction to the nuclear problem we all face.

So, with all due respect for my good friend and distinguished leader in the Armed Services Committee, I am afraid I cannot support the amendment.

Mr. STENNIS. Mr. President, as far as I now know, no other speakers want time. If it is desired, I am ready to yield back the time.

Mr. FULBRIGHT. Mr. President, will the Senator yield?

Mr. STENNIS. Mr. President, I yield 2 minutes to the distinguished Senator from Arkansas.

The VICE PRESIDENT. The Senator from Arkansas is recognized for 2 minutes.

Mr. FULBRIGHT. Mr. President, I am very intrigued by the significance of the amendment of the Senator from Maine.

It strikes me that it is entirely consistent with what I have been saying

against the deployment at this time of Safeguard and, I would say, any other system. This happens to be the one under consideration. However, at the same time the Senator from Maine is in favor of continued research in this field involving such things as sophisticated computers and radars which are an integral and indispensable part of any kind of system, whatever one may call it.

The Senator says that in another part of the bill there is authorization for Nike X. However, I take it from that statement that she is not for the deployment of the Nike X or any other weapon, but simply for research in the general field relating to this kind of weapons system.

I do not see any inconsistency in that with what I have been saying or with what other people who support the Cooper-Hart amendment have been saying. If I understand it correctly, it is entirely consistent.

If there is clarification needed in order to make that clear, I should think the Senator from Maine would be willing to do that. I certainly would.

The time is rather short in which to do that. However, as I understand what the Senator has said, I believe it is entirely consistent with what we have tried to do with the Cooper-Hart amendment. Therefore, as I have said, I shall support the amendment. If it fails, I shall support the Cooper-Hart amendment.

Mr. STENNIS. Mr. President, I respectfully say that I do not intend to use any more time now. However, I understand I have 1 more minute remaining.

The VICE PRESIDENT. The Senator is correct.

Mr. GORE. Mr. President, will the Senator from Maine yield?

Mrs. SMITH. I am glad to yield to the Senator from Tennessee.

The VICE PRESIDENT. The Senator from Tennessee is recognized.

Mr. GORE. Mr. President, I wonder if the distinguished senior Senator from Maine is agreeable to modifying her amendment as follows:

On page 2, after the word "system", strike the period and insert a comma and the following words: "provided that funds contained herein for research and development of radar and computer components of other weapons systems shall not be affected."

Mrs. SMITH. Will the Senator read the last part of the suggested modification?

Mr. GORE. The last part reads:

Insert a comma and the following words: "provided that funds contained herein for research and development of radar and computer components of other weapons systems shall not be affected."

Mrs. SMITH. Mr. President, the Senator from Maine would be willing to accept the modification.

Several Senators addressed the Chair. Mr. STENNIS. Mr. President, a parliamentary inquiry.

The VICE PRESIDENT. The Senator will state it.

Mr. STENNIS. Mr. President, have the yeas and nays been ordered?

The VICE PRESIDENT. The yeas and nays have been ordered, and it would

take unanimous consent to modify the amendment.

Mr. GORE. Mr. President, the Senator from Maine can ask for unanimous consent to modify her amendment.

Mrs. SMITH. Mr. President, first I yield to the Senator from New Jersey.

The VICE PRESIDENT. The Senator from New Jersey is recognized.

Mr. CASE. Mr. President, will the Senator from Tennessee modify his suggestion to include an exception not only for funds contained in the pending bill, but also elsewhere, because the main provision of the amendment proscribes the use of any funds.

Mr. GORE. Mr. President, that is entirely agreeable.

Mrs. SMITH. Mr. President, I ask unanimous consent that my amendment be modified as suggested by the distinguished Senator from Tennessee.

Mr. GOLDWATER. I object.

The VICE PRESIDENT. Objection is heard. Who yields time?

Mr. FULBRIGHT. Mr. President, a parliamentary inquiry.

The VICE PRESIDENT. The Senator will state it.

Mr. FULBRIGHT. Mr. President, this request having been refused, would it be in order at a later date to offer the amendment with the modification the Senator from Maine has requested?

The VICE PRESIDENT. The Parliamentarian advises the Chair that if it were considered a substantial change, it would be in order.

Mr. FULBRIGHT. It would be in order to offer it later.

The VICE PRESIDENT. The Senator is correct.

Mr. SYMINGTON. Mr. President, a parliamentary inquiry.

The VICE PRESIDENT. The Senator will state it.

Mr. SYMINGTON. Mr. President, does the Parliamentarian consider that the substantial change recommended by the Senators in question to the amendment of the Senator from Maine is a substantial change?

The VICE PRESIDENT. The Parliamentarian advises the Chair that he is not ready to pass final judgment on that, but that he would be inclined to consider it as a substantial change. That is not decided at the moment.

Mr. SYMINGTON. Mr. President, a further parliamentary inquiry.

The VICE PRESIDENT. The Senator will state it.

Mr. SYMINGTON. Mr. President, how long does the Parliamentarian believe it will be necessary for him to take to consider this before he can give his decision?

The VICE PRESIDENT. The Parliamentarian has not had a chance to inspect the language.

Mr. STENNIS. Mr. President, a parliamentary inquiry.

The VICE PRESIDENT. The Chair will make the decision after the Parliamentarian has advised it.

Mr. SYMINGTON. The Chair, of course, is correct.

The VICE PRESIDENT. Who yields time?

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Mrs. SMITH, Mr. President, I will be very glad to yield back any time that remains, if the distinguished chairman of the committee does likewise.

The VICE PRESIDENT. The Senator from Maine has agreed to yield back the remaining time if the Senator from Mississippi will yield back the 1 minute he has remaining.

Mr. FULBRIGHT, Mr. President, will the Senator yield to me?

Mr. STENNIS. The Senator from Maine has yielded back the time—

Mr. FULBRIGHT. I wish to propose a question. In view of the fact that the Chair has ruled—

The VICE PRESIDENT. Does the Senator from Mississippi yield time to the Senator from Arkansas?

Mr. STENNIS. Yes.

Mr. FULBRIGHT. In view of the fact that the Chair has ruled that this amendment, as proposed to be modified by the Senator from Maine, can be offered, I would appeal to those who wish to object, because it certainly will be offered. It is simply in the interest of saving time. We could now short circuit a rather long and roundabout move by having a vote on it now. If nobody else will offer it, I will; but I think others will.

The VICE PRESIDENT. The Chair is perfectly willing to entertain the request if it is renewed.

Mr. FULBRIGHT. Mr. President, I would respectfully ask unanimous consent again that the Senator from Maine be allowed to modify her amendment, because it has been ruled as a parliamentary matter that it can be offered.

Mr. STENNIS. Mr. President, a point of order.

Is it in order for the Senator from Arkansas to request that the Senator from Maine modify her amendment?

The VICE PRESIDENT. The request is in order by unanimous consent.

Mr. STENNIS. Mr. President, I object. The VICE PRESIDENT. The Chair hears objection.

All time has expired.

Mr. MANSFIELD. Mr. President, if I may have the attention of the Senate, I would like to make an unusual request at this time, considering the circumstances.

We have a very distinguished visitor in the Chamber, and I would like, with the permission of the Senate, to suspend briefly so that the distinguished Senator from Alabama (Mr. SPARKMAN) can take the floor and introduce our guest.

The VICE PRESIDENT. Without objection, the Senator from Alabama is recognized.

VISIT TO THE SENATE OF THE SPEAKER OF THE BRITISH HOUSE OF COMMONS

Mr. SPARKMAN. Mr. President, we are honored today with the visit of a distinguished guest. We had the privilege of lunching with him, together with some members of the Committee of Foreign Relations, and we had a very fine discussion.

I should like at this time to present to the Senators the right Honorable Horace Maybray King, the Speaker of

the British House of Commons. [Applause, Senators rising.]

The VICE PRESIDENT. On behalf of the Senate, the Chair is very happy to welcome our distinguished guest.

Mr. SPARKMAN. Mr. President, I ask unanimous consent to have printed at this point in the RECORD a brief biographical sketch of our distinguished visitor.

There being no objection, the sketch was ordered to be printed in the RECORD, as follows:

THE RIGHT HONORABLE HORACE MAYBRAY KING, SPEAKER OF THE BRITISH HOUSE OF COMMONS

Rt. Hon. Horace Maybray King, P.C., B.A., Ph.D., M.P.; British politician; born May 25, 1901; educated at Stockton Secondary School and King's College, University of London. Head of English Department, Taunton's School, Southampton, 1925-46; Headmaster Regents Park School, Southampton, 1947-50; Member of Parliament since 1950; Speaker's Panel, Chairman, 1953-64; Chairman of Ways and Means 1964-65; Speaker of House of Commons since 1965; Vice Chairman, Cultural Committee, Council of Europe, 1960.

Publications: *Selections from Macaulay*, 1933; *Selections from Homer*, 1940; *Selections from Sherlock Holmes*, 1948; *Parliament and Freedom*, 1951.

Mr. MANSFIELD. Mr. President, I suggest the absence of a quorum.

In the meantime, Senators might want to meet the distinguished Speaker of the House of Commons.

The VICE PRESIDENT. The clerk will call the roll.

The assistant legislative clerk proceeded to call the roll.

Mr. MANSFIELD. Mr. President, I ask unanimous consent that the order for the quorum call be rescinded.

The VICE PRESIDENT. Without objection, it is so ordered.

ACM
AUTHORIZATION OF APPROPRIATIONS FOR FISCAL YEAR 1970 FOR MILITARY PROCUREMENT, RESEARCH AND DEVELOPMENT, AND FOR THE CONSTRUCTION OF MISSILE TEST FACILITIES AT KWAJALEIN MISSILE RANGE, AND RESERVE COMPONENT STRENGTH

The Senate resumed the consideration of the bill (S. 2546) to authorize appropriations during the fiscal year 1970 for procurement of aircraft, missiles, naval vessels, and tracked combat vehicles, and research, development, test, and evaluation for the Armed Forces, and to authorize the construction of test facilities at Kwajalein Missile Range, and to prescribe the authorized personnel strength of the Selected Reserve of each Reserve component of the Armed Forces, and for other purposes.

Mr. MANSFIELD. Mr. President, a parliamentary inquiry.

The VICE PRESIDENT. The Senator from Montana will state it.

Mr. MANSFIELD. What is the situation at the moment?

The VICE PRESIDENT. The question is on agreeing to the amendment of the Senator from Maine. All time has expired. The yeas and nays have been ordered.

Mr. STENNIS. Mr. President, a parliamentary inquiry.

The VICE PRESIDENT. The Senator from Mississippi will state it.

Mr. STENNIS. Under the unanimous-consent agreement, is it not true that all time for debate has expired?

The VICE PRESIDENT. That is true. Mr. STENNIS. Mr. President, a further parliamentary inquiry.

The VICE PRESIDENT. The Senator from Mississippi will state it.

Mr. STENNIS. That being true, is not the next step, under the unanimous-consent agreement, to call the roll for a yeas-and-nays vote on the amendment?

The VICE PRESIDENT. The Senator is correct.

Mr. STENNIS. I call for the regular order.

The VICE PRESIDENT. The time can be extended by unanimous consent.

Mr. SYMINGTON. Mr. President, a parliamentary inquiry.

Mr. STENNIS. I call for the regular order.

Mr. SYMINGTON. Mr. President, a parliamentary inquiry.

The VICE PRESIDENT. The Senator from Missouri will state it.

Mr. SYMINGTON. After the vote on this amendment, will it be in order to offer another amendment?

The VICE PRESIDENT. It will be in order after time on amendment No. 101 has expired.

Mr. SYMINGTON. I thank the Chair. I call for the vote.

Mr. STENNIS. The regular order, Mr. President.

The VICE PRESIDENT. The clerk will call the roll.

The assistant legislative clerk called the roll.

The result was announced—yeas 11, nays 89, as follows:

[No. 64 Leg.]		
YEAS—11		
Alken	McGovern	Saxbe
Fulbright	Muskie	Smith
Gore	Nelson	Young, Ohio
McCarthy	Ribicoff	
NAYS—89		
Allen	Fong	Mondale
Allott	Goldwater	Montoya
Anderson	Goodell	Moss
Baker	Gravel	Mundt
Bayh	Griffin	Murphy
Bellmon	Gurney	Packwood
Bennett	Hansen	Pastore
Bible	Harris	Pearson
Boggs	Hart	Pell
Brooke	Hartke	Percy
Burdick	Hatfield	Proxmire
Byrd, Va.	Holland	Randolph
Byrd, W. Va.	Hollings	Russell
Cannon	Hruska	Schweiker
Case	Hughes	Scott
Church	Inouye	Sparkman
Cook	Jackson	Spong
Cooper	Javits	Stennis
Cotton	Jordan, N.C.	Stevens
Cranston	Jordan, Idaho	Symington
Curtis	Kennedy	Talmadge
Dirksen	Long	Thurmond
Dodd	Magnuson	Tower
Dole	Mansfield	Tydings
Dominick	Mathias	Williams, N.J.
Eagleton	McClellan	Williams, Del.
Eastland	McGee	Yarborough
Ellender	McIntyre	Young, N. Dak.
Ervin	Metcalf	
Fannin	Miller	

So the amendment (No. 122) offered by Mrs. Smrrh as a substitute for the Cooper-Hart amendment was rejected.

The VICE PRESIDENT. It is the understanding of the Chair that the time remaining on the amendment of the

Senator from Michigan recurs as the order of business. The proponents have 44 minutes remaining. The opponents have 58 minutes remaining. Pending the expiration of the agreed-upon time on the amendment of the Senator from Michigan, no further amendments will be in order except by unanimous consent.

Mr. STENNIS. Mr. President—

The VICE PRESIDENT. The Senate will be in order.

Mr. STENNIS. Mr. President, I move to reconsider the vote by which Mrs. SMITH's amendment (No. 122) was rejected.

Mr. TOWER. Mr. President, I move that the motion to reconsider be laid on the table.

The motion to table was agreed to.

Mr. STENNIS. Mr. President, I had asked for recognition. Has the Chair ruled on the tabling motion?

The VICE PRESIDENT. The motion to lay on the table was agreed to.

Mr. STENNIS. Mr. President, I yield now 20 minutes to the Senator from Rhode Island (Mr. PASTORE).

The VICE PRESIDENT. The Senator from Rhode Island is recognized for 20 minutes.

Mr. JAVITS. Mr. President, before the Senator does that, would he yield? Would someone yield me 30 seconds for a parliamentary inquiry? I think the Chair said something we want to hear about.

Mr. STENNIS. Mr. President, I have the floor.

The VICE PRESIDENT. The Senator from Mississippi has the floor.

Mr. JAVITS. Would the Senator allow us just to make a parliamentary inquiry?

Mr. STENNIS. Mr. President, I want to be courteous to the Senator. I do not know the nature of this matter. We had a recess a moment ago. I asked the Senator from Rhode Island to wait and that I would yield him time.

Mr. JAVITS. The Chair said something about no further amendments, which I think perhaps we should have clarified. We certainly should know the whole story.

The VICE PRESIDENT. Does the Senator from Rhode Island yield to the Senator from New York?

Mr. PASTORE. I yield 30 seconds to the Senator from New York.

The VICE PRESIDENT. The Senator from New York is recognized for 30 seconds.

Mr. JAVITS. Mr. President, a parliamentary inquiry.

The VICE PRESIDENT. The Senator from New York will state it.

Mr. JAVITS. The Chair just stated something about other amendments, which we did not understand. Would the Chair please clarify his statement?

The VICE PRESIDENT. The Chair stated that pending the expiration of the agreed-upon time on the amendment of the Senator from Michigan, no further amendments would be in order except by unanimous consent.

Mr. JAVITS. I thank the Chair, and I thank the Senator from Rhode Island.

Mr. PASTORE. Mr. President, may we have order?

The VICE PRESIDENT. The Senate will be in order. Please, gentlemen, may we have order in the Senate?

The Chair has no intention of allowing the proceedings to continue until there is order in the Senate.

Please, gentlemen.

The Senator from Rhode Island.

Mr. PASTORE. Mr. President, the challenge of our time is peace—

Mr. STENNIS. Mr. President, would the Chair keep the Senate in order so that those who wish to hear may hear?

The VICE PRESIDENT. The Chair is doing his best.

Mr. STENNIS. Yes.

Mr. PASTORE. Mr. President, the challenge of our time is peace—an honorable peace—and to avert, if possible, a nuclear and a thermonuclear holocaust.

The Senate may be divided on some matters, but certainly there is no division among us on the basic purpose—

The VICE PRESIDENT. Will the Senator withhold for a moment?

Please, gentlemen, may we have order in the Senate?

Will those not having business on the floor kindly clear the Chamber?

The Senator from Rhode Island.

Mr. PASTORE. Mr. President, this Senate may be divided on some matters, but certainly there is no division among us on the basic purpose of American policy. It has always been, and still is, our goal to achieve a just and lasting peace.

We do not apologize for American efforts to support and to encourage a decent peace, and the United States of America has always been in the forefront seeking to limit and to reduce world armaments.

To be more specific, Mr. President, in 1946, under the administration of President Truman, when we had a monopoly on all atomic weapons, we offered, under the Baruch plan, to internationalize the atom and to share the hopeful possibilities of the nuclear age with the entire world.

Regrettably, we were summarily rebuffed by the Soviets. The Kremlin, instead of accepting our offer, proceeded with a hard-driving nuclear weapons program of its own, leaving us no alternative but to develop a strong Western nuclear deterrent.

Notwithstanding this, the United States, under President Eisenhower, under President Kennedy, under President Johnson, and now under President Nixon, has always vigorously pursued our aim of achieving understandings and agreements in arms control and in disarmament.

Now, gentlemen, let us face it. The only real solution to the mad race in armaments is limitation of all weapons.

In this day and age, with the world the way it is, complex and troubled as it is, it is not a question so much of what we want. The big question is, How do you get it?

We have made some small progress. The Nuclear Test Ban Treaty was achieved in 1963, and now, today, we are awaiting the ratification by the Soviets of the Nonproliferation Treaty, which they have not yet done.

In pursuance of my official duties as a member of the Joint Committee on Atomic Energy since 1962, I was much involved in the discussions and developments on the Nuclear Test Ban Treaty. And I stood on this floor side by side with the Senator from Arkansas and urged the Senate to ratify that treaty. I attended all the hearings in consideration of that treaty, even going, at the behest of President Kennedy, to Moscow in August of 1963 to witness its signing.

As for the Nonproliferation Treaty, Senators will recall that I introduced the resolution calling on President Johnson to exert every possible effort to bring about a treaty, and that that treaty was reported by the Joint Committee on Atomic Energy and was ratified on this floor by a vote of 84 to 0.

So let no one say here that I am not for peace and that I am not for disarmament.

We must admit that these achievements are small steps. Yes, we are thankful and grateful for them, but, by the same token, we have got to admit that it just is not enough. It just is not enough. We need more, and much more.

Unfortunately, we have learned by bitter experience that the process of limiting world armaments on any reliable basis is a long and tedious and difficult task.

Now, why am I for a defense system and why do I support the committee's recommendation?

Mr. President, I am not a late-comer to the conviction that an anti-ballistic-missile system is necessary for our security, nor are my convictions the result of the process of association, that if A is for it, I can be for it, and if B is against it, I should be against it. My conviction is my position is predicated on my own study, my own attendance at hearings, my own hearing at briefings from all of the responsible authorities of this Government.

In December of 1964, as chairman of the Joint Committee on Atomic Energy, I visited our establishment at Livermore, Calif., the place where we conduct all of our experiments and most of our experiments in weapons. And while I was there in 1964 they showed me a photograph of a missile that looked like a defense missile. They did not know for sure what it was, but it had all the appearance and it had all the characteristics of being an antiballistic missile. We were not sure. So we studied it, and we called John McCone in, who came in before our committee, and we called in all our authorities, whether it was from the Defense Department, Atomic Energy Commission, Los Alamos, Livermore, or anywhere else. They confirmed the fact that it was an antiballistic missile.

I will tell the Senate how they got it in 1964. In 1958 we began an "informal moratorium" on testing in the atmosphere with the Russians. We did not test and they did not test. At that time we were negotiating for a nuclear test ban treaty.

We pursued that plan under John F. Kennedy, but on August 30, 1961, while our negotiators were in Geneva talking with the Russians, they broke the mora-

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torium and conducted 50 atmospheric tests with a total yield of about 120 megatons, and that is when they detonated their terror bomb—a 55-to-60 megaton blast when they developed the atomic warhead for their antiballistic missile—and we did nothing.

In 1963, at the invitation of President Kennedy, I went to the White House. At that time, we were considering the multilateral naval force for the Atlantic Alliance. We had a long discussion.

Finally I asked him, "Mr. President, what will we do when Red China becomes a nuclear power?"

President Kennedy hesitated. He looked me straight in the eye, and then he said:

John, at that time we will have to reappraise the balance of power in the world.

One year and a half after that March meeting in 1963, on October 16, 1964, the Chinese, by surprise and before all expectations, detonated a nuclear device; and since then, they have had eight nuclear tests some of which have been of a thermonuclear nature, even superior to the efforts of the French who did not achieve a thermonuclear device, until last summer.

Those are the facts. We held hearings before our Joint Committee to find out what the threat of China was to our national security. We published a report, and then I was invited to speak at the launching of the *Narwhal* submarine at Groton, Conn. This was in September of 1967. I stood up and called upon the administration to go full-steam ahead, in view of the accomplishment of the Russians and of the Chinese, to work out an antiballistic missile defense system.

This, as I say, was in September 1967, after President Johnson had met with Kosygin at Glassboro in June of 1967, 3 months before. Senators will remember that. They met at Glassboro to talk about disarmament, and they met at Glassboro to talk about an antiballistic missile, and how we could bring it under control. Will you ever forget? Kosygin left Glassboro and went to New York, and held a news conference. At that news conference, he rebuffed us completely, and said:

Nothing doing; you can fly a kite as far as I am concerned, unless you get out of Vietnam unilaterally.

And that is where we stand.

In 1968, we authorized the antiballistic missile. Up to that time there had been no talks, and there had been no willingness to talk on the part of the Russians. But when we passed the authorization on June 24, 1968, within 3 days the Soviets announced they were ready to talk.

I am not saying that that action of the Senate is what induced them to talk, but all I am saying is, is it not an extraordinary coincidence? Is it not extraordinary that the minute we show we mean it, then they begin to respect us?

But I ask Senators to recall, after they broke that self-imposed moratorium in 1961, how long after that did we have the Cuban crisis? We had that in October of 1962, and I should like to ask my friends here who say, "Let us trust the

Russians," what made Khrushchev dare to put those missiles on Cuba? What daring made him do it? And why did he take them off? Because John Kennedy stood up. John Kennedy, who spent \$800 million on the antiballistic missile in 1961, 1962, and 1963. He spent \$285 million in 1961, \$287 million in 1962, and \$278 million in 1963.

Now some are calling it a boondoggle. Well, I say to my friends who like to quote John F. Kennedy, I never considered him a boondoggler. He spent \$800 million on the antiballistic missile. That is how much he thought it would not work.

I say to my friends who say this cannot work, "Well, now, the Russians have deployed 67 around Moscow. I know that the Kremlin is crafty and cunning, but they are not stupid. They are not putting their money in 67 weapons that will not work."

I am asking my friends, if the Russians put their money in an anti-ballistic-missile that they think will work, then why cannot we? Here is the Nation that was first to split the atom. Here is the Nation that was first to put a man on the moon. Why do we sell American science short? What is this inferiority complex about the superiority of American science? If they can do it, why cannot we do it? We put a man on the moon, did we not? John Kennedy in 1961 said, "We will put a man on the moon first," and we did, in 1969.

But did we leapfrog to our first jump to the moon? Of course not. We had to send Alan Shepherd up, in May of 1961, and he was up there for 15 minutes and 13 seconds. If we had not sent him up for 15 minutes and 13 seconds, we would never have put a man on the moon in July of 1969.

For some reason, if one is for the ABM, he must prove that it is the ultimate. When has that ever happened? Does anyone believe we would have the modern Lincoln Continental if we had never had the first flyver? Of course not.

Mr. JACKSON. Mr. President, will the Senator yield?

Mr. PASTORE. I yield.

Mr. JACKSON. Mr. President, I should like to ask the Senator if he is aware that, in 1962, it was said that the lunar orbital rendezvous technique would be a poor way to send a man to the moon, that it would not work, that it would involve too great risks for the lives of the astronauts, and so on. Is the Senator aware that the man who said that was Dr. Jerome B. Wiesner, the science adviser to President Kennedy? Fortunately, President Kennedy did not follow the counsel of Dr. Wiesner on that issue. Dr. Wiesner is now the leading opponent of the ABM. President Kennedy followed the advice of the responsible technical experts in NASA.

Mr. PASTORE. The best way I can answer that is that Jerome Wiesner—and he is a good friend of mine; I know all about Jerome. He was the scientific adviser to President Kennedy in 1961, 1962, and 1963; and while he was scientific adviser, John Kennedy spent \$800 million on the ABM. So it is either one of two things: He was either advising

Kennedy wrong, or Kennedy was not listening to him. [Laughter.]

I mean, there you are. I studied geometry. [Laughter.]

You cannot have it both ways.

I will admit that this is not the ultimate answer, and I do not think we should have to prove that it is.

Let me tell you something else, about taking care of the poor. Here is one man who apologizes to no one about taking care of the poor. I stood on this floor alone and offered an amendment to override the House of Representatives and override my Appropriations Committee by increasing a cut that the House made, and was sustained by the Appropriations Committee on an amendment to raise it by \$225 million.

Let nobody tell me that I am taking bread out of the mouths of the hungry in order to get the bomb. Let him tell that to somebody else.

Furthermore, who ever said we had to make a choice? After all, if we need the ballistic missile for the security of the Nation, let us have it. If we do not need it, let us do away with it. That was the purpose of the Smith amendment. If we do not need it, let us do away with it. Let us be honest about it.

The only question is: Will it work? I have already covered that ground. It is said that the ballistic missile is expensive. Everything is expensive. What are we talking about in the bill? A difference of \$345 million. Yet we spend almost \$500 million in Vietnam every week. If we can spend \$500 million on strangers to keep them free, why can we not spend \$345 million to save our American population? We are not so poor that we have to give up the security of our country.

Who ever said I had to make a choice between my father and my mother? Why can I not have security and feed the poor, as well? Can we not do that in America? Why should it be a question of one against the other? What good is it to have a full belly if the Russians and the Chinese are going to take us over? What good is it?

Now as to the miracle of our time: Today is the 24th anniversary of the dropping of the atomic bomb on Hiroshima—August 6, 1945. To me it is a miracle that no country has ever done such a thing since then. But why not? We had a monopoly in 1946. Now there are five members of the "nuclear club"—the United States, Great Britain, the Soviet Union, France, and Red China. That is the problem; that is the dilemma.

Do we want to sit back and rely on the intransigence of the Russians? I say we should go ahead and do it. I say, "OK, let us talk."

John Kennedy said:

Let us never negotiate out of fear. But let us never fear to negotiate.

I asked President Nixon point blank: "Will this deter you or interfere with your talks on disarmament?"

He told me categorically: "This will help me. It will strengthen my hand."

The VICE PRESIDENT. The time of the Senator from Rhode Island has expired.

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Mr. PASTORE. May I have 5 additional minutes?

Mr. STENNIS. Mr. President, I yield 5 additional minutes to the Senator from Rhode Island.

Mr. PASTORE. So I say to my friends: That is why I am for the antiballistic missile. It is not my job to sell this, and I do not intend to sell it. I do not expect to persuade or to influence any Senator's vote.

I do not care whether one is for or against it. I will say this for us: we are all sincere. This is a matter of judgment, conviction, and conscience.

Let me say that this idea that if one is for the ABM, he is a stooge or the captive of the industrial complex and that if one is against it, he is blind to the perils in the world is nonsense.

Every Senator in the Chamber understands the perils in the world. We are, of course, in disagreement as to how we meet and overcome the problem.

I say we cannot do it by just wishing for it. And I am hopeful for the day when we can take every missile and smash each one into junk. I hope for the day when we can take every bomb and dismantle each one of them.

I detest the day when the bomb became technically feasible. The bombs that fell on Hiroshima and Nagasaki were a scourge of mankind. I do not want to see another one dropped.

All I want to see us do is what we must do to prevent a holocaust. There is only one way to do that, and that is to assure the credibility of our deterrent power so that they will not take that chance. That is all we are doing. All we are talking about is a defensive weapon. It is a weapon that will not go off until they send—God forbid—one of their bombs and we have to stop it. Otherwise, we will not have to use an antiballistic missile.

The sad part of it is that I will never be able to prove my case. I never want to prove it. I pray to God that I will never have to prove I am right, because at that time it will be too late.

Let me tell the Senate that we can build all the antiballistic missiles we want to and we can build all the offensive missiles we want to. But if this thing ever lets go, God help us all.

I find no comfort in the fact that we can kill 150 million Russians on a second strike after they have killed 50 million Americans on a first strike.

I am not interested in the numbers game. I love humanity right down to the last individual. We have to save humanity. And if we are going to bring back our forces from the rest of the world, if we are not going to continue killing our soldiers, and if we are to begin to mind our own knitting, then let us begin to mind our own skin. That is what I am talking about.

Let me conclude by saying that whatever the vote of the Senate is, I shall abide by it.

My only prayer this afternoon, and I say this with all my heart, is that I hope, whatever decision we make, it will be for the sake of the security of this country and for the future of our people.

Mr. President, I ask unanimous consent to have printed at this point in the

RECORD an excerpt from the report of the Joint Committee on Atomic Energy entitled "The Impact of Chinese Communist Nuclear Weapons Progress on U.S. National Security," and a chronology of events relating to atomic weapons and disarmament matters.

There being no objection, the material was ordered to be printed in the RECORD, as follows:

IMPACT OF CHINESE COMMUNIST NUCLEAR WEAPONS PROGRESS ON U.S. NATIONAL SECURITY

One of the crucial matters affecting U.S. national security is the development by foreign nations of nuclear weapons and the accompanying delivery systems. The present nuclear threat to the United States and the free world comes from the Soviet Union and Communist China. In order properly to understand the scope and magnitude of this threat, the Joint Committee has over the years held executive hearings at which nuclear weapons experts have charted the progress of foreign nations as they developed and refined their nuclear arsenals.

The emergence of a serious threat from the Chinese Communists began in 1964. In a brief span of less than 3 years, Red China has had six nuclear tests. The last one on June 17, 1967, was in the megaton range and indicated that they were making rapid progress in thermonuclear design. They are also making progress in the development of delivery vehicles for megaton weapons. The internal strife in Red China appears to have had little, if any effect on their nuclear weapons program to date.

The trends in nuclear weapons development by foreign nations have been followed closely by the Joint Committee. These trends have been borne out by subsequent events. Progress, particularly by Red China, has been more rapid and surprisingly more effective than had been expected or indeed predicted.

The nuclear and thermonuclear capabilities of the Soviet Union are generally well known and understood by the American public. The Joint Committee's intention in this report is to bring into perspective the accomplishments and possible future trends in the development of Red China's nuclear offensive force.

BACKGROUND

As the nuclear threat posed by the Chinese Communists became more pronounced, Chairman Pastore decided to conduct a special inquiry regarding Chinese Communist nuclear weapons development. This probe began on January 11, 1967, and was formally announced at the Joint Committee's first public hearing of the 90th Congress on January 25, 1967.

In connection with this study the Joint Committee received the following testimony in executive session:

January 11, 1967: Richard Helms, Director of the Central Intelligence Agency.

February 1, 1967: Dr. Norris Bradbury, Director, Los Alamos Scientific Laboratory, and Dr. Michael May, Director, Livermore Radiation Laboratory.

Mar. 13, 1967: Secretary of State Dean Rusk.

July 13, 1967: Representatives of the Department of Defense, CIA, and AEC.

These witnesses presented testimony concerning advances being made by Communist China in developing nuclear weapons as well as their progress in developing the capability to deliver these weapons against neighboring countries or the United States.

Detailed technical presentations were heard concerning each individual Chinese Communist nuclear test and an assessment was made of future developments by Red China in the field of nuclear weapons and associated delivery systems.

An analysis of the impact of the emergence of Red China as a nuclear power on U.S. foreign policy with particular emphasis on the proposed nonproliferation treaty was also presented.

Information concerning French and Soviet nuclear weapons and delivery methods were also discussed but principal emphasis was on Red China.

CONCLUSIONS

On the basis of various hearings we have had and studies made by the Joint Committee, the following committee conclusions have been developed:

1. Chinese nuclear weapons capabilities

The Chinese Communist test of June 17, 1967, at the Lop Nor Nuclear Test Site was her sixth nuclear test in the atmosphere and her first in the megaton range. Such a test was expected because of the success of the preceding thermo-nuclear experiment conducted on December 28, 1966. The Chinese purposely may have limited the yield of that test—their fifth test—to keep the fallout in China at an acceptable level. The fifth test indicated that the Chinese had taken a major step toward a thermonuclear weapon.

There is evidence that the sixth test device—with a yield of a few megatons—was dropped from an aircraft.

Analysis of the debris indicates use of U^{235} , U^{238} , and thermonuclear material. As in the other tests, there is no evidence that plutonium was used. The preliminary indication is that a considerable improvement accompanied the increase in yield. A large amount of U^{238} was used in the device.

The sixth Chinese nuclear test has confirmed the conclusion reached from the analysis of the fifth Chinese nuclear test that they are making excellent progress in thermonuclear design. They now have the capability to design a multimegaton thermonuclear device suitable for delivery by aircraft.

We believe that the Chinese will continue to place a high priority on thermonuclear weapon development. With continued testing we believe they will be able to develop a thermonuclear warhead in the ICBM weight class with a yield in the megaton range by about 1970. We believe that the Chinese can have an ICBM system ready for deployment in the early 1970's. On the basis of our present knowledge, we believe that the Chinese probably will achieve an operational ICBM capability before 1972. Conceivably, it could be ready as early as 1970-1971. But this would be a tight schedule and makes allowance for only minor difficulties and delays. We believe that the Chinese have already completed the development of a medium range ballistic missile. We have no indication of any deployment.

We also believe that by about 1970 the Chinese Communists could develop a thermonuclear warhead with a yield in the few hundreds of kilotons in the MRBM class and that they could develop an MRBM warhead with a megaton yield about a couple of years later. Meanwhile, should they desire a thermonuclear bomb for delivery by bomber, they could probably begin weaponizing the design employed in the sixth test.

The missile-delivered fourth Chinese test demonstrated that the Chinese now have the capability to design a low yield fission warhead compatible in size and weight with a missile. With a few tests, the Chinese could probably design an improved fission weapon for MRBM or bomber delivery. However, they may forego extensive fission weapon production in order to have materials and facilities available for thermonuclear weapon systems.

The Chinese bomber forces consist of a few hundred short-range jet bombers and a handful of somewhat longer range bombers. We have no knowledge of a Chinese plan to develop heavy intercontinental range bombers.

Earlier, the Communist Chinese conducted four other nuclear detonations:

October 16, 1964: Low yield (up to 20 kilotons).

May 13, 1965: Low intermediate (20 to 200 kilotons).

May 9, 1966: Intermediate (lower end of 200 to 1,000 kiloton range).

October 27, 1966: Low intermediate (20 to 200 kilotons).

The Chinese were able to continue their nuclear program after the Soviets apparently ceased technical assistance in this area by 1960, and detonated a uranium device in October 1964.

All of the Chinese detonations have utilized enriched uranium (U^{235}) as the primary fissionable material. Uranium-238 was also present in all tests. The detonation of any device which also contains U^{238} results in some fissioning of the U^{238} . The debris from their third and fifth tests indicated some thermonuclear reactions had involved lithium-6 in those devices.

We believe that the Chinese are interested in the development of submarines equipped with suitable relatively long-range missiles; at this time we have not determined the exact nature or status of the program.

2. French nuclear test program

Turning to the French nuclear test program, in February 1960 the French tested their first atomic device. In 1966 the French conducted five nuclear tests. In 1967 they held a short series of three tests. Another series of tests is planned for next summer. All of the 1966 tests were plutonium fission devices. The last two tests in 1966 were experiments aimed at the thermonuclear development.

The year's tests were conducted on June 5, June 27, and July 2. They were suspended by balloons, above the Mururoa Lagoon. The tests all had low yields. The French announced that all of the tests were to be of triggers for thermonuclear devices which the French still have not tested.

Although French officials continue to state publicly that France will detonate her first thermonuclear device in 1968 when enriched uranium becomes available, there have been hints in the press that France is having her difficulties with its program. Should this be true, the first generation of both the land-based and submarine-launched missile systems might have to use warheads developed in the 1966 series.

To recapitulate, the Chinese are well ahead of the French in thermonuclear weapon design. In 2½ years and six tests the Chinese have successfully tested a multimegaton thermonuclear device. The French, on the other hand, have conducted many more tests over a 7-year period and have not yet tested a true thermonuclear device or achieved a megaton size yield.

The French have developed higher yield fission weapons than the Chinese. The French have achieved yields of up to 250 kilotons while the Chinese fission devices have had lower yields.

The French now have an operational strategic force of about 60 Mirage IV aircraft with a stockpile of 60 to 70 KT nuclear weapons. At this time the Chinese do not have such an operational strategic force.

SUMMARY

The Joint Committee believes that the American public needs to know the threat that is posed by Red China. Communist China has emerged with a fledgling, but effective, nuclear weapons capability. This capability has and will continue to have a great effect on U.S. foreign policy in the Far East. It will have an effect on our relations with the South East Asia Treaty Organization. It will have an effect on the nonproliferation treaty principally because of the close connection between Chinese nuclear power and the national security of India. Its effect will

also be felt by Japan. Moreover, the Chinese Communists could use nuclear blackmail to assert their position not only broadly in Asia, but specifically in Southeast Asia.

Perhaps most significant for the United States is the fact that a low order of magnitude attack could possibly be launched by the Chinese Communists against the United States by the early 1970's. At present we do not have an effective anti-ballistic-missile system which could repel such a suicidal (for the Chinese) but nevertheless possible strike.

It is for these reasons that the Joint Committee feels the assessment it has made, based upon information received in executive sessions, should be brought before the American public—not to overemphasize or to underplay but to state clearly and concisely with due regard for the protection of intelligence sources where we stand in relation to this emerging threat to our national security.

SIGNIFICANT DATES IN ATOMIC WEAPONS DEVELOPMENT AND SUBSEQUENT TEST BAN AND NONPROLIFERATION NEGOTIATIONS

DATES OF CERTAIN NUCLEAR WEAPONS EXPLOSIONS

July 16, 1945: First U.S. nuclear device test, Alamogordo, N. Mex.

August 6, 1945: First atomic bomb dropped on Hiroshima.

August 9, 1945: Second atomic bomb dropped on Nagasaki.

August 29, 1949: First Soviet atomic test.

October 3, 1952: First nuclear bomb test by the United Kingdom.

November 1, 1952: Hydrogen device fired at Eniwetok by United States.

August 21, 1953: First hydrogen device tested by U.S.S.R. detected by United States.

February 13, 1960: First French atomic test.

October 16, 1964: First Chinese atomic test.

DATES OF NEGOTIATIONS OF DISCONTINUANCE OF NUCLEAR WEAPON TESTS

June 14, 1946: U.S. proposal for international control of atomic energy (Baruch plan).

June 19, 1946: U.S.S.R. proposed alternate plan including insistence on retention of Security Council veto power over any control system.

March 24, 1957—Bermuda declaration: Joint declaration by the United States and the United Kingdom to conduct nuclear tests in such a manner as to keep world radiation from rising to more than a small fraction of the level that might be hazardous to continue to announce test series, also expressed willingness to announce tests to the U.N. and permit international observation if the U.S.S.R. would do the same.

November 14, 1957—General Assembly Resolution 1148 (XII): Regulation, limitation, and balance reduction of all armed forces and all armaments; conclusion of an international convention (treaty) on the reduction of armaments and the prohibition of atomic, hydrogen, and other weapons of mass destruction. Among its provisions, this resolution urged the immediate suspension of testing of nuclear weapons with prompt installation of effective international control, including inspection posts equipped with appropriate scientific instruments located in the United States, the Soviet Union, and the United Kingdom, and at other points as required.

December 10, 1957: Soviet proposal that U.S.S.R., United States, and United Kingdom discontinue all tests as of January 1, 1958.

March 31, 1958: Decree of the Supreme Soviet concerning the discontinuance of Soviet atomic and hydrogen weapons tests.

April 28, 1958: President Eisenhower by letter to Khrushchev proposed that both nations have the technical experts start to work on the practical problems involved in

disarmament, particularly working toward the suspension of nuclear testing. President Eisenhower stated: "I reemphasize that these studies are without prejudice to our respective positions on the timing and interdependence or various aspects of disarmament."

May 9, 1958: Letter from Khrushchev accepting Eisenhower's proposal of April 28 to have experts study the problems involved in an agreement on the cessation of atomic and hydrogen weapons tests as far as inspection and control are concerned.

July 1, 1958: Conference of Experts from the West (United States, United Kingdom, Canada, and France) and East (U.S.S.R., Czechoslovakia, Poland, and Rumania) met in Geneva.

August 21, 1958: Conference of Experts adopted a final report for consideration by governments. Conference of Experts recommended the so-called Geneva system of detecting nuclear explosions. This system recommended a network of 180 control points. It should be noted that the American representatives, during this Conference, had taken the position that 650 control points would be necessary to have adequate protection down to 1 kiloton. Through compromise with the Soviets, they settled on the 180 stations, but then had to point out the weakness between the area of 1 and 5 kilotons.

August 22, 1958: President Eisenhower announced that based on the Conference of Experts' report, the United States was prepared to negotiate an agreement with other nations which have tested nuclear weapons for suspension of nuclear weapons tests and the establishment of an international control system.

The President also indicated that the United States would withhold further testing on its part of atomic and hydrogen weapons for a period of 1 year from the beginning of the negotiations unless testing is resumed by the Soviet Union.

October 31, 1958: First meeting in Geneva of the Conference on the Discontinuance of Nuclear Weapons Tests.

November 4, 1958—General Assembly Resolution 1252 (XIII): The discontinuance of atomic and hydrogen weapons tests. Among its provisions, this resolution urged the parties involved in the test-ban negotiations not to undertake further testing of nuclear weapons while these negotiations are in progress. It expressed the hope that the Geneva test-ban conference would be successful and lead to an agreement acceptable to all. It also requested the parties concerned to report to the General Assembly the agreement that might be the result of their negotiations; and requested the Secretary General to render such assistance and provide such services as might be asked for by the conference commencing at Geneva on October 31, 1958.

November 7, 1958: President Eisenhower announced that the United States had detected additional tests by the Soviets subsequent to October 31, 1958.

December 28, 1958: The President appointed a panel on seismic improvement to review technical problems and to recommend methods of improving seismic detection.

January 5, 1959: United States released data showing many underground tests could not be detected by Geneva experts system recommended in 1958. Indicated Geneva system applicable at 20-kiloton rather than 5-kiloton threshold.

February 22, 1959 to March 2, 1959: Macmillan meeting with Khrushchev. During this meeting Macmillan and Khrushchev discussed the establishment of quotas for numbers of onsite inspections in countries where suspicious events have taken place.

April 13, 1959: United States proposed phased testing ban limited in first phase to atmospheric tests below 50 kilometers, with simplified control system, if Soviet Union

continued to insist on veto for onsite inspections.

April 23, 1959: Soviets reject U.S. proposal to stop only atmospheric tests and said numerous onsite inspections would not be necessary for complete ban.

June 22, 1959 to July 10, 1959: Technical Working Group No. 1 met in Geneva to study high-altitude detection problems. On July 10 Geneva Technical Working Group I proposed establishment of system of earth satellites and installations of additional equipment at control posts to detect high-altitude explosions.

August 26, 1959: United States extended unilateral suspension to end of 1959.

August 27, 1959: United Kingdom said it would not resume tests as long as Geneva negotiations showed prospect of success.

August 28, 1959: U.S.S.R. pledged not to resume testing unless Western Powers did so.

November 21, 1959—General Assembly Resolution 1402 (XIV): Suspension of nuclear and thermonuclear tests. Among its provisions this resolution expressed the hope that the countries involved in the test ban negotiations at Geneva would intensify their efforts to reach an agreement at an early date; it further urged the countries concerned in these negotiations to continue their voluntary ban on testing nuclear weapons; it also requested the countries concerned to report to the General Assembly the results of their negotiations.

November 25, 1959: Technical Working Group II met in Geneva with the Soviets and the British. This group met to consider data from the Hardtack series of nuclear explosions and the findings of the Berkner panel. On December 18, 1959, at the conclusion of the meetings held by Technical Working Group II, U.S. members of Geneva, Technical Working Group II reported that a large number of seismic events could not be identified without on-site inspection, even with improved techniques. The Soviet members of Geneva Technical Working Group II disagreed with U.S. finding.

December 29, 1959: United States said it was free to resume testing after end of 1959 but would not do so without giving advance notice.

February 11, 1960: United States proposed phased agreement, first phase to provide for cessation of tests in atmosphere, oceans, and outer space, to greatest height that could be effectively controlled; underground tests above 4.75 seismic magnitude (estimated by United States to equal explosion of about 20 kilotons) would also be covered; the 4.75 threshold would be lowered as capabilities of detections system were improved, 20 or 30 percent of unidentified seismic events above threshold should be inspected. United States experts estimated that this would mean about 20 inspections per year in U.S.S.R.

March 19, 1960: Soviets offered to conclude treaty on cessation of tests, together with moratorium on underground tests below magnitude 4.75, and to agree to point research program on understanding that weapons tests would be halted during program.

March 29, 1960: United States and United Kingdom said they would agree to voluntary moratorium on underground weapons tests below magnitude 4.75 after treaty was signed and arrangements were made for coordinated research program.

December 20, 1960—General Assembly Resolution 1577 (XV): Suspension of nuclear and thermonuclear tests. This resolution urges the countries involved in the Geneva test-ban negotiations to seek a solution for the few remaining questions so that a test-ban agreement could be achieved at an early date; it further urges the countries concerned in these negotiations to continue their present voluntary suspension of the testing of nuclear weapons; it also requests the countries concerned to report the results

of their negotiations to the Disarmament Commission and the General Assembly.

March 21, 1961: First meeting under the new administration of the Geneva Conference on Discontinuance of Nuclear Weapons Tests. United States proposal presented by Ambassador Arthur H. Dean, Soviet Union introduced its troika proposal on this date.

April 18, 1961: United States and United Kingdom introduced draft treaty to the Geneva Conference.

May 5, 1961: Statement by President Kennedy on the Geneva test-ban negotiations made at his news conference. Mention is made of the new United States and United Kingdom proposals and the introduction of the troika proposal by Russia.

June 4, 1961: Khrushchev delivers Soviet aide-memoire concerning disarmament and nuclear weapons tests to President Kennedy at Vienna. Insists the question of control hinges on Western Powers accepting proposals on general and complete disarmament.

June 6, 1961: Kennedy reports to American people on his Vienna talks with Khrushchev.

June 6, 1961: Khrushchev reports to Russian people on his talks with President Kennedy. (Tass report topics covered:) General and complete disarmament, banning of nuclear weapons, cessation of tests, question of control. Hammarskjold, the German question (peace treaty).

June 17, 1961: U.S. aide-memoire to Soviet Russia concerning Geneva test-ban negotiations. Repeated new proposals offered by the United States and the United Kingdom on March 21, 1961.

June 28, 1961: President Kennedy announces appointment of Committee of Scientific Experts to advise him on test-ban problem.

July 5, 1961: Soviet note replying to U.S. note of June 17, 1961, concerning suspension of nuclear weapon tests. Says Soviet proposals have been distorted. Brings up again supervision of inspection and control by equal representatives of three basic groups: Socialist states, capitalist states in Western military bloc, and neutral states (troika).

July 15, 1961: U.S. note to Soviet Union referring to the Soviet note of July 5, 1961, on the Geneva test-ban negotiations. Says Soviet note contains a multitude of irrelevant and unwarranted comments. Confines its reply to the central issue: Is the Soviet Union prepared to reach an accord which would halt nuclear tests under effective international control?

July 15, 1961: United States and United Kingdom request to United Nations to place on the agenda the 16th General Assembly an item entitled "The Urgent Need for a Treaty To Ban Nuclear Weapons Tests Under Effective International Control."

July 20, 1961: President announces membership of nuclear test study group.

August 10, 1961: President announces he has reviewed report of Scientific Committee and is sending Ambassador Dean back to Geneva.

August 30, 1961: Soviets announce plans to resume nuclear testing. Among the reasons cited by the Soviets for taking this step were the turn-down of the troika proposal, the nuclear tests carried out by the French beginning February 13, 1960, and the Berlin situation.

August 30, 1961: White House statement on the Soviet's announcement that they planned to resume nuclear testing. This statement expressed concern and resentment in regard to the Soviet decision to resume nuclear testing. It added that the Soviet decision presented a threat to the entire world. It denounced the Soviet pretext for resumption of weapons testing by mentioning that the Berlin crisis was created by the Soviets themselves. It also mentioned that the Soviet Union bears heavy responsibility before all humanity for this decision which was made in complete disregard of the United

Nations. It concluded by announcing that Ambassador Arthur Dean was being recalled immediately from his post as chief negotiator at the nuclear test ban meetings.

September 1, 1961—November 4, 1961: The Soviet Union conducted a series of approximately 50 atmospheric nuclear tests with a total yield of about 120 megatons. The tests were conducted at three different locations in the Soviet Union: Semipalatinsk, Novaya Zemlya, and east of Stalingrad. The series was highlighted by a 55- to 60-megaton detonation on October 31, 1961, despite a resolution adopted October 27, 1961, by the United Nations appealing to the U.S.S.R. to refrain from carrying out their stated intention to explode a device of this yield.

September 3, 1961: President Kennedy, in a joint statement with British Prime Minister Macmillan, proposed that the Soviet Union agree immediately to discontinuing testing nuclear weapons in the atmosphere. The note suggested that the United States, United Kingdom, and U.S.S.R. representatives meet in Geneva not later than September 9 to record the agreement to cease nuclear testing in the atmosphere and report it to the United Nations.

September 5, 1961: President Kennedy announced that the United States would resume nuclear testing. He ordered the tests carried out in the laboratory and underground "with no fallout." This decision was made after the Soviets set off their third nuclear test in the atmosphere in 5 days. President Kennedy, in referring to the Kennedy-Macmillan statement of September 3 on banning nuclear testing in the atmosphere, said the offer remains open until September 9, 1961.

September 15, 1961: The United States detonates its first underground nuclear device since the end of the test moratorium at the Nevada Test Site.

November 2, 1961: The President announces that the policy of the United States will be to proceed in developing nuclear weapons to maintain a superior capability for the defense of the free world against any aggressor. This statement indicated that the United States would make necessary preparations in case it becomes necessary to test in the atmosphere.

December 22, 1961: A joint communique was issued by President Kennedy and Prime Minister Macmillan following a 2-day meeting in Bermuda. They agreed that it was necessary "as a matter of prudent planning for the future, that pending the final decision [to resume atmospheric testing] preparations should be made for atmospheric testing to maintain the effectiveness of the deterrent."

January 29, 1962: Geneva Conference on the Discontinuance of Nuclear Weapons Tests breaks up at 353d meeting. The United States proposed an adjournment, and Soviet negotiator Tsarapkin said, "This is the end."

February 7, 1962: President Kennedy and British Prime Minister Macmillan said they have proposed to Soviet Premier Khrushchev that another supreme effort to halt the nuclear arms race be made by raising next month's 18-nation general disarmament conference to the Foreign Ministers' level.

February 14, 1962: President Kennedy urged Premier Khrushchev not to press his proposal for an 18-nation summit meeting on disarmament. However, he assured the Soviet leader that he was ready to participate "at any stage of the conference when it appears that such participation could positively affect the chances of success."

February 21, 1962: Premier Khrushchev replied to President Kennedy's letter of February 14 still insisting on a summit conference on disarmament.

February 24, 1962: Letter from President Kennedy to Premier Khrushchev. President Kennedy replied to Premier Khrushchev's letter of February 21, 1962, stressing that heads-of-state participation at the Geneva

August 6, 1969

Conference should be reserved until a later stage in the negotiations after preliminary agreements have been reached at the Foreign Ministers' level.

March 2, 1962: President Kennedy announced that he had ordered a resumption of nuclear tests in the atmosphere in late April unless the Soviet Union agrees before then to an "ironclad" treaty banning all tests. The President held out to Khrushchev the promise of a summit conference at which such a treaty could be signed, and also said that a satisfactory treaty would be offered by the West at the disarmament conference opening in Geneva on March 14, 1962.

March 4, 1962: The Soviet Government sent the United States a message delivered to the State Department advising that Foreign Minister Gromyko would go to Geneva. The Kremlin message was reported to have said that Khrushchev had reluctantly accepted the Foreign Minister proposal.

March 14, 1962: 17-nation disarmament conference opened in Geneva. (Originally 18-nation conference, but France did not attend.)

March 15, 1962: The United States, during the Geneva Disarmament Conference, clearly indicated its willingness to drop the 4.75 threshold and to make the test ban treaty, from the outset, complete in its coverage by banning all tests in the atmosphere, outer space, underground, and in the oceans. The response of the Soviet Union to this proposal indicated an unwillingness on their part to accept a treaty with or without the U.S. proposed amendment.

March 16, 1962: Premier Khrushchev announced that Soviet scientists had developed a "global rocket" invulnerable to antimissile weapons and that it rendered obsolete the early warning system of the United States.

April 10, 1962: The White House released a joint United States-United Kingdom statement on nuclear testing appealing to the Soviet Union to agree to a nuclear test ban with adequate safeguards including the principle of international verification. This statement indicated that if such an agreement was not successful then the test series scheduled by the United States for the latter part of April would go forward.

April 10, 1962: Prime Minister Macmillan added a personal message to the joint Anglo-American note to Premier Khrushchev on a nuclear test ban asking him to accept an inspection procedure and "all all the peoples of the world with a new sense of hope."

April 12, 1962: Premier Khrushchev rejects the Kennedy-Macmillan joint statement on nuclear testing.

April 16, 1962: Eight neutral nations appealed to the nuclear powers to persist in their efforts to reach agreement on prohibiting nuclear weapons testing for all time. They suggested establishing a system for continuous observation and control on a scientific and nonpolitical basis, built on existing national network of observation posts.

April 18, 1962: United States offered a three-stage plan for disarmament having as its goal general and complete disarmament and gradual replacement of the armed power of single nations by a strengthened United Nations. The disarming process would be balanced to prevent any state from gaining a military advantage, and compliance with all obligations would be effectively verified.

April 22, 1962: Joint Committee on Atomic Energy in summary-analysis of 1961 Vela hearing, reports that nearly 3 years of research had brought no material progress toward an effective method of detecting clandestine underground tests.

April 25, 1962: First, 1962 U.S. nuclear test in the atmosphere. This test was of an intermediate yield from a plane near Christmas Island. The President approved the resumption on nuclear testing after repeated unsuccessful attempts by the United States to

get the U.S.S.R. to agree to a nuclear test ban treaty with adequate safeguards.

April 26, 1962: Secretary of State Rusk justified the new series of tests on the basis of refusal of the Soviet Union to accept the kind of international verification necessary for a test ban agreement. The Secretary of State referred to President Kennedy's address of March 2 in which he set forth the reasons why a certain number of tests would be necessary in the absence of an international agreement banning nuclear tests with adequate assurances; and, secondly, that it is a major objective of American policy to bring an end to testing immediately and permanently when we were assured that testing had been abolished.

May 1, 1962: France conducts underground explosion of nuclear device in Algerian Sahara.

May 2, 1962: Disarmament talks were resumed in Geneva. British Minister of State John Godber said U.S.S.R. must change its attitude toward verification measures if the world is to have general and complete disarmament.

May 16, 1962: Premier Khrushchev confirmed U.S.S.R. determination to test. He based his decision on the fact that the United States had resumed testing in the Pacific.

June 14, 1962: The 18-Nation Disarmament Conference recesses.

July 12, 1962: Secretary of State Dean Rusk reports that the preliminary Vela results, released by the Defense Department on July 7, offer some promising signs for detecting and identifying nuclear tests but emphasized the new findings cannot be considered a substitute for control posts or on-site inspections.

July 13, 1962: Soviet Union served official notice that it claims the right to be the last nation to carry out nuclear weapon tests.

July 16, 1962: The 18-Nation Disarmament Conference reconvenes in Geneva. The United States proposes discussion of scientific findings, particularly from Project Vela.

July 21, 1962: The Soviet Government announces its decision to resume nuclear tests.

August 1, 1962: President Kennedy stated at his news conference that on the basis of recent technical assessments, the United States can work toward an internationally supervised system of detection and verification for underground testing which will be simpler and more economical than the system which was contained in the treaty which we tabled in Geneva in April 1961. He emphasized that these new assessments do not affect the requirement that any system must include provision for on-site inspection of unidentified underground events.

August 5, 1962: The Soviet Union detonates a nuclear explosion in the atmosphere in the order of magnitude of 30 megatons. This is the first of some 40 tests, continuing until December 25.

August 8, 1962: U.S. Delegate Dean proposed reducing the number of control posts to something like 80—a reduction of more than half. He offered this concession in view of his contention that detecting devices have gone ahead rapidly. Thus, our techniques for detecting sneak tests are much better.

August 9, 1962: Ambassador Dean formally introduces a new proposal for a comprehensive test ban treaty based on a worldwide network of internationally supervised, nationally manned control posts. Provided the Soviets agree to the principle of obligatory on-site inspection, the numbers of control posts and on-site inspections would be substantially reduced from previous U.S. proposals. Ambassador Zorin immediately rejects the new proposal.

August 20, 1962: The U.S.S.R. rejected proposals for a partial nuclear test ban treaty.

¹ The 18-Nation Disarmament Conference now composed of 17 nations. France, an original member withdrew at the beginning of the Conference.

The idea of a halfway treaty was advanced by Brazil, Sweden, and Italy. The proposed treaty would stop atmospheric tests immediately to ease fallout dangers.

August 27, 1962: The United States and Great Britain offered the Soviet Union the choice of an internationally inspected total ban on nuclear weapons tests or an uninspected limited ban. The limited ban would cover tests in the atmosphere, in space and under water pending further negotiations for a treaty to include underground tests, the most difficult to identify.

August 29, 1962: The U.S.S.R. submitted to the Disarmament Conference a formula for halting nuclear weapons tests that the United States and Britain have repeatedly termed unacceptable because of inadequate guarantees and safeguards for inspection of suspicious events.

August 29, 1962: President Kennedy welcomed a Soviet proposal that all nuclear testing cease by January 1. But he reiterated the Western position that an enforceable treaty, complete with inspection provisions, be signed first.

September 7, 1962: The 18-Nation Disarmament Conference recesses, but the Test Ban Subcommittee remains in session.

October 24, 1962: At the United Nations, Brazil proposes denuclearization of Latin America and Africa which would include a ban on nuclear weapon tests in these continents.

November 4, 1962: President Kennedy announces the end of the current series of atmospheric nuclear tests, but states that underground tests will be continued in Nevada. The last atmospheric detonation was November 4, 1962.

November 6, 1962: The General Assembly adopts a two-part resolution on nuclear tests. Part (A), sponsored by 37 powers and approved by a vote of 75 to 0 with 21 abstentions, calls for the cessation of testing by January 1, 1963, and an interim arrangement with certain assurances if no final agreement is achieved by that date. Part (B), sponsored by the United States and the United Kingdom and approved by a vote of 51 to 10 with 40 abstentions, urges the early conclusion of a comprehensive test ban treaty with effective international verification. The United States and the U.S.S.R. abstain on part (A), and the U.S.S.R. opposes part (B).

November 13, 1962: At Geneva, Ambassador Tsarapkin suggests that unmanned seismic stations be employed as an addition to existing national detection stations to monitor a test ban.

November 26, 1962: The 18-Nation Disarmament Conference reconvenes for the third session.

November 28, 1962: In an attempt to end the deadlock at Geneva, Swedish Delegate Rolf Edberg proposed a moratorium on all nuclear tests while an international group of scientists works out underground control methods satisfactory to both the West and the Soviet Union.

December 3, 1962: The U.S.S.R. rejected the proposal for setting up a nuclear test ban put forth by the Indian-Swedish delegations.

December 4, 1962: The Soviet Union told the United States and Great Britain that as long as they insisted on on-site inspection there would never be any agreement to end nuclear testing. Joseph B. Godber of Britain declared that dismissal of the neutralist efforts to break the test ban stalemate was "not the action of a responsible government."

December 4, 1962: Arthur H. Dean told the Soviet Union that unmanned seismic stations the so-called black boxes—cannot serve as a sole guardian of a nuclear test ban.

December 10, 1962: In the 18-Nation Disarmament Conference, Ambassador Tsarapkin formally proposes the establishment of two or three unmanned seismic stations on

the territories of states possessing nuclear weapons. Locations by zones for those to be placed in the Soviet Union are named. This proposal is conditioned on the abandonment by the West of its insistence on international control and obligatory on-site inspection.

December 19, 1962: Premier Khrushchev, in a letter to President Kennedy, states that the Soviet Union is now prepared to accept two or three on-site inspections per year on Soviet territory. In addition, he says there could be three unmanned seismic stations on Soviet territory. The final location of the stations is left open.

December 20, 1962: The 18-Nation Disarmament Conference recesses.

December 28, 1962: President Kennedy in reply to Premier Khrushchev, indicates encouragement that the Soviets have now accepted the principle of on-site inspection, but states that the figure of two or three on-site inspections is not sufficient, nor are three unmanned seismic stations. He denies that the United States offered to agree on three inspections. The United States has reduced the number of on-site inspections to 8 from 10.

January 4, 1963: Arthur H. Dean announced that he had submitted his resignation on December 27, 1962, as chief U.S. negotiator at the Disarmament Conference at Geneva.

January 7, 1963: In a letter to President Kennedy, in further exchange on the subject of on-site inspection, Premier Khrushchev holds to his contention that an annual quota of two or three inspections is sufficient.

He emphasizes that he considers agreement in principle a great unilateral concession, and he agrees to further discussion on the questions between United States and U.S.S.R. representatives.

January 14, 1963: United States and Soviet representatives meet in New York. The United States is represented by William C. Foster, Director of the U.S. Arms Control and Disarmament Agency; and the U.S.S.R. is represented by N. T. Fedorenko, Soviet Ambassador to the U.N. and S. K. Tsarapkin, chairman of the Soviet delegation to the 18-Nation Disarmament Conference. Discussions continue in New York until January 22 when they are moved to Washington.

January 26, 1963: President Kennedy orders that preparations for underground testing in Nevada be suspended in the hope that the Western-Soviet discussions presently taking place in New York and Washington would materially enhance the prospects for an effective agreement on a test ban.

February 1, 1963: The New York and Washington, D.C., discussions on a test ban are slated to be taken up at the 18-Nation Disarmament Conference scheduled to be resumed on February 12. In a press conference, Secretary of State Rusk expressed the disappointment of the United States that the position of the Soviet Union appeared to have hardened into a take-it-or-leave-it attitude on their offer for two or three on-site inspections per year. The Secretary states: "The idea of on-site inspection is not simply a political question involving the acceptance of on-site inspection in principle, but is the practical problems of establishing arrangements which in fact do provide assurance that agreements are being complied with."

February 1, 1963: President Kennedy orders resumption of the preparations for underground testing in Nevada.

February 8, 1963: The scheduled series of underground tests is begun in Nevada.

February 12, 1963: The 18-Nation Disarmament Conference reconvenes at Geneva.

February 22, 1963: The ACDA announces in Washington that the United States is willing to consider possible acceptance of seven on-site inspections, providing the modalities of inspection can be agreed upon.

February 28, 1963: In a Moscow election

meeting speech, Premier Khrushchev reaffirms his refusal to consider anything but three on-site inspections per year.

April 1, 1963: The United States and United Kingdom delegations table a memorandum of position concerning the cessation of nuclear weapon tests. This memorandum sums up the Western position on general principles of agreement on-site inspection and automatic seismic station arrangements, and includes specific proposals submitted to date.

August 5, 1963: Limited test ban treaty is signed in Moscow.

August 31, 1963: Hot-line teletype system between Washington and Moscow becomes operational.

October 7, 1963: President, with the advice and consent of the Senate, signs the limited test ban treaty.

October 10, 1963: The limited test ban treaty enters into force.

December 31, 1963: Premier Khrushchev calls on all states to conclude an international agreement "for the renunciation by the states of the use of force for the settlement of territorial disputes and boundary questions."

January 8, 1964: In his state of the Union message, President Johnson announces that U.S. production of enriched uranium will be reduced by 25 percent and that the Atomic Energy Commission will close down 4 of its 14 reactors producing plutonium for weapons. The President calls on the Soviet Union to take similar steps.

January 18, 1964: President Johnson, in his reply to Premier Khrushchev's letter of December 31, 1963, appeals to the Soviet Union to support concrete steps to strengthen peace, by urging that both nations present new proposals at Geneva on the prevention of the spread of nuclear weapons, cessation of the production of fissionable materials for weapons uses, the transfer of large amounts of fissionable materials to peaceful uses, the prohibition of all nuclear tests, limitations on nuclear weapons systems, reduction of all risk of war by accident or design, and progress toward general disarmament.

January 21, 1964: The Eighteen Nation Disarmament Committee (ENDC) reconvenes in Geneva.

In a message to the ENDC, President Johnson submitted proposals designed to: prohibit the use of force, achieve a verified freeze of nuclear delivery vehicles, achieve a verified agreement on the cessation of the production of fissionable material for weapons, reduce the danger of accidental war and surprise attack, and halt the spread of atomic weapons.

April 20, 1964: President Johnson announces that he has ordered "a further substantial reduction" in the production of enriched uranium. Combined with the reduction announced last January, the overall reduction in the production of enriched uranium will be 40 percent over a 4-year period.

Premier Khrushchev announced discontinuance of the construction of two new reactors for the production of plutonium and that the production of uranium 235 would be substantially reduced over the next several years (On November 24, 1965, in Khrushchev's statement of April 20, 1964, the AEC stated "there is no evidence to confirm that the Soviets have indeed done what they stated they would do.")

April 21, 1964: Prime Minister Douglas-Home announces that United Kingdom production of military plutonium will gradually be terminated.

April 28, 1964: The ENDC recesses.

June 9, 1964: The ENDC reconvenes.

June 11, 1964: The IAEA Board of Governors approves an agreement between the United States and the Agency whereby four U.S. reactors will be placed under Agency safeguards against diversion to nonpeaceful ends.

June 25, 1964: At the ENDC, the United States presents a plan to provide verification for a cutoff in the production of fissionable materials for weapons.

August 27, 1964: At the ENDC the Indian representative states that under no circumstances will his country use its nuclear capabilities for nonpeaceful purposes.

September 17, 1964: The ENDC adjourns.

October 16, 1964: Communist China explodes its first atom bomb.

October 24, 1964: The chairman of India's Atomic Energy Commission states that India might be compelled to manufacture nuclear weapons unless some important and tangible steps are made toward general disarmament.

November 1, 1964: The White House announces that former Deputy Secretary of Defense Roswell L. Gilpatric has been appointed by the President to head a special panel to study ways and means of preventing the spread of nuclear weapons.

December 8, 1964: Following their Washington conference, President Johnson and United Kingdom Prime Minister Wilson issued a communique in which they express agreement on the urgency of a worldwide effort to prevent proliferation of nuclear weapons.

December 30, 1964: In a New Year's greeting to Premier Kosygin, President Johnson expresses the hope that practical agreements can be reached soon in the area of arms control.

January 19, 1965: AEC announces that the United States has detected venting from the Soviet underground test of January 15.

January 26, 1965: In a statement before the House Foreign Affairs Committee, ACDA Director Foster states that the Soviet test of January 15 may have been a technical violation of the limited test ban treaty.

February 15, 1965: AEC announces it will further reduce the rate of production of enriched uranium. The new reduction will be gradually carried out from 1966 to 1969.

May 14, 1965: Communist China explodes its second atomic bomb.

May 17, 1965: In the Disarmament Commission, ACDA Director Foster suggests a broad program of measures to halt the proliferation of nuclear weapons.

July 27, 1965: ENDC convenes at Geneva. In a message to the delegates, President Johnson states that the American delegation is instructed to seek "agreements that will limit the perilous spread of nuclear weapons, and make it possible for all countries to refrain without fear from entering the nuclear arms race," "effective limitation of nuclear weapons and nuclear delivery systems" and a "truly comprehensive test ban treaty."

August 8, 1965: Pope Paul VI urges mankind to renounce forever use of atomic weapons and prays that men will "no longer place their trust, their calculations, and their prestige in such fatal and dishonoring weapons."

August 17, 1965: At the ENDC, the United States presents a draft nonproliferation treaty.

August 31, 1965: At the ENDC the Soviet Union rejects the U.S. draft nonproliferation treaty of August 17.

September 16, 1965: The Conference of the Eighteen Nation Committee on Disarmament (ENDC) adjourns following the conclusion of its 234th plenary meeting.

September 23, 1965: In a speech at the United Nations, Ambassador Goldberg stresses that the first priority toward the goal of general and complete disarmament "must be given to halting the spread of nuclear weapons."

September 24, 1965: Soviet draft treaty on nonproliferation presented to the Secretary General of the United Nations.

October 17, 1965: William Foster, Director, Arms Control and Disarmament Agency, in a speech at the United Nations calls for the resumption of the ENDC at Geneva.

November 25, 1965: At the United Nations 26 nations present a draft resolution on the "urgent need for suspension of nuclear and thermonuclear tests." This draft resolution was subsequently sponsored by nine other nations.

December 3, 1965: The 35-nation draft resolution of November 25, 1965 approved by the General Assembly by a vote of 92 to 1 with 14 abstentions. Albania votes against the resolution. The following countries abstain: Algeria, Bulgaria, Byelorussian S.S.R., Congo, Cuba, Czechoslovakia, France, Guinea, Hungary, Mauritania, Mongolia, Poland, Ukrainian S.S.R., and the Soviet Union.

December 28, 1965: Ambassador at Large Averell Harriman leaves Washington to visit Eastern Europe on a peace mission for President Johnson.

January 27, 1966: The 18-Nation Disarmament Committee is scheduled to reconvene in Geneva.

SIGNIFICANT DATES CONCERNING DISARMAMENT DEVELOPMENTS, 1966 TO PRESENT

January 18, 1966: Senator Pastore (Dem., R.I.), Vice Chairman of the Congressional Joint Committee on Atomic Energy, and 52 other senators sponsored a resolution urging "serious and urgent efforts" to achieve a treaty and reach a solution of the nuclear proliferation problem.

February 23, 1966: Testifying before the Joint Committee on Atomic Energy, Secretary of State Rusk welcomed the Pastore resolution as a "significant expression of congressional support" for President Johnson's efforts to meet the threat of nuclear proliferation.

April 27, 1966: Secretary of State Rusk in a press conference denied that he had decided to "forego indefinitely" plans for "an allied nuclear weapons system." He said the United States had made no decision to foreclose A.N.F. or "any other collective approach to the problem."

April 28, 1966: At the ENDC, ACDA Director Foster announced that the United States had offered the IAEA access to Nuclear Fuel Services, Inc., a commercial chemical plant in West Valley, N.Y., processing plutonium to assist the IAEA in the development of safeguard procedures and the training of inspectors. He characterized the offer as "a new contribution to the development of safeguards" against the diversion of peaceful atoms to weapons use.

May 7, 1966: President Johnson announced that the United States would seek a treaty in the United Nations to prevent sovereignty claims in space and to seek an accord on cooperation and peaceful exploitation. In New York, Ambassador Goldberg requested an early meeting of the Legal Subcommittee of the UN Outer Space Committee to consider the President's proposal.

May 9, 1966: The Chinese Communists detonated their third nuclear device and asserted that it contained "thermonuclear material." They stated that their program was intended to oppose American "nuclear blackmail" and "U.S.-Soviet collusion and monopoly of nuclear weapons." Recalling their nuclear disarmament proposals of October 17, 1964, and May 14, 1965, they again declared that China would not be the first to use nuclear weapons.

May 10, 1966: The ENDC recessed until June 14. In his closing remarks, ACDA Director Foster blamed the Soviet Union for the impasse in negotiations and said it was regrettable that "it was the Soviet Union that at first gave assistance in the nuclear field to Communist China" which "may now be regarded with some dismay by those who granted it." Ambassador Roshchin blamed the United States and its allies in NATO for "blocked progress" but concluded that opposing positions were better understood.

May 17, 1966: The Senate unanimously approved the Pastore resolution commending

the President for steps already taken, and supporting "the principle of additional efforts" for a nuclear nonproliferation treaty.

June 14, 1966: The ENDC resumed in Geneva. ACDA Director Foster in his opening remarks reminded the Committee of the 20th anniversary of the Baruch plan.

June 16, 1966: Ambassador Goldberg submitted a U.S. draft treaty on the exploration of the moon and other celestial bodies to Kurt Waldheim, Chairman of the Committee on the Peaceful Uses of Outer Space.

The Soviet Union also submitted to the United Nations a draft treaty on peaceful exploration and research in outer space and asked that it be included on the agenda of the twenty-first session of the General Assembly.

July 2, 1966: France exploded an atomic bomb on Niururoa atoll in the Pacific, the first in a series of explosions scheduled for the area.

July 12, 1966: At Geneva the Legal Subcommittee of the U.N. Committee on the Peaceful Uses of Outer Space began discussion of the U.S. and Soviet draft celestial-bodies treaties. Ambassador Goldberg stated that the drafts, though different in scope, would be reconcilable if there was good will and common purpose to reach agreement.

July 27, 1966: Prime Minister Eshkol told Jerusalem journalists that Israel had no nuclear arms and would not be the first to introduce them into her area.

July 28, 1966: At the ENDC, ACDA Deputy Director Fisher proposed the application of IAEA or equivalent international safeguards to the peaceful nuclear activities of non-nuclear-weapon states and to all international transfers of nuclear material and equipment for peaceful uses, in order to prevent the proliferation of nuclear weapons and to prevent nuclear weapons from being developed "under the guise of peaceful application of nuclear energy."

September 21, 1966: Secretary of State Rusk expressed hope for international agreements on the peaceful uses of space and on non-proliferation. He also hoped that the time would come "when, by permitting effective inspection on their own soil, the Soviets will make possible progress in reducing armaments."

September 24, 1966: Observing ACDA's fifth anniversary, President Johnson pledged the United States "to continue to search for peace." "When the United States was the only nation possessing atomic weapons," he said, "we urged others to join us in placing all atomic facilities under international control."

October 10, 1966: President Johnson met with Foreign Minister Gromyko in Washington to discuss a number of topics, including non-proliferation. After the talks, Mr. Gromyko told the press that the exchange was useful and that "it looks like both countries... are striving to reach agreement" on a non-proliferation treaty.

October 27, 1966: The Soviet Union set off the world's largest underground nuclear explosion—equal to more than a million tons of TNT—which seismic signals indicated as a yield in the intermediate to high range. The AEC reported the test was conducted on Novaya Zemlya.

October 27, 1966: Communist China's New China News Agency announced successful conclusion of a guided-missile-nuclear-weapon test with an explosive yield in the range of 20 kilatons.

November 4, 1966: By a vote of 110 to 1, with 1 abstention, the General Assembly adopted resolution 2149 (XXI) on renunciation of actions hampering the conclusion of a non-proliferation agreement. Albania voted against the resolution, and Cuba abstained. The resolution was cosponsored by the United States, Soviet Union, and other countries.

November 16, 1966: At the AEC's Hanford

plant near Richland, Washington, representatives of 50 nations and several international agencies watched the demonstration of a U.S. method of monitoring a shutdown plutonium-producing reactor.

December 2, 1966: The First Committee adopted by a vote of 99 to 0, with 10 abstentions, the tripartite draft resolution on the elimination of foreign military bases in the countries of Asia, Africa, and Latin America.

December 8, 1966: In Austin, President Johnson announced that the United States and the Soviet Union had reached agreement on a draft treaty barring weapons on the moon and other celestial bodies.

December 19, 1966: The General Assembly unanimously adopted resolution 2222 (XXI), endorsing the proposed treaty on the peaceful uses of outer space.

December 21, 1966: At a news conference, Secretary of State Rusk said that the United States would like to see "some means developed" to avert another upward spiral in the arms race and to avoid the "wholly new major levels of expenditure" which would be required by deployment of anti-ballistic missile defense systems by the two major powers. He expressed the hope that the Soviet Union would agree to refrain from entering this new and costly phase.

December 28, 1966: Communist China carried out a nuclear test at Lop Nor in Sinkiang province.

January 10, 1967: In his State of the Union message to the Congress, President Johnson declared that U.S. policy in East-West relations was "not to continue the cold war but to end it." Referring to Soviet ABM development, he emphasized that "the important link between Russia and the United States" was "our common interest in arms control and disarmament."

January 27, 1967: The Treaty Governing Activities of States in Exploration and Use of Outer Space Including Moon and Other Celestial Bodies was signed at Washington, London, and Moscow.

March 2, 1967: President Johnson announced at a news conference that Premier Kosygin had replied to his letter of January 27 and agreed to bilateral discussions on "means of limiting the arms race in offensive and defensive nuclear missiles."

April 25, 1967: The Senate unanimously approved (88-0) the outer-space treaty of January 27, 1967.

May 19, 1967: Tass announced that the Presidium of the Supreme Soviet of the USSR had ratified the outer-space treaty.

June 17, 1967: Communist China successfully exploded its first hydrogen bomb at the Lop Nor center in Sinkiang, the site of China's five earlier nuclear detonations.

June 23, 1967: After their first meeting at Glassboro, N.J., President Johnson said that he and Premier Kosygin had agreed that it was "now very important to reach international agreement on a non-proliferation treaty."

June 25, 1967: At the conclusion of the Glassboro, N.J., summit conference, President Johnson stated that he and Premier Kosygin had discussed arms limitation and had agreed that Secretary of State Rusk and Foreign Minister Gromyko would "pursue this subject" further in the immediate future.

August 24, 1967: At the ENDC, the United States and Soviet Union tabled separate but identical texts of a draft non-proliferation treaty.

September 9, 1967: In a speech at the launching of nuclear submarine NARWHAL, Senator Pastore calls for development of a U.S. ABM system.

September 18, 1967: Speaking at San Francisco, Secretary of Defense McNamara announced that the United States would deploy a limited anti-ballistic missile system against Communist China.

October 10, 1967: The outer-space treaty of January 27 entered into force when the United States, the United Kingdom, the Soviet Union, France, and other nations deposited their instruments of ratification at Washington, London, and Moscow.

November 3, 1967: Secretary of Defense McNamara announced at a press conference that the Soviet Union was believed to be in the process of developing an orbital nuclear missile that could reduce the warning time of an attack on the United States to about 3 minutes. He called the new Soviet system a "fractional orbital bombardment system (FOBS)."

November 6-7, 1967: Joint Committee on Atomic Energy and Senate Preparedness Committee hearings on Scope, Magnitude, and Implications of the United States Anti-Ballistic Missile Program, held.

November 18, 1967: Marshal Krylov, Commander-in-Chief of the Soviet Strategic Rocket Forces, announced at Moscow that the USSR had developed new missiles "capable of delivering nuclear warheads to the target along ballistic and orbital trajectories." He said that the head portions of these rockets carried devices to break through the enemy's anti-missile defenses.

December 2, 1967: President Johnson announced that when Safeguards were applied under the non-proliferation treaty, the United States would permit the International Atomic Energy Agency to apply its safeguards to all nuclear activities in the United States, with the exception only of those with "direct national security significance."

December 5, 1967: By an 85-0 vote with 9 abstentions, the General Assembly passed resolution 2286 (XXII) approving the Treaty for the Prohibition of Nuclear Weapons in Latin America. Cuba, the Soviet Union, and France were among the abstaining states.

December 18, 1967: The General Assembly passed resolution 2340 (XXII) establishing an *ad hoc* committee to study the exploration and use of the sea-bed and ocean floor. The vote was 99 to none, with no abstentions.

December 24, 1967: The AEC announced that the Chinese Communists had conducted their seventh atmospheric nuclear test explosion. The low yield detonation was held in the Lop Nor testing area. This test, unlike the six earlier ones, was not publicly announced by the Peking authorities.

January 18, 1968: The ENDC reconvened in Geneva. The United States and the Soviet Union submitted separate but identical revised texts of the draft non-proliferation treaty.

February 12, 1968: President Johnson told the Congress that the draft non-proliferation treaty of January 18 was the most significant achievement of the U.S. Arms Control and Disarmament Agency since its establishment.

March 7, 1968: In the ENDC, the United States, the United Kingdom, and the Soviet Union submitted to a draft Security Council resolution on security assurances to non-nuclear weapon states. The resolution would recognize that the nuclear-weapon permanent members of the Security Council would have to "act immediately in accordance with their obligations under the United Nations Charter" against a nuclear attack or threat of nuclear aggression against a non-nuclear weapon state.

March 20, 1968: In the U.N. *Ad Hoc* Committee To Study the Peaceful Uses of the Sea-Bed, the Soviet Union proposed that the ENDC negotiate an international ban against using for military purposes the sea-bed and ocean floor beyond the limits of national jurisdiction.

April 1, 1968: At Mexico City, the United States signed Additional Protocol II to the Treaty for the Prohibition of Nuclear Weapons in Latin America (see February 14, 1967). The protocol calls on nuclear-weapon states

(1) to respect the statute of denuclearization in Latin America, (2) not to contribute to violations of the basic provisions of the treaty, and (3) not to use or threaten to use nuclear weapons against the Latin American parties to the treaty.

June 4, 1968: In his commencement address at Glassboro State College, President Johnson said that the United States was anxious to reach an agreement with the Soviet Union to avert a "costly anti-ballistic missile race between the United States and the Soviets." He said that the United States was now ready to put an end to the nuclear arms race, provided that it and the Soviet Union could reach "binding agreements" which would "preserve the security of each nation."

May 31, 1968: Speaking to the General Assembly, President Johnson said that the non-proliferation treaty was the "most important international agreement in the field of disarmament since the nuclear age began."

June 24, 1968: U.S. Senate votes funds for a U.S. ABM system.

June 27, 1968: In the Supreme Soviet, Foreign Minister Gromyko announced that the Soviet Union was ready to begin discussions with the "Western nuclear powers" concerning a "mutual restriction and subsequent reduction" of offensive and defensive missile systems.

July 1, 1968: The non-proliferation treaty was opened for signature at Washington, London, and Moscow. The representatives of 56 countries signed during the White House ceremonies.

July 11, 1968: In a statement to the Senate, Foreign Relations Committee, General Wheeler, the JCS Chairman, said that the JCS had long supported "balanced, phased, safeguarded, and verifiable arms control measures." In reviewing the non-proliferation treaty, they concluded that the treaty did not "operate to the disadvantage of the United States and our allies" and that it did not "disrupt any existing defense alliances" of the United States.

August 20, 1968: Armed forces of the Soviet Union, Poland, Hungary, Bulgaria, and East Germany invaded Czechoslovakia.

August 24, 1968: At Mururoa atoll, France exploded its first hydrogen bomb.

September 4, 1968: NATO's Defense Planning Committee announced that a meeting of military experts to study plans for mutual arms reduction by NATO and the Warsaw Pact nations had been called off as a result of the Soviet invasion of Czechoslovakia.

September 5, 1968: Speaking before the National Press Club, Secretary of Defense Clifford said that he did not think that the U.S. decision to install the Sentinel ABM defense system and to continue MIRV tests would "hinder the success of the proposed U.S.-Soviet negotiations on strategic arms limitations. He said that the Soviet invasion of Czechoslovakia indicated that a "significant American military presence in Western Europe" was still needed, and that "when and if we negotiate, safety and success demand that we negotiate from strength."

September 11, 1968: In a press statement, Mr. Nixon endorsed the non-proliferation treaty but urged the Senate to delay approval until the "posture and intentions of the Soviet Union toward Czechoslovakia and other nations of Central and Western Europe can be reassessed."

September 17, 1968: The Senate Foreign Relations Committee approved the non-proliferation treaty by a 13-to-3 vote, with 3 abstentions. Senators Hickenlooper, Aiken, and Williams abstained from voting, while Senators Dodd, Lausche, and Mundt voted against the treaty.

September 29, 1968: Secretary of Defense Clifford said in a television interview that the United States "should maintain a nuclear superiority vis-a-vis the Soviet Union. He believed this issue involved the "very exist-

ence of our nation as a nation," and "you deal much better with the Soviet Union when you deal from strength."

October 25, 1968: At a news conference, Secretary of Defense Clifford said that the Soviet Union had considerably narrowed the nuclear missile gap in recent years, but that the United States still maintained, "substantial military superiority" over the Soviets.

December 10, 1968: The Soviet Union announced an increase in its military budget for 1969.

December 27, 1968: Communist China conducted an atmospheric hydrogen bomb test in the Lop Nor area. The detonation had a yield of about three megatons and was the eighth Chinese atmospheric test detected by the United States.

January 14, 1969: Appearing before the Senate Armed Services Committee, incoming Secretary of Defense Laird stated that negotiations between the United States and the Soviet Union concerning missile reductions had been set back "at least for 9 to 12 months" as a result of the Soviet's invasion of Czechoslovakia last year.

January 20, 1969: The Soviet Government announced that it was ready to "start a serious exchange of views" with the United States on a "mutual limitation and subsequent reduction of strategic nuclear delivery vehicles, including defensive systems."

January 27, 1969: At his first Presidential news conference, President Nixon said that he favored the non-proliferation treaty, but that he would have to confer with the National Security Council and Congressional leaders on whether this was the proper time to ask the Senate to approve it.

February 5, 1969: In a special message to the Senate, President Nixon formally asked for approval of the nuclear nonproliferation treaty.

February 25, 1969: The Senate Foreign Relations Committee approved the non-proliferation treaty by a vote of 14 to 0. Senator Dodd (Dem., Conn.) abstained.

March 13, 1969: The U.S. Senate by a vote of 83-15 gave its advice and consent to ratification of the non-proliferation treaty.

March 14, 1969: President Nixon announced that the United States would deploy a modified ballistic missile defense system to be known as the Safeguard program.

March 17, 1969: Dr. DuBridge, Science Adviser to the President, stated in a letter to President Nixon that he thought the Safeguard antiballistic missile system approved by the President represented a "sound and reasonable approach to our strategic defense problem."

March 18, 1969: The Eighteen Nation Disarmament Committee (ENDC) began its 15th session at Geneva. In a letter to ACDA Director Smith, President Nixon stated that the "fundamental objective" of American foreign policy was the establishment of a world of "enduring peace and justice" in which international disputes would be resolved "without resort to war."

April 7, 1969: At a press conference, Secretary of State Rogers said that nothing was hindering the start of the strategic arms limitation talks between the United States and the Soviet Union. He said he expected them to begin in the late spring or early summer.

April 10, 1969: The Department of State announced that the United States and the Soviet Union would hold technical talks in Vienna, beginning April 14, on the peaceful uses of nuclear explosions.

April 16, 1969: The United States and the Soviet Union issued a joint communique at the conclusions of the Vienna talks on peaceful nuclear explosions declaring the talks "timely" and "very useful" and recommending that additional talks on the subject be held.

May 22, 1969: At the ENDC, the United States submitted a draft treaty to ban the

emplacement of nuclear weapons and other weapons of mass destruction on the seabed and ocean floor beyond a three-mile coastal limit.

June 19, 1969: President Nixon told his news conference that the United States was completing its strategic review. Secretary of State Rogers had informed the Soviet Ambassador that the United States had set July 31 as the target date for the beginning of the talks.

July 3, 1969: In a message to the ENDC, President Nixon expressed the hope that a "sound seabed arms control measure" could be presented to the General Assembly.

July 10, 1969: In an address to the Supreme Soviet, Foreign Minister Gromyko said that the Soviet Union was prepared for Strategic Arms Limitation Talks (SALT) and hoped that both sides would bear in mind its "paramount importance."

July 11, 1969: In a press statement, Secretary of State Rogers said that Gromyko's speech seemed to be "positive in tone." He said that the United States considered SALT a "significant step forward in our relations with the Soviet Union" and was awaiting a Soviet response on the time and place of the talks.

Mr. PASTORE. Mr. President, I thank Senators for listening.

The VICE PRESIDENT. Who yields time?

Mr. JACKSON. Mr. President, will the Senator from Kentucky yield some time?

Mr. FULBRIGHT. Mr. President, I hope the Senator from Kentucky will not yield time to the opposition.

Mr. COOPER. Mr. President, I understand that 44 minutes remain.

The VICE PRESIDENT. The Senator is correct.

Mr. JACKSON. Mr. President, how much time remains to the opposition?

The VICE PRESIDENT. Thirty-three minutes remain to the opposition.

Time is running.

The Senator from Kentucky is recognized.

Mr. COOPER. Mr. President, I yield 10 minutes to the Senator from Missouri.

The PRESIDING OFFICER (Mr. GURNEY in the chair). The Senator from Missouri is recognized.

Mr. SYMINGTON. Mr. President, I ask that we have order and that the time involved not come out of my time.

The PRESIDING OFFICER. The Senate will be in order so that the Senator may be heard.

The Senator may proceed.

SIGNIFICANT REASONS AGAINST SAFEGUARD DEPLOYMENT

Mr. SYMINGTON. Mr. President, it would appear that just about everything which could be said has been said about the proposed deployment of this Safeguard ABM system.

For months, based on the facts, it has been difficult indeed for me to understand why there has been such unparalleled desire, from so many quarters, to deploy this system at this time.

Perhaps there is one aspect which has not been adequately emphasized; namely, if the strength and reliability—specifically, the lethal yield, megatonnage, and CEP, accuracy—now ascribed to the Soviet SS-9 missile by our Defense Department is correct, it would appear that our Minuteman, in their fixed missile sites, will shortly become obsolescent if not actually obsolete.

If this is correct, then I believe it is important to weigh carefully our entire defense posture—what should we have, what should we do so as to attain adequate security at minimum cost in lives and treasure.

What are the true national priorities incident to our increasingly limited resources?

I do not agree with this sudden elevation to unprecedented performance by the Defense Department of this liquid-fueled Soviet SS-9, actually nothing more than a possible improvement to our own now abandoned liquid-fueled Titan ICBM. But if the Department is correct, then, in recognition of the tremendous increase in the art of nuclear yield as against weight, it would seem clear that it is of paramount importance to our national security for us to establish, now, a major research and development program for the establishment of mobile missiles on the ground comparable to the mobile status of Polaris on the seas.

Finally, after long study, it is my conviction that, first, because some of the five primary components have not yet been built, let alone tested, and because of their complexity, these units may not work adequately, when linked together, in case of a sudden all-out attack; second, no one has ever yet asserted that the Safeguard radar is right in design to defend hard missile sites; third, no one has presented any logical answer to the constantly repeated assertions of objective scientific experts that the Safeguard radar is vulnerable to even the smaller Soviet SS-11 missiles, of which they have hundreds, and fourth, and no one yet has ever denied that a relatively slight addition to the production of Soviet SS-9's would nullify any effective defense which could be obtained as the result of the deployment of this Safeguard ABM system.

Except for heavy multiplication of the relatively small number of Sprints and Spartans that are now planned in this Safeguard system—figures so small that unfortunately they have never been declassified—the only defense offered to this devastating criticism is that the very high cost of the SS-9's to the Soviets would prevent them from increasing SS-9 production; an argument absurd on the face of it.

To illustrate this absurdity, consider the fact that the latest unit cost of the Minuteman III, our most modern ICBM, is currently estimated at less than \$5 million, that figure including various R. & D. and site costs.

But in effort to rig up some answer to the charge that the Soviets could totally nullify any effective defense obtained from Safeguard by means of but a small increase in SS-9 production, we are now told that the unit cost to the Soviets of future SS-9's would be \$30 million.

In other words, in this ever more strange dialogue of justification, we are now asked to believe that in a country where we are told each man in turn is told where to work, when to work, and at what wages he shall work, the cost of the new Soviet ICBM will nevertheless be over six times greater than the cost to our own taxpayers of our newest ICBM.

If the Senate now decides to accept this latest justification for deployment

of this unproved weapons system, I believe that it will be a sorry day, indeed, for the security and well-being of this country.

Now Mr. President, I do not, in any way, criticize the sincerity of those who are for this system or those who are against it. But 24 years ago, as Assistant Secretary of War, I heard what could be well described as "terror talks" about the Soviet danger, have heard them consistently over this quarter century, and am hearing them again today.

When I objected to this system because the technology of it did not appear right to me, I was criticized. Some people said, "We thought you were one of us." Well, I am "one of us." I am an American citizen, as we all are.

I did some research, and found that, since the end of World War II, I have worked for and voted for \$953 billion of the taxpayers' money to protect this country. So as of the end of this session, I will have voted for over one trillion dollars, \$1,000 billion, to protect the United States against outside danger.

Mr. FULBRIGHT. Mr. President, will the Senator yield?

Mr. SYMINGTON. If I may finish this one point.

Mr. President, it has gotten to a point in the Senate—and I say this with great respect—that we have some Senators who can hear the farthest drum before the cry of a single hungry child in the street; and we have some Senators, fed up with that approach, who can hear all the children, whether or not they are hungry, before they can hear a single drum.

Then there is another group, and a large group, which can hear every single child and every single drum and say: "What of it? I'll vote for all the children and I'll vote for all the drums."

That is perhaps the worst position. It is as clear as light that the integrity of the dollar, through such problems as inflation and the continuing unfavorable balance of payments, is slowly but steadily being eroded to the point where our people are suffering—really suffering—not only the really poor, but also those with average and less than average incomes in this country.

Therefore, I earnestly hope there is a fourth group on this floor, a group who will say: "We have to establish some priority. We cannot go on forever listening to the terror talks about the dangers which are made to justify the latest of these new weapons systems being presented to the Congress."

I say this as one who admits his own error in voting for every one of these systems up to this particular Sentinel-Safeguard system.

I yield to the Senator from Arkansas.

Mr. FULBRIGHT. I merely wanted to emphasize what the Senator said about how much we have appropriated since World War II and how, on every occasion, if a question has been raised, we have heard exactly the same kind of talk as the Senator from Rhode Island has just given us.

Now we look at the situation in this country. The Senator from Missouri has often talked of it, and it has resulted, to

a great extent, in the diversion of over a trillion dollars.

Actually, when the Senator says he has voted for \$935 billion, he is talking about direct costs of the military. He does not include such things as the indirect costs of the veterans' program and in the interest on the debt created by the military. If that is used, it is \$1,250 billion.

This is one of the troubles with this country today, because we have neglected so many of the other activities. The Senator from Rhode Island very glibly says if we need anything else, we can have it; there is no matter of choice. Well, this has been proved to be clearly not feasible under our system. The Senator, himself, knows this, when we consider the critical situation this country is in today, financially and internally, from the disaffection of so many people in the ghettos and the universities.

So I agree with the Senator from Missouri, and I do hope that on this, the first occasion that the Senate has ever seriously challenged, on the floor of the Senate, any military program, the Senate will at least resolve any doubts in favor of some restraint upon the growth of the largest military establishment the world has ever seen.

Mr. SYMINGTON. Mr. President, I thank the Senator from Arkansas for his constructive comments.

I have served 17 years on the Committee on Armed Services with one of the most gracious and intelligent people with whom it has ever been my privilege to work, the senior Senator from Maine. To the best of my knowledge—although I may be wrong—this is the first weapons system that she has ever questioned in such open fashion. I would hope that my colleagues on both sides of the aisle would give at least some respect to her opinion in a field in which there is no greater authority in this body than the senior Senator from Maine.

The PRESIDING OFFICER. Who yields time?

Mr. STENNIS. Mr. President, I yield 5 minutes to the senior Senator from Wyoming.

Mr. MCGEE. Mr. President, hopefully, we will soon decide the question of deployment of antiballistic missiles. The long hours of debate over this vital, if not agonizing, question have reinforced what all of us, Senators and citizens alike, have long known. That is, our decision here will not be easy.

The question before us is of unprecedented dimension. The testimony heard in Senate committees and the long debate on the floor have all been tools to help us in our decision. The coming determination on the deployment of the ABM may hold in balance more answers to the mystery of the future than any of us would like to believe. For this reason, making the right decision becomes a more awesome responsibility than any one mortal could possibly wish in his own time. As painful and as difficult as the decision is for all of us as Senators of the United States, we are required by the Constitution, by tradition and constituent expectation to do so.

Until now, much overstatement and misstatement has characterized the widespread discussion on the ABM. Wishful thinking and emotional "druthers" have often swept the dispute beyond the normal rules of reason; and most serious of all, the longer the debate has gone on, the more intransigent have the proponents and opponents become.

A major casualty of the ABM dispute has been the open mind and the flexible judgment. The temptation to freeze one's opinion; to lock in one's case and then to assemble as much evidence as possible to prove that case too often has come to dominate the forensics of the Nation's debaters on this question.

The well-being of the human race, as well as the national interest of the United States, demands that our judgment here be as error free as possible. The quest for wise judgment forces us to use every analytical tool at our disposal. One such tool would, in my estimation, be a set of four questions. Such a set would be something like the following questions:

First. Do the security demands of the United States require the ABM?

Second. Will the ABM work?

Third. Will our adoption of an ABM system escalate the arms race?

Fourth. Are there viable alternatives to the ABM?

As imperative as is the need for certainty in responding to these questions, the current status of data, facts, information and the interminable unknown have surfaced only one firm conclusion and that is no one knows for sure. This is what is so characteristic of the hours and hours of hearings, the pages and pages of testimony, and the days of debate about the ABM.

The questions I refer to have not become less imperative by the testimony and by the debate, so, my comments are only one Senator's attempt at answers to the urgent questions so far raised by our discussions.

The first of these urgent questions is: Do the security demands of the United States require the ABM?

Both sides in the controversy are generally agreed that some eventualities which would upset the security of the United States might indeed come to pass. In the first place, both sides have agreed—generally speaking—that the Soviet Union's big SS-9 Missile might be able to destroy virtually all the American Minuteman intercontinental missile force in a surprise attack.

Second is the possibility that the growing Soviet missile-carrying submarine fleet might be used to launch a surprise attack on the American Bomber Force.

Third is the possibility that the Mainland Chinese might deploy a force of ICBM's that could threaten the destruction of a number of American cities.

Fourth is the possibility of an accidental or a demonstration launch of a missile by one of the nuclear powers.

What is so characteristic of all these possibilities is that they are, indeed, possibilities not certainties or even probabilities. Wisdom has for some time dictated that meaningful choicemaking has

seldom been allowed the luxury of certainty.

The second question we must answer in our deliberations over the ABM system is: Will the ABM work?

Here again there is little disagreement over whether the various components of the Safeguard system taken separately will work. All of them except the long-range perimeter acquisition radar have been built and successfully tested.

But, all this does not permit us the ease of accepting the facile implication that we must buy the Safeguard system; since we do not know, with clear certitude, whether all the components when put together will work in an emergency. Yet, it is all we have at this point, and the need for ABM seems to me still present, even though we do not have absolute assurance that it will all work in an emergency.

Perhaps there is some point in recalling that similar doubts about "workability" preceded the final successful completion of other weapons systems.

The third question raised in the controversy over the ABM system is even more difficult than the first two. That is: Will our adoption of an ABM system escalate the arms race?

Here again, the question is a matter of judgment. Will the hopes for world peace be enhanced if the United States goes ahead with deployment of a major new weapons system while it engages in the disarmament talks that are sure to be extremely complex and may last for 4 or 5 years? Or will the hopes for peace be enhanced if the United States stops deployment of both Safeguard and multiple war heads as a dramatic first step in the negotiations?

Whether or not these questions are a matter of judgment does not allay the reality of the Soviet Union's SS-9 missile. Nor do the questions relieve us of the fact of a growing Soviet missile-carrying submarine fleet. The questions give us scant comfort in the face of mainland China's determination to build ICBM's. And last, the possibility of an accidental or a demonstration launch of a missile by one of the nuclear powers is not lessened by the question.

Therefore, before deciding that a limited ABM deployment would trigger a new level of the arms race, one would have to establish within reasonable certainty that the "balance of terror" would be seriously upset. However risky or frightening the maintenance of such a balance may appear to be, it has in the past afforded a better climate for talks than the contrary condition of serious imbalance. For example, during the time that the United States had a monopoly on atomic bomb delivery capability, there was no disposition in Moscow to discuss arms limitations. Now that the Soviets and the Americans have achieved their relative balance of terror the prospects for meaningful talks, at least, have noticeably improved. The proposed "thin line" deployment would not add to the delicate scales of balance new elements not already present.

By the same token, it is argued by some political scientists that the mainland

Chinese cannot afford to discuss arms limitations at least until they have acquired a delivery capability. For the predictable future, however, the relevant make-weights for nuclear balance will be held in American and Soviet hands.

If, on the other hand, our failure to deploy a thin line of ABM's should forfeit our relative balance of capabilities, would not the chances for U.S.-U.S.S.R. negotiations have been set backward?

Because the answers to the first three questions are dominated by uncertainties, the fourth question becomes almost chimerical. Are there viable alternatives to the ABM?

The necessity for an answer does not diminish in the face of the illusive difficulty of the question. The fact is, if the consequences of the decision not to employ the ABM system prove to be wrong, then it would be disastrous to the United States. On the other hand, if we build the ABM system and do not have to use it, such a decision would not be a disaster. I know there are those who believe that weaponry expenditures destroy our chances of resolving our grave domestic problems. But, I believe that the vaunted wealth of the United States allows us not only to safeguard national security but to resolve the very serious internal problems as well. And deployment conceivably could even preserve the chance for new solutions to the disarmament question.

Even so, this Senator, as an individual human being, for example, is plainly structured constitutionally in opposition to military might; he is philosophically fearful of unrestrained arms races. His personal "druthers" would be to oppose the ABM. And were he still a professor in the classroom, he might well be out on the public platform crusading against the ABM.

As a U.S. Senator, however, I have sought to isolate in my own conscience the requirements of a public sense of responsibility, and have made an effort to equate that sense with an understanding of that even deeper responsibility which falls upon the shoulders of the President of the United States. This, then, becomes the key to my quest for the necessary answer regarding the limited deployment of the ABM.

The President of the United States—any President, not just this one—I presume, must start from his own assumption that his decision may be wrong. Only in this way can he then measure the consequences of human error for the people of his country. Should he decide to deploy the ABM system and this turns out to be a wrong decision, would the consequences be irretrievable? Or, on the other hand, should he decide to veto the system and this turned out to be a wrong decision, what would it mean? In the simplest terms it could mean, in the first instance, the wasting of several billions of dollars—little more. In the second instance, however, if scrubbing the system proved to be a wrong decision, the obvious consequence could be serious, if not fatal, to our country's security.

Or, even the pending compromise proposal could risk the loss of irretrievable

time should the optimists turn out to be wrong.

The sheer uncertainty surrounding the search for the right answer must weigh heavily on the sense of responsibility of any President of the United States. It would seem to boil down to the President's having to back into the lesser of two evil choices. While a Senator on either side of the argument can still afford to be wrong with less disastrous consequences for the country or for the world, the President cannot.

For this reason, there ought to be a greater understanding of the importance of protecting the President's options—of allowing the President the opportunity to hedge his bets in order to keep open the choice of correcting or adjusting the national course as we learn more and as the known factors permit a more sophisticated judgment.

As the country in general and the Senate of the United States in particular now approach the time for decision on the ABM, I believe it important to keep uppermost in our minds the requisite of Presidential responsibility in arriving at that decision.

The awful loneliness imposed by that sense of responsibility on the conscience of a President—be he a Truman, an Eisenhower, a Kennedy, a Johnson, or a Nixon—ought to evoke a deeper understanding in the heart of each Member of this body. It is in that spirit of understanding that I have chosen to support the President of the United States in his request to proceed with a limited deployment of an anti-ballistic-missile system.

Mr. President, I wish to concentrate on one point. It is a very personal point. It has to do with the philosophy of this liberal Democratic Senator in regard to this special issue. In a sense, I think it would be fair to say that I have sort of backed into this position.

One of the real casualties in this dialog, in these debates, and in this controversy, in my judgment, has been the freezing of many minds, the closing of many more of them; and I hope that once we get this behind us, there will be a thawing out again. For that reason, what I have to say at this time has nothing to do with persuading anyone to consider the rightness or the wrongness of my particular view; because, if the truth were known, I am constitutionally structured, as an individual human being, to oppose armies, to oppose generals, to oppose arms races. It just goes against my grain. And I would not mind confessing that if I were back in the classroom, professing again on my campus, I probably would be out crusading against the ABM.

But on this special occasion I have tried to isolate in my conscience and within the dimensions of my personal philosophy what I have striven to understand better than I ever have before, and that is the loneliness of the responsibility that finally devolves upon the shoulders of the President of the United States—any President of the United States, not just the present one.

I must say, Mr. President, that while I can have my own biases on this question, the world will survive if McGEE is wrong.

The world probably will survive the decision that any Senator in this body makes. If I am wrong, I can just say: "Sorry, Chief; let us try something else. We will go on our way." But in the case of the President, the issue is slightly different, and if he makes a wrong decision, the consequences are far more serious than if I do.

Thus, I have tried to approach a closer understanding of the kind of situation in which he finds himself. I would think, although I have no reason for knowing, that any president would have to back into this matter by assuming that he is wrong, so if he decides to agree to an ABM deployment and assuming he turns out to be wrong, what are the consequences? In this case I suppose the consequences would be the expenditure of a great many billions of dollars as Senators have mentioned, and probably more than that.

But the real test comes when a president has to ask himself, "Suppose I am wrong if we do not deploy it. Then, what are the consequences?" I think it is immediately obvious that the consequences then are those of a highly escalated price and a price that goes beyond dollars and taxes, a price that might be irretrievable because of the passing events of our time.

On this basis, as I have searched for understanding on my own part, I thought of that terrible isolation that falls upon a President, be he a Truman, Eisenhower, Kennedy, Johnson, or a Nixon, and that he has to be prepared to take the lesser of evil alternatives. We have to help him, in my judgment, to protect his options, and to hedge his bets.

Whatever else emerges from our hours and hours of debate and hearings, it is that none of those who testified before us are willing to testify quietly alone with us that they are sure they are right. There is that haunting uncertainty.

The PRESIDING OFFICER. The time of the Senator has expired.

Mr. MCGEE. There is that haunting uncertainty of not being sure that behooves me to support the President in protecting this option, in hedging on this point, until we can learn more in the days ahead about the judgments that we will still be required to make.

The PRESIDING OFFICER. Who yields time?

Mr. HART. Mr. President, I yield to the senior Senator from Maine. How much time does the Senator request?

Mrs. SMITH. Mr. President, I shall take only—

Mr. NELSON. Mr. President, I wish to inquire if this is on the time of the proponents of the measure.

Mr. HART. It is. I wish to explain to the distinguished Senator from Wisconsin, who understood he had 10 minutes and we were advised he had requested 5 minutes, that we will make our best effort to deliver on the time we have been asked to provide. I think all of us understand why time is now unanticipatedly being allocated to the Senator from Maine.

Mr. NELSON. Yes, I am wondering. Some of us have brief remarks.

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The PRESIDING OFFICER. Does the Senator wish to state a parliamentary inquiry?

Mr. NELSON. Mr. President, I would like to ask unanimous consent that whatever time the Senator from Maine uses be changed to the time on the bill.

The PRESIDING OFFICER. There is no time on the bill.

Mr. STENNIS addressed the Chair.

The PRESIDING OFFICER. The Senator from Mississippi is recognized.

Mr. STENNIS. Mr. President, will the Senator restate his request? What is the request of the Senator?

Mr. NELSON. Mr. President, I would like to have the Senator from Maine recognized from some other time rather than on the time of some of us who would like to make remarks. Perhaps we should ask unanimous consent that each side be granted 5 more minutes.

Mr. STENNIS. The time now being used is on the amendment.

Mr. HART. The Senator can have all of my time remaining, which is 2 minutes.

Mr. STENNIS. Mr. President, a parliamentary inquiry.

The PRESIDING OFFICER. The Senator will state it.

Mr. STENNIS. Mr. President, at this stage of the proceedings, under the unanimous-consent agreement, is it in order to offer an amendment to the Cooper amendment?

The PRESIDING OFFICER. It is not in order until the time has expired, unless it is by unanimous consent.

Mr. HART. Mr. President, I yield to the distinguished Senator from Maine.

Mrs. SMITH. Mr. President, I shall take only a minute.

I thank the distinguished Senator from Michigan for yielding.

Mr. President, at the expiration of time on the Hart-Cooper amendment I intend to offer another amendment, and for the information of the Senate I will read the amendment at this time. The amendment will be my original section 402, with an additional provision:

Sec. 402. None of the funds authorized by this or any other Act may be used for carrying out, after the date of enactment of this Act, any research, development, testing, evaluation, or procurement of the antiballistic missile system known as the Safeguard system, or to carry out any research, development, testing, evaluation, or procurement of any part or component of such system; *Provided*, That funds contained herein or elsewhere for research, development, test and evaluation of components, and related procurement, of any other advanced antiballistic missile system or other weapons system shall not be affected.

I have copies of the proposal on my desk if anyone wishes to read it.

Mr. COOPER. Mr. President, will the Senator yield for a parliamentary inquiry?

The PRESIDING OFFICER. Who yields time?

Mr. COOPER. Mr. President, I make a parliamentary inquiry in order to be certain. When all the time has elapsed upon the Cooper-Hart amendment, will it then be in order for the Senator from Maine to offer her amendment?

The PRESIDING OFFICER. The Chair advises the Senator that it would

be in order for anyone to offer an amendment at that stage.

Mr. COOPER. I want it to be specific. I ask about the amendment of the Senator from Maine.

Is there any parliamentary device which can prevent her from offering her amendment when all the time has elapsed, if she secures the floor?

The PRESIDING OFFICER. No; nothing would prevent its offering at that time.

Mr. COOPER. Mr. President, I would like to make an announcement.

Mr. FULBRIGHT. Mr. President, may we have order? It is difficult to hear the Senator.

The PRESIDING OFFICER. The Senate will be in order.

Mr. COOPER. Mr. President, the Senate knows of the long hours of debate we have had on the Hart-Cooper amendment. We believed in it, and worked for it, and fought for it. We have been joined by many other Senators in this body who have worked in the same way.

We have had an opportunity to listen to the distinguished Senator from Maine when she first presented an amendment and, of course, she has been very kind to discuss her amendment with us.

She will offer a new amendment. The Senator from Michigan (Mr. HART) and I have considered it with many others and decided that her amendment, in a different way, but as precisely and perhaps more clearly accomplishes the purpose of our amendment.

So when the opportunity arises I shall vote for her amendment. My colleague, the Senator from Michigan (Mr. HART) will speak for himself, but I know we will vote for her amendment and we would hope very much that all of those who have been so kind as to support the amendment which we offered will join us in supporting the amendment of the Senator from Maine.

Mr. MURPHY. Mr. President, a parliamentary inquiry.

The PRESIDING OFFICER. Who yields time?

Mr. STENNIS. Mr. President, I yield myself 1 minute to make a parliamentary inquiry.

The PRESIDING OFFICER. The Senator will state it.

Mr. STENNIS. Mr. President going back to the proposition about the amendment, no amendment has been offered now or sent to the desk. Is that correct?

The PRESIDING OFFICER. The Senator is correct.

Mr. STENNIS. But I have one in my hand—which is not my own.

My point is that the amendment of the Senator from Maine, another amendment, offered on that same subject, would have to carry a substantial difference in substance.

The PRESIDING OFFICER. The Senator is correct.

Mr. MURPHY. Mr. President, a parliamentary inquiry.

Mr. STENNIS. Does the Senator wish to be recognized?

Mr. MURPHY. No. I wish to address a parliamentary inquiry.

Mr. STENNIS. I yield 1 minute for that purpose.

Mr. MURPHY. Mr. President, when the Senator from Maine offers a new amendment, will it be in order for debate, will time be controlled, and for how long?

The PRESIDING OFFICER. The Chair advises the Senator there will be 1 hour under the previous agreement, which would be divided equally.

Mr. STENNIS. I yield 10 minutes to the Senator from Washington.

Mr. JACKSON. Mr. President, in my opening remarks in this debate on July 9, I addressed the Senate on the main considerations which lead me to support President Nixon's request for the authorization of phase I of the Safeguard ABM. Later, at a closed session of the Senate, I discussed many of the classified matters relating to the proper consideration of this issue. Since that time, I have noted a recurring theme of those who oppose the President's ABM request: It is said that the Safeguard ABM "will not work."

This is not the first time we have heard this argument against a new development. When the first automobile chugged down the street, there were loud cries of "The darn thing will never work, get a horse." When the first pair of pajamas was put on sale, a man looked at it and predicted it would never replace the old-fashioned nightshirt.

In 1906, we were told that heavier-than-air craft would be incapable of sustained flight. Who said that? Simon Newcomb, an American scientist of the first rank, and he said that a few years after the Wright brothers flew at Kitty Hawk.

In 1933, we were advised that we were never likely to be able to control atomic energy to a useful extent. Who said that? Dr. Ernest Rutherford, the great English scientist and Nobel Prize winner, and he said it less than a decade before we achieved the first sustained nuclear chain reaction.

At the end of the 1940's, we were told the H-bomb might not prove feasible. Who said that? Various members of the prestigious General Advisory Committee to the Atomic Energy Commission. In the end, every member of the General Advisory Committee recommended, for one reason or another, that we not go forward with the hydrogen bomb—except Dr. Glenn Seaborg, who was away in Europe when the committee met on October 29, 1949. And who were the members of the General Advisory Committee? They were a Who's Who of the American scientific fraternity.

It is our good fortune that President Truman rejected the advice of these noted scientists. He concluded that the Soviets would go ahead with their own program, whatever we did, and that to leave the field and possibly sole possession of the H-bomb to Russia would be a criminal dereliction of duty. As things turned out, the Soviets were already hard at work on the H-bomb. Their test came at about the same time as ours at Eniwetok and was also a successful one.

In 1949, a book was on the presses with a prediction that it would be 10 years before the Soviets would produce a work-

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able atomic bomb. When the Soviets exploded an atomic bomb in August 1949, the printing presses had to be stopped, and the prediction cut out of the type. Who was the author of the book? The distinguished scientist, Dr. Vannevar Bush, who directed the important Office of Scientific Research and Development during World War II. The book was his well known "Modern Arms and Free Men."

In 1949, we were told that it would prove impossible to make relatively accurate intercontinental rockets—that in fact such rockets would be extremely inaccurate and astronomically expensive. Who told us that? Dr. Vannevar Bush.

In February 1953, it was said that the Soviets could not be expected to have any ICBM's before the late 1960's. Who made that prediction, plainly in error before the year 1953 was even over? That prediction was made in the final report of the Lincoln Summer Study, among whose prominent members were President James Killian of MIT, Dr. Carl Kaysen of MIT, and Dr. Jerome B. Wiesner of MIT.

In 1956, we were told that it was not technically feasible to put H-bombs in intercontinental missiles. Who told us that? P. M. S. Blackett, the outstanding British scientist and Nobel Prize winner in physics. And he told us that at a time when it had been known in the classified literature for more than 2 years that it was technically feasible and when, in fact, this knowledge had played an important part in the decision to accelerate the U.S. ICBM program.

In 192 it was said that lunar orbital rendezvous would be a poor way to send men to the moon, that it would not work, that it involved too great risks for the lives of the astronauts, and so on. Who said that? Dr. Jerome B. Wiesner, then science adviser to President Kennedy. Fortunately, President Kennedy did not follow Dr. Wiesner's counsel on this issue. He followed the advice of the responsible technical experts in NASA.

We all recognize the right of scientists to speak their minds. The men I have cited were able and knowledgeable. They have made outstanding contributions in their own professions and disciplines. The point is: Exact prediction on these matters defies absolute assertion, and even great scientists can be wrong.

In short, we do not settle an issue like the ABM by claiming it will not work. Distinguished scientists will be found on both sides of this sort of issue. Trying to make one's case by the method of scientific authority will not wash. Like President Truman in the H-bomb decision, and like President Nixon now in the ABM decision, we Senators have to use our heads and exercise our judgment in evaluating the conflicting points of view and in weighing all the relevant considerations.

As my colleagues know, some critics of Safeguard have tried to give the impression that the whole scientific community is up in arms against the Safeguard ABM. This is a wild distortion of the facts. Even the scientists who appeared before the Senate Armed Services Committee as opponents and critics of the Safeguard system did not go out on the

limb of saying that Safeguard would not work. And there is no doubt whatsoever about the eminence of those scientists who believe Safeguard is practicable and who strongly support going forward with the program as recommended by President Nixon—such men as:

Dr. Freeman Dyson, professor, Institute of Advanced Study in Princeton.

Dr. Charles Herzfeld, former director, Advanced Research Projects Agency.

Dr. Willard Libby, Nobel Prize winner in chemistry, professor of chemistry and director of the institute of geophysics and planetary physics at the University of California, Los Angeles, and a former member of the AEC.

Dr. William McMillan, professor chemistry, UCLA.

Dr. Frederick Seitz, president, Rockefeller University, recently president of the National Academy of Sciences.

Dr. Harold Smith, associate professor of nuclear engineering, University of California at Berkeley.

Dr. Edward Teller, associate director, Lawrence Radiation Laboratory, University of California.

Dr. John Wheeler, professor of physics, Palmer Physical Laboratory, Princeton University.

Dr. Eugene Wigner, Nobel Prize winner in physics, professor of mathematical physics, Princeton University.

Mr. President, the Safeguard system is the result of a very comprehensive research and development effort. The components are more fully advanced and better tested than were the components of the Polaris missile system, when a comparable go-ahead was given.

We solved greater and more complicated technical problems to make the successful Apollo flight, than we find in the Safeguard program. Surely, if we can walk on the moon, we can make the Safeguard program work.

Since President Nixon made his request for the Safeguard ABM on March 14, the facts of growing Soviet strategic offensive capabilities are more ominous—not less so.

The Soviets are continuing to install their very large SS-9 missiles, each capable of carrying one gigantic 20- to 25-megaton warhead. The number of their SS-9 missiles operational or under construction now considerably exceeds the figure of 230 used as late as May by Secretary Laird. Moreover, the number exceeds the earlier estimate of the intelligence community for the time period involved.

Since March, the Soviets have tested multiple reentry vehicles on their SS-9; three such RV's—each with payload equivalent to a 5-megaton warhead—per missile, and the tests have not been unsuccessful.

Also, our information now is that the Soviets have launched or have under construction more than 20 "Y" class Polaris-type submarines. The Soviet Union not only has the plant capacity to produce as many as six to eight of these "Y" class submarines a year, but the current information is that they are in fact producing them at the rate of eight per year at two assembly-line facilities. It is considered likely that as production experience is gained the rate of output from

the two facilities might increase significantly.

In recent months, more and more informed analysts of Soviet developments, right, left, and center, are assessing the Soviet leadership as evident products of the Stalin system, not inclined or able to move the Soviet Union out of the vicious circle of repression, fear, repression. The defection of Anatoly Kuznetsov is just the latest testimony to the trend toward the domestic hard line in Russia. Furthermore, an increasing number of Western analysts are warning that the Soviet Union faces a leadership crisis, the outcome of which is unpredictable. We do not know who will have the finger on the Soviet nuclear trigger in the months and years ahead. The enormous Russian arsenal will be at the disposal of whatever "strong man" or ascendant faction of tough, ambitious figures maneuver to the fore in the struggle for power and influence going on within the Politburo.

Furthermore, three danger spots in the world show no signs of quieting down; the threatening situation on the Sino-Soviet border where both sides have piled up vast arsenals; the potentially explosive conditions in Central Europe, where the Kremlin is using force to turn back the clock in Czechoslovakia; and the Middle East, where no agreements are in sight, and where the bitter conflict goes on. Crises in any one of these areas—and in other areas—could get out of hand; the trouble and violence could spill over and involve us directly.

Hence, there is everything to be said for the United States maintaining a strong and prudent defense posture.

And, as I see it, this means moving now to give a future President an option between capitulating to any nuclear attack and "emptying the holes" in an all-out nuclear war. The whole point of the Safeguard ABM is to keep open the option for a future President for what John Kennedy called "a choice between Armageddon and surrender."

Mr. President, I do not find the prospects of negotiating reliable agreements with the Soviet Union on the limitation of offensive and defensive nuclear systems as rosy as some people now paint them. But we have to do our best, for if there is a chance to have successful negotiations we must not miss it.

I am confident President Nixon is going to be in a better position—as the Senator from Rhode Island (Mr. Pastore) so well stated a short while ago—to negotiate with the Soviets on nuclear arms control, when the Senate has voted to give him the authority to move ahead with phase I of Safeguard.

The purpose of negotiations with Moscow on offensive and defensive nuclear systems is to reach mutually acceptable agreements that improve the chances for building a peaceful world. We do not want just negotiations. We want serious and productive negotiations that advance the prospects for a more stable, decent world in which individual liberty can survive and flourish. So our preparation for these negotiations and our stance as we enter them are very important.

The PRESIDING OFFICER. The time of the Senator from Washington has expired.

Mr. STENNIS. Mr. President, I yield 2 additional minutes to the Senator from Washington.

The PRESIDING OFFICER. The Senator from Washington is recognized for 2 additional minutes.

Mr. JACKSON. Mr. President, I think it very likely that the Soviets will want to maintain a limited ABM defense to give them some future protection from nuclear coercion and attack from Communist China and other secondary nuclear powers. In any case, I do not see how anyone could realistically expect to get Moscow to agree to limit its ABM deployment, if we abandon the deployment of our ABM's, unilaterally, before the negotiations even begin. Nothing in the record of negotiations on the control of arms suggests that this would be the way to have a successful parley with the Soviets.

I believe there is some chance that we could come to an agreement with the Soviet Union for a limited ABM defense on both sides—for example, an agreed ceiling on the number of ABM's for each side—provided that the Congress does not foolishly throw that chance away by now scuttling our own program.

In my view, nothing would be more detrimental to our diplomatic effort—or more shortsighted in the cause of world peace—than to deny President Nixon the strong hand he needs just as his negotiators are about to sit down at the conference table.

The PRESIDING OFFICER. Who yields time?

Mr. STENNIS. Mr. President, how much time is left for the opposition?

The PRESIDING OFFICER. Fifteen minutes.

Mr. STENNIS. Mr. President, we have used quite a bit of the time on this side. I respectfully ask to be relieved of yielding now, and ask the other side to yield some time.

The PRESIDING OFFICER. Does the Senator from Michigan yield time?

Mr. HART. Mr. President, what time remains on the side of the proponents?

The PRESIDING OFFICER. Thirty minutes remain on the Senator's side.

Mr. HART. And the opponents?

The PRESIDING OFFICER. Fifteen minutes.

Mr. HART. Mr. President, I am prepared to yield time to the Senator from Wisconsin (Mr. NELSON), but he is not present at the moment.

Mr. STENNIS. Mr. President, I yield 3 minutes to the Senator from Iowa (Mr. MILLER).

The PRESIDING OFFICER. The Senator from Iowa.

Mr. MILLER. Mr. President, there is not much I can add to what the able Senator from Washington and the able Senator from Rhode Island have had to say, except I would like to put in perspective one point that the Senator from Missouri has been stressing very greatly, and that is the terrible cost of our defense budget.

There is no one in the Senate who is not concerned about the size of the defense budget. No one has a premium on

that concern. But let us put it in perspective. The other day I sought to do that, and I regret that my colleague the Senator from Missouri did not hear me.

I pointed out that our gross national product for fiscal 1970 will be \$960 billion. If our defense budget goes through at \$78 billion, including only the sum of \$345 million for the Safeguard system, it will mean that 8.1 percent of our gross national product will go for national defense. Last year it came to 8.2 percent. Five years ago the total was 8.4 percent. Ten years ago it was 8.5 percent. Fifteen years ago it was 9.5 percent.

Mr. President, if we take a look at it from that standpoint, we are not doing as badly, considering the relationship of our defense budget to our gross national product, or our country's capabilities, as we were 15 years ago. In fact, as compared with 3 years—5 years ago, 10 years ago, and 15 years ago—it will be less.

I am not saying that we should not be concerned about defense costs, but I think there has been just too much talk about it without taking it in the perspective in which I put it.

One last comment. For a long time I thought the Cooper-Hart amendment was being supported by Senators who recognized the need for an ABM system and recognized the need for a Safeguard system, but wanted to limit the funds to research and development. Now the Senator from Kentucky tells us that they can support the Smith amendment because the Smith amendment would do away with the Safeguard system altogether. I do not think we have been given the proper approach on this question, with all deference to my colleague from Kentucky. I do not think the true position has been shown to us.

The PRESIDING OFFICER. The time of the Senator has expired.

Mr. COOPER. Mr. President, may I have 1 minute to respond?

Mr. HART. I yield 1 minute to the Senator from Kentucky.

Mr. COOPER. Mr. President, the amendment which the Senator from Michigan (Mr. HART) and I have offered, which has been debated for weeks, would deny the use of any funds during the next fiscal year for deployment and provide funds only for research and development.

When Senators study and consider the amendment which will be proposed by the Senator from Maine (Mrs. SMITH), I believe they will find the Smith amendment could achieve the same result. I have read her amendment carefully and discussed it with her. The amendment proposes that no funds shall be used for research and development, test, evaluation, or procurement for the Safeguard system—as designed. It would prohibit its deployment, as ours would.

The PRESIDING OFFICER. The time of the Senator has expired.

Mr. HART. I yield 2 additional minutes to the Senator from Kentucky.

The PRESIDING OFFICER. The Senator from Kentucky is recognized for 2 additional minutes.

Mr. COOPER. We have been fighting against the Safeguard system because we

have said again and again on the floor that we do not believe it is designed correctly. We have advocated that the funds be used for designing a new system. This is the purpose of Senator SMITH's amendment, also.

The amendment of the Senator from Maine provides that these funds can be used for any purpose connected with research and development, testing, and evaluation, concerning this or any other weapons system or any other advanced ballistic missile system. Our amendment seeks research on a better designed ABM system.

As I said a few minutes ago, the amendment of the Senator from Maine is perhaps more precise than ours is. But I find no essential difference between our two amendments. I want to make this clear.

The PRESIDING OFFICER. Who yields time?

Mr. HART. Mr. President, I yield 5 minutes to the Senator from Wisconsin.

The PRESIDING OFFICER. The Senator from Wisconsin is recognized for 5 minutes.

Mr. NELSON. Mr. President, more than 4 years ago, in the spring of 1965, I was here on the floor of the Senate arguing and voting against appropriations to launch a land war in Vietnam. The same pundits of the press, the same generals in the Pentagon, and the same Members of Congress, were then making the same arguments for intervention in the war in Vietnam that they are now making for deployment of the ABM. There is hardly a single proponent for intervention in the war in Vietnam in all America who now does not wish we could turn the clock back to avoid that tragic mistake. Five years from now, in my judgment, they will be confessing their mistake on the ABM as they are now confessing, privately and publicly, their mistake on Vietnam.

On April 18, 1968, I introduced the first amendment to delete appropriations for the anti-ballistic-missile system. That amendment received only 17 votes. Since that time there has been increasing widespread debate over the wisdom of deploying this weapons system and increasing opposition to it until, it appears now, the Senate is about equally divided. It is interesting to note that the membership of the Foreign Relations Committee, which conducted extensive hearings on this issue is divided 10 to 4 against deployment and the Armed Services Committee is divided 10 to 8 in favor of deployment. Thus, a majority of 18 to 14 on these two committees is opposed to deployment.

In any event, as I see it, the most disturbing thing about the Safeguard proposal to deploy antiballistic missiles is its disastrously bad timing. At this very point the United States and Russia are in a position to begin negotiations which could put an end to the arms race. This is the heart of the issue before us. We can either take the initiative now to push for arms control agreements or we can add fuel to the escalating weapons race by deploying an anti-ballistic-missile system. Whatever merits the proponents claim for an ABM, Russia knows that we have sufficient nuclear warheads

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in hardened missile sites on the ground, in bombers, and in inaccessible submarines to retaliate with devastating force upon any country that attacks us. Russia occupies the same relative posture of strength toward us.

If under these circumstances it is not possible for the great powers to move for negotiations to deescalate the arms race, we may as well concede it never can be done. If that is the gloomy prospect we can resign ourselves to an endless weapons race that dramatically increases insecurity in the world, dissipates critical resources and contributes to the growing disillusionment with political systems here and elsewhere which are so remarkably efficient at making war and so utterly incapable of creating a peace.

What we should do now is postpone on-site deployment of the ABM while we continue research and development. If at some later date compelling reasons arise for deployment, that issue can be decided then. At the time we announce the postponement, we should initiate talks for deescalation. All elements are now present for mutually beneficial negotiations.

This is the first time such an opportunity has appeared in 20 years. If we pass it up we may have to wait another 20 years. The world cannot afford that.

If we deploy a new weapons system Russia responds with another and we react with something else. After the Safeguard system, each side expands from a thin system to a thick one, and then to the multiple warhead—MIRV—and then to construction of launching sites on the bottom of the ocean, and so on without end.

Former Secretary of Defense Robert McNamara said it well:

It is precisely this process of action and reaction upon which the arms race feeds, at great cost to both sides and benefit to neither.

In the growing debate over the military budget in general and the ABM in particular, we are really witnessing the opening of a much broader debate over a much larger question—what are and what should be our national priorities? How long can we continue to ignore critical social, political, and economic problems on the homefront and still maintain the unity of our people? We can spend all our resources for defense, and have nothing left to defend. We can populate our country with shiny new missiles and other glamorous armaments and ignore the continuing decay of our cities, the overwhelming pollution of our rivers and lakes and air, the children who go hungry and sick in this affluent society, the educational institutions that limp along for lack of funds.

The PRESIDING OFFICER. The Senator's time has expired.

Mr. NELSON. Mr. President, I ask for one more minute.

Mr. FULBRIGHT. I yield the Senator from Wisconsin 2 additional minutes.

The PRESIDING OFFICER. The Senator is recognized for an additional 2 minutes.

Mr. NELSON. Is it not remarkable that almost any weapons system the mind of man can conceive we will fund to the patriotic chant of "national de-

fense" when in fact each step up the escalation ladder brings us closer to a certain end spelled "international disaster." Is it not ironic that we can spend \$350 million a year on chemical agents and disease organisms that would wipe out whole populations of people but we have to close Job Corps camps and send unfortunate boys and girls back to the streets because we need to save \$57 million in the current budget? Does not it give one cause to ponder the character of a society that can enthusiastically spend \$25 billion for the moon landing and fund only \$214 million in a lamentably insignificant effort to stay the pollution of our rivers, lakes and streams? Remarkable though the achievement, to what avail do we discover the physical composition of all the barren planets in our solar system while man's depredations destroy those characteristics that distinguish this planet from all the rest?

A year ago, the U.S. Senate was debating another version of the ABM—the Sentinel program. I opposed that system, and said that if it was bad politics to do so, at least it was good sense, and that is something worthwhile nowadays.

Right now we have a "sufficiency" of arms capability that is almost beyond comprehension. Future plans for our Polaris submarines will give them 6,000 underwater warheads poised for action. Add to this right now 1,000 land-based Minuteman missiles, 7,000 tactical nuclear weapons in Europe, plus another 1,000 for our bombers. Enough to snuff out any country and the rest of the world. How much is enough? Between the United States and Russia there are stockpiled enough nuclear weapons to equal 15 tons of TNT for every man, woman, and child on earth.

Over the weeks all the arguments pro and con have been made. There is really nothing to add. I would emphasize once more, however, that all experts agree that any anti-ballistic-missile system can be quite simply neutralized by saturation. It is only necessary to make a photographic count of the ABM silos and produce enough offensive missiles to absorb the system. This point is not in dispute. Is anyone in doubt that either side would do exactly that in the event the other deployed an ABM? We in fact have already responded to the limited deployment of 72 antiballistic missiles around Moscow in precisely this fashion. They may protect Moscow for a limited time against attack by China, but they offer no defense against our system. They know that and so do we.

Every Member of the Senate has viewed the Defense Department chart that shows how many offensive missiles it will require to neutralize both phase I and phase II of our proposed ABM system. The Russians know what that number is as well as we do since it is a relatively simple mathematical calculation. Thus, I wonder why the Defense Department has not made the chart public as suggested by the distinguished Senator from Missouri, Senator SYMINGTON. It would seem obvious that the American public is en-

titled to know as much about that chart as the Russians do.

Of course, one response the proponents make to the saturation argument is that we can expand our ABM if they try to neutralize our system, as they will certainly do, and therein lies the catalytic agent for a dramatic escalation of the arms race.

Former Defense Secretary McNamara graphically described the folly of spending when he said:

\$4 billion, \$40 billion, or \$400 billion—and at the end of all the spending, and at the end of all deployment, and at the end of all the effort, to be relatively at the same point of balance on the security scale that we are now.

Certainly we cannot expect to throw a new weapons system into the arms race and then join the Russians in meaningful arms control negotiations.

Mr. President, I ask unanimous consent that remarks I made in opposition to deployment of the ABM on April 8, 1968, and April 19, 1968, be printed in the RECORD at the conclusion of my remarks.

There being no objection, the remarks were ordered to be printed in the RECORD, as follows:

[From the CONGRESSIONAL RECORD, Apr. 8, 1968]

Mr. NELSON. The price tag on this proposal is now \$5 billion. As we all know, it will be higher. We are told it is aimed against China missiles only. It is conceded by everyone that at best it would be effective against a crude, unsophisticated delivery system. On February 2 of this year, Defense Secretary McNamara testified before the Armed Services Committee that this was a Chinese oriented system. When Senator DOMINICK asked, "If a Soviet missile should come within that particular defense system you could handle that one?" Secretary McNamara replied:

"If it were only one missile, yes. However, if it were the size attack the Soviets are capable of mounting today, the answer is 'No.'"

In a speech, a few months ago on September 18, 1967, the Defense Secretary said:

"Our strategic offensive forces are immense. All of these flexible and highly reliable forces are equipped with devices that insure their penetration of Soviet defenses."

Mr. McNamara said further:

"None of the [ABM] systems at the present or foreseeable state of the art would provide an impenetrable shield over the United States. There is clearly no point . . . in spending \$40 billion if it is not going to buy us any significant improvement in our security. Every ABM system that is now feasible involves firing defensive missiles at incoming offensive warheads in an effort to destroy them. But what many commentators on this issue overlook is that any such system can rather obviously be defeated by an enemy simply sending more offensive warheads, or dummy warheads, than there are defense missiles capable of disposing of them."

He reminded his audience that the United States has "already initiated offensive weapons programs costing several billions in order to offset the small present Soviet ABM deployments."

Secretary McNamara pointed out that four distinguished scientific advisers to three Presidents—Eisenhower, Kennedy and Johnson—"have unanimously recommended against the deployment of an ABM system designed to protect our population against a Soviet attack." He went on to say:

"We have the power not only to destroy completely China's entire nuclear offensive forces, but to devastate her society as well."

He went on to elaborate on the folly of spending "\$4 billion, \$40 billion, or \$400 billion—and at the end of all the spending, and at the end of all deployment, and at the end of all the effort, to be relatively at the same point of balance on the security scale that we are now."

So, nevertheless, we are now in the treadmill process of spending \$5 billion on a system that may not work at all and, at best, could have some brief, some transitory value until China slightly refined its delivery system, which everyone concedes they can easily do—and certainly will.

What incredible manner of logic is this? We can, as Mr. McNamara put it, totally destroy "China's entire nuclear offensive forces" and "devastate her society as well," but, he says, we should install this system because "one can conceive conditions under which China might miscalculate."

I respectfully suggest to Mr. McNamara that the fertile human mind can conceive of almost any condition it wants to. With that assumption, any proposition can be logically supported.

It is, I think, a weird process of reasoning that causes us to spend \$5 billion on a system of doubtful and certainly temporary value on the belief that China might be insane enough sometime to attack us knowing it would result in devastation for their whole society.

We cannot even wait to conclude our first round of folly in Vietnam before launching into a second round of folly in a nuclear missile race.

In 1965, when we intervened in Vietnam with a military ground troop commitment, it was argued, among other things, that it was a necessary move to contain China. High State Department including the Secretary of State and other officials, used the same argument to justify each stage of the escalation. Now we are there with over a half million troops and draining our Treasury at the rate of \$25 billion a year in an enterprise we wish we had never undertaken in the first place.

China has not a single troop in the war but somehow we are supposed to be containing China by fighting the Vietnamese.

Now, again, under the guise of defending ourselves against the same enemy, China, we are launching a little "thin missile system" which, like the Vietnam war, will balloon into a big thing—and, like Vietnam, 5 years from now we will all be saying, how in Heaven's name did we ever get trapped into this? Well, it is not easy, but it can and will be done if we work at it hard enough.

I think the truth of the matter is, this is not an anti-Chinese system at all, but the first step in construction of a major heavy ABM system. Of course, many of the proponents—I emphasize this—of the thin system do not intend that result any more than they intended a big war in Vietnam, but that, nevertheless, will be the result.

The signposts along the route we are traveling are clear and we can read them down that route as far as the eye can see—they read: We escalate; they escalate; we escalate; and so forth, until we reach the end of the line, wherever that may be. As Mr. McNamara put it, we could spend \$4 billion, \$40 billion, or \$400 billion on an ABM system and at the end be relatively at the same point of balance on the security scale that we are now.

In commenting on the futility of it all, Dr. Jerome Wiesner, science adviser to the President, said:

"Defense against thermonuclear attack is impossible."

Dr. Ralph Lapp stated:

"I believe that for every wrinkle you introduce into defense there are 10 more wrinkles

that can be introduced in the power of the offense."

I am aware that the Joint Chiefs and the military hierarchy favor the heavy ABM just as they favored intervention in Vietnam, and we who oppose it will be told now, as we were then, that we are wrong and the military knows what is best. And, again, 5 years from now, if we are still around, we will have the doubtful honor of pointing to our sad mistake—and we will be told then, as now, to quit talking about the past—that is history—let us talk about the future. And so mankind goes down his merry road to disaster.

There is, of course, no doubt that this authorization will pass. This is an election year and we all know that the two biggest words in the English language are "national defense," "national defense." If you just shout them loud enough you are in the clear—you win and your opponent loses. It is just plain unpatriotic to question any appropriation for national defense. Defense against what? It does not matter what, or where, or how, or whether it makes any rational sense at all—just utter the magic words and you are in the clear.

We know that the military-industrial complex favors this appropriation; we know that Congress supports it; I assume that the public does, too. But I do not and I will not vote for it. I cannot in good conscience vote for a program that will launch us into a spiraling missile escalation which has no end and no purposes either. If that is bad politics, at least it is good sense and that is something worthwhile nowadays. For my part, I would rather leave here with my conscience than stay here without it.

In conclusion, may I say, how much better it would be if we just poured this money into our troubled cities for programs to right what is wrong in America. Lest we do that soon, we may not have a worthwhile society left here in America for the ABM to defend.

Mr. President, I ask unanimous consent to have printed at this point in the Record an article entitled "Experts See 'Thin' ABM Vulnerable," published in the Washington Post of Sunday, March 3, 1968; an article entitled "Defense: The Missile Nobody Needs," written by William E. Jackson, Jr., and published in the New Republic of October 28, 1967; and an article entitled "Anti-Ballistic-Missile Systems," written by Ricard L. Garwin and Hans A. Bethe, and published in the Scientific American of March 1968.

There being no objection, the material was ordered to be printed in the Record, as follows:

"[From the Washington Post, Mar. 3, 1968]

"EXPERTS SEE 'THIN' ABM VULNERABLE

"The Chinese will be able to build missiles that will penetrate the so-called 'light' ABM system the United States intends to construct, according to statements by two groups of American scientists.

"An article in the March issue of Scientific American by Richard L. Garwin and Hans A. Bethe, both long associated with the development of American nuclear weapons, argues that the proposed system 'will add little, if anything, to the influences that should restrain China indefinitely from an attack on the U.S.'

"The two scientists argue that the Chinese can surmount the American system, 'whose characteristics and capabilities have been well publicized.' Their article discusses this possibility in considerable technical detail.

"Bethe is a Nobel Prize winning physicist. Garwin, a Columbia University physicist, was recently reported to have gone to South Vietnam, a report setting off rumors that nuclear weapons were being deployed there. But Pentagon officials later said he went instead to Thailand.

"The Federation of American Scientists, in

a statement, called the ABM system 'irresponsible on fiscal grounds' and 'pointless on military grounds.' The Federation statement said that 'the basic technical fact is that this system can be easily neutralized by the Chinese by using relatively simple and cheap penetration aids or by developing different means of weapons delivery.'

"Both the Garwin-Bethe article and the FAS statement express fear that the 'light' ABM system, approved last September by Defense Secretary Robert S. McNamara, will not stop here. Both believe there will be great pressure to expand the system into one designed to protect against Soviet ICBMs at a cost of \$40 billion or more.

"The FAS statement is also critical of incoming Defense Secretary Clark M. Clifford's statement that he will seek 'clear-cut nuclear superiority' over the Soviet Union. The statement said that 'at today's level of weaponry there can be no such thing.'"

[From the CONGRESSIONAL RECORD, Apr. 19, 1968]

Mr. NELSON. Mr. President, my remarks are addressed to the bill itself, which I am going to vote against.

There are, it seems to me, any number of routes a country may follow down the road to disaster. We seem to be traveling several roads at the same time; namely, the war in Vietnam, the destruction of our environment and the disintegration of our great cities.

One would think that these manmade disasters would be sufficient for any country to contend with at one time. But, apparently not.

We are now about to trigger a missile race with Russia, an offensive and defensive missile escalation that literally will have no end.

The so-called thin missile system is not aimed at China at all. That is ridiculous. It is simply an opening wedge for the installation of a heavy system aimed at Russia which will cost us \$30 to \$40 billion, when the system will be obsolete anyway. We will have succeeded only in exacerbating the balance of terror.

Mr. President, I will not vote for this bill because it involves this authorization for the Sentinel thin missile system.

I predict that every single Member of this body who votes for this bill which will start this escalation by construction of the thin missile system, will regret his vote and the honest ones will publicly apologize for it in less than half a dozen years.

Mr. HART. Mr. President, I yield 1 minute to the Senator from Oklahoma.

Mr. HARRIS. Mr. President, because I have voiced my opposition to the Safeguard missile system on the floor of the Senate on other occasions, and since the issue is rather clear now, and the time of the proponents is very limited, I have been requested, rather than to detain the Senate at this time, to ask unanimous consent that a detailed statement by me of my reasons for supporting the pending amendment be printed in the Record; and I now do ask unanimous consent that those remarks be printed in the Record at this point.

The PRESIDING OFFICER. Without objection, it is so ordered.

The statement is as follows:

Mr. HARRIS. Mr. President, I would like to speak in behalf of the pending amendment to S. 2546.

Passage of the amendment does not mean that an ABM system would never be developed. It means, rather, that deployment would be postponed while we consider

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whether the ABM is indeed necessary for our national defense.

This amendment would limit funds for the ABM system to those needed for research and development. Deployment and site acquisition would be delayed pending the results of this further research.

In the past, we have spent enormous sums to deploy weapons systems. All too often these systems have been abandoned before becoming operational or have been declared obsolete shortly after deployment. Especially with our mounting domestic problems, we cannot afford to spend the taxpayer's dollars in such an undisciplined and incautious manner.

Matthew Arnold, in describing 19th century England said:

"We show as a nation laudable energy and persistence in walking according to the best light we have, but we are not quite careful enough, perhaps, to see that our light be not darkness."

Today, in 20th century America, there is a great need for us, as a nation, to be certain that "our light be not darkness"—that we not misunderstand the true meaning of the "security" we seek. In the nuclear age, security can derive only from stability. It is all too obvious that the spiraling arms race, on the periphery of which we exist today, presents the ultimate in instability and thus insecurity.

To preserve an adequate level of stability and security requires a slowing of the arms race—an event which can occur today only through agreement between the United States and the Soviet Union.

It is clear that deployment of the ABM at this time could be very detrimental to our negotiations with the Soviet Union, and this is the most important argument in favor of the pending amendment.

The Administration claims it is essential that we bargain from the position of strength which the ABM will supposedly provide. The debate on this question of our present military strength has established clearly the impressive state of our deterrent force.

I recently met with the Chief of Naval Operations, Admiral Moorer, to discuss the current status of our Naval force. I must say that I am impressed with our Navy and its great flexibility, mobility, and almost unquestioned effectiveness. As an example, Admiral Levering Smith, Director of the Navy's strategic systems project, has stated that the Polaris Submarine will remain invulnerable for another forty years. To eliminate the effectiveness of our submarine force, the Soviet Union would have to develop an anti-submarine technology capable of tracking all missile submarines. Since the free world controls a great percentage of the shorelines, the tracking of our submarines becomes an almost impossible task.

Our advantage over the Soviet Union in the intercontinental bomber category has also been established. We have a clear numerical advantage of 646 intercontinental bombers to their 150 to 155. In addition, our bombers can carry three to four warheads, compared to the two which Soviet bombers can carry.

It is estimated that in the event of attack we could have no less than 40% of our bomber force in the air. This force, like our nuclear submarines, is clearly impressive and clearly superior to its Soviet counterpart.

The third deterrent force discussed during the debate, ICBM's, is for all purposes evenly balanced with neither power being able to claim a superior force.

Finally, we have the capacity to deliver thousands of warheads with intermediate range planes and missiles stationed on aircraft carriers and foreign bases. By reason of the strategic location of these weapons, it is generally conceded that we have a formidable deterrent force in these weapons alone.

Notwithstanding the numerical superiority we have in these various categories, the So-

viet Union has nonetheless indicated its willingness to negotiate arms limitations.

They do so recognizing that we live within a structure of nuclear deterrence with both nations maintaining the ability to destroy the other.

If either we or the Russians try to radically alter this relative nuclear vulnerability in an attempt to obtain a first strike capability, or what appears to be a first strike capability, the only choice available to the other side will be to react with new weapons costing billions of dollars.

It is important that one understand that once we leave the present arms level in the elusive search for nuclear superiority, there will be much less opportunity for meaningful arms negotiations. The next plateau of armaments, the ABM and the MIRV reaction, does not very easily lend itself to arms control.

I do not mean to indicate that the Soviet Union will agree with us on arms limitations just out of the goodness of their hearts. Nor will we agree with them just to be nice to them.

Each of us will agree with the other—if at all—only because we find it in our own self interest to do so.

There are indications that the Soviet Union, beset with border clashes with mainland China and increasingly feeling a growing demand for consumer goods at home, may now have begun to see that, since neither country can or will allow the other to achieve any substantial defensive or offensive advantage, some mutually enforceable agreement now for arms limitations could provide the same kind of military parity which would exist after we had both spent untold additional billions on new systems.

Whether these talks are eventually successful or not, they are long overdue, and we should get on with them. In the meantime, we should do nothing which would damage in advance their possibility for success. The point is that we have the time to do so, while continuing research and development on an admittedly undeveloped and untested ABM system.

By withholding authorization for the deployment of the ABM we leave open what may in fact be the last feasible option for successful talks which both the United States and Russia have indicated a desire to hold. If we now deploy the Safeguard system, we make much more difficult any eventual agreement with the Soviet Union, which President Nixon has made clear he seeks.

Daily, in debate on this floor, the technical feasibility of the ABM has been questioned, along with the effectiveness of detector-control systems. Responsible and informed members of the scientific community assert that an effective detector-control system can be developed only through extensive and realistic experiments and tests. This strongly suggests the need for further research and development in order to assure the workability of the system before initiating costly construction and deployment.

In the past, we have sometimes proceeded too quickly in procuring components for systems not fully developed. Such haste has resulted in expenditures in excess of \$4 billion for missiles such as the Mauler, Typon, Navaho, and others which were never deployed.

In the past 16 years we have spent billions of taxpayer's dollars on systems which were only briefly deployed—the Nike-Ajax, Regulus, and Atlas D, E, and F.

My fellow Oklahomans well remember the silos which were dug in the Southwest section of our state for the Atlas Missile. Barely completed and dedicated, they were abandoned. They are now for the most part empty—waiting for the ingenuity of man to devise other uses for these multi-million dollar holes in the ground.

This program and similar ones cost the taxpayers approximately \$19 billion.

This is not to say all of the money expended in these programs was wasted. In some instances, for example, we greatly improved our technology. But, the point is that recommendations in this field are not necessarily infallible, and where we have time to do so, as in the instant case we should take the time to determine that our technology has been perfected.

Finally, one must confront the questions of our national priorities. National security should be, and is a major concern of all Americans. But what of health, safety, education, and happiness of our people? Is this not also a part of our national security? These are the things that are necessary for man's "growth, joy and reason." These are more truly the things that give us our strength and our purpose.

Erich Fromm, among others, has warned us of an inherent danger in our technology—acceptance of the principle that something ought to be done because it is technically possible to do it.

Quoting Dr. Fromm:

"The principle means the negation of all values which the humanist tradition has developed. This tradition said that something should be done because it is needed for man, for his growth, joy, and reason, because it is beautiful, good, or true. Once the principle is accepted that something ought to be done because it is technically possible to do it, all other values are dethroned, and technological development becomes the foundation of ethics."

Indeed it would be tragic if we spend billions on a weapons system and find that in the end it has lessened the national security we seek because of its adverse effect on the coming arms negotiations with the Russians and because it has decreased our economic ability to meet pressing needs here at home.

The diversity of opinion on the ABM proposal is evidence of its complexity and significance. I think we realize that we may be setting forth priorities and goals for this nation that will be hard to change. So, let us not imitate the Queen of Hearts who had to pass sentence first and then hear the evidence. The pending amendment gives us the opportunity to develop the evidence and then weigh it carefully before acting finally. I hope it will be adopted.

The PRESIDING OFFICER. Who yields time?

Mr. HART. I yield 2 minutes to the Senator from Illinois.

Mr. PERCY. Mr. President, I intend to support the Cooper-Hart amendment, but I also wish to indicate a clear intention to support a modification which the Senator from Maine has indicated she intends to submit. I do this because I feel that the modified Smith amendment can accomplish everything that I feel is needed to be done on the antiballistic missile system.

It would enable the redesign of the MSR to make it less vulnerable. It would enable redesigning to make a number of multiple radars available, rather than the single MSR that would be at each site; and it would enable us to design a system that would be far less vulnerable.

In addition, it would give us the time to see whether the Soviet Union is serious about the intention to negotiate, and whether it intends to seriously try to find a way to stop the nuclear arms race.

Mr. President, each of us sees this problem from a different perspective. I have, in common with the distinguished Senator from Missouri, a background in military procurement, though his experience was at a substantially higher

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level than mine, and we have had comparable experience in the electronics industry. I suppose it could be said that both the Senator from Missouri and I are members and have been members of the military-industrial complex for about a quarter of a century.

I oppose the Safeguard system, simply because I think we all know several things. We know that it has never been fully assembled. We know that it has never been fully tested. We know that it has never been, therefore, fully evaluated. We have no idea, really—any of us—what it will cost. The range of estimates is from a low of \$8 billion to figures mentioned by members of the Armed Services Committee ranging up to \$40 billion.

I feel it would be a great mistake to rush into production and deploy a system when we do not know whether it will work, whether it can be put together, to effectively carry out its mission, whether it will carry out its objectives, or what it will actually cost.

My own experience in production would lead me to believe we will actually lose time by rushing into production on a system that has not even been fully completed in design.

The PRESIDING OFFICER. The Senator's time has expired.

Mr. HART. Mr. President, how much time remains?

The PRESIDING OFFICER. The Senator from Michigan has 16 minutes remaining. The Senator from Mississippi has 11 minutes.

Mr. HART. I yield 4 minutes to the Senator from Arkansas.

Mr. FULBRIGHT. Mr. President, I agree with the Senator from Wisconsin that about all that can be said on the substance of this issue has been said. I simply wish to clarify my position with regard to the amendment of the Senator from Maine.

I think it would accomplish the same ultimate objective as the Cooper-Hart amendment.

It may be that some, because of prior commitments to the Cooper-Hart amendment, would feel that they cannot support the amendment. I would hope that everyone who will support the Cooper-Hart amendment will feel free to support the amendment of the Senator from Maine. If, by any chance, that amendment should fail, then, of course, they will have another opportunity to vote.

I can only say with regard to these systems, by way of review, that for 25 years this country has placed its principal reliance upon armaments. The major expenditures of this Nation have been for armament. We have piled up the most prestigious amount of arms the world has ever seen. These arms have the capacity to destroy all the world, and certainly all of the countries within the Communist bloc.

The Communists, of course, have similar armaments.

I do think we should give very serious consideration at least to a change in our approach to this policy.

Surely, none of us is satisfied with present conditions in our country.

We have seen our present policy result in internal turmoil all the way from the

ghettos in the cities to the universities and many other areas.

We have seen our present policy result in many of the things the Senator from Wisconsin has stated. I will not repeat them.

I do plead with my colleagues to give prayerful consideration to this need for a slight change in direction to promote the security of our country.

I cannot help believing that the security of our country does not result from the piling up of more and more weapons of varying kinds in our arsenals and neglecting the internal strength of our country.

Surely, with the warnings we have had, ranging all the way from the riot in Watts to the burning and riot in Washington, we have had a warning that different priorities are required.

It seems to me that the first step toward that would be for us to take this small degree of change of direction in our expenditures for military equipment.

The main significance of this particular change, of course, is in the arms race. And it would be a gesture of good will and a token of our good will to other nations who are interested in deescalating the arms race.

I do hope that the Senate, in view of the present conditions and our past experience, will at least take the slight risk involved in trying another approach to our security.

There has been a tendency to identify the amount of arms we have with security, in the belief that arms and security are the same thing, only said in different words. I do not think that is true. Security, to a great extent, must depend on the internal strength of our Nation.

The PRESIDING OFFICER. The time of the Senator has expired. Who yields time?

Mr. HART. Mr. President, I yield myself 1 minute.

The PRESIDING OFFICER. The Senator from Michigan is recognized for 1 minute.

Mr. HART. Mr. President, as other Senators have done, I came to the floor with an elaborate speech. It would not have changed any minds, although it might have made me comfortable when looking at the RECORD.

The only thing I desire to say that may have some effect is that, with the Senator from Kentucky (Mr. COOPER), I hope very much that the Senate will support the amendment intended to be offered by the able Senator from Maine.

That amendment achieves, I think, the objective that is common to all of us—to encourage research and to insure against deployment.

This is the last chance we have to correct a mistake we made last year when we approved deployment of ABM Sentinel.

The people of this country, by their voices of protest have helped us to obtain this opportunity to correct that mistake. Let us not repeat the mistake again.

Mr. President, I yield 5 minutes to the Senator from Kentucky.

The PRESIDING OFFICER. The Senator from Kentucky is recognized for 5 minutes.

Mr. COOPER. Mr. President, I want to make it clear that the Senator from Michigan and I have offered is not withdraw and in the event the amendment offered by the Senator from Maine should be defeated—and I hope it will not be—there will be a vote on our amendment.

I have talked a great deal in this debate, and I shall now make my last speech for the RECORD.

The debate upon the proposed Safeguard anti-ballistic-missile system has been long and hard fought. But it has been worthwhile. It has proven the absolute necessity of the democratic process of inquiry and public debates. It has challenged the Senate as a body to exercise its responsibilities and has challenged the courage of the administration to enter negotiations with the Soviet Union for the control of arms without binding itself to a weapons system, which the negotiations will seek to control.

It has been urged again and again in the debate that a decision must be made now to deploy the Safeguard system, that it is essential to the security of our country. The responsibility for national security rests with the Congress as well as with the executive branch of our Government. We respect the President's grave responsibilities, but the Constitution calls for a joint judgment. It is a trust given the Congress by the people.

The relation of the issue before us to national security, with its vast implications for the protection and future of our country, has caused the Senate to debate its definition and the Nation's goals.

If, as has been argued, national security means a decision at this time to deploy the Safeguard system, to protect our country's retaliatory nuclear forces—the deterrent—I submit that it is a narrow definition, and the supporters of Safeguard have not made their case.

The United States possesses now vast superiority over the Soviet Union in nuclear strength. Compared to the Soviet Union's 2,200 deliverable warheads, the U.S. arsenal includes 4,200 warheads, deliverable from land, the air, and under the seas. If the Soviet Union continues to increase its strategic nuclear weapons, our country can and will increase its nuclear strength and, if needed, can speed the construction of a more effective ABM system. The bill before us is proof that the administration is increasing its offensive nuclear weapons. It provides funds for the Minuteman III program, for MIRV, for converting Polaris submarines to Poseidon, and for attack submarines. The Department of Defense has portrayed a grim picture of Soviet capabilities. It should give all the facts and tell our people that the United States has the capability to protect the deterrent.

Deployment of the Safeguard system is not possible in fiscal year 1970. No component, no part of a component of Safeguard can be emplaced on any missile site in fiscal year 1970. Research and development must proceed for some time on the antimissiles—Spartan and Sprint—and the warheads will not be

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ready until 1974. The radars simply do not exist. A missile site radar—MSR—is being tested at Kwajalein. Construction of the perimeter acquisition radar—PAR—the development of the necessary computers has begun, but their “software”—the feeding of necessary information and intelligence into the computers—has not yet been fully developed.

The amendment which we support does not lock the hands of the President. It provides full funds for research and development. It does prohibit in fiscal year 1970 the procurement of components of the Safeguard system. They have not been tested separately or as integrated units. Their procurement could “lock in” our country to Safeguard, a system which outstanding scientists, who have spent years working on ballistic systems, have testified is not designed for missile site defense, and cannot be effective without a minimum expenditure of \$40 billion. A decision to deploy now, to lock in the system, will not contribute to national security.

We have a kind of security today. It is the ability to destroy the Soviet Union or any other power. The Soviet Union has this security as well.

The pursuit of security through nuclear power alone will never end. It will waste the fruits of the earth and make the labor of men empty. It will increase the sense of futility, particularly among the young. For we and the Soviets, with all our technology, can be reduced to dust at any moment. The green earth and millions who live on it can be burned to grey ashes. This specter is the essence of the nuclear arms race. This is our present security.

A point of view is held by some in this land which has been hardly challenged, but which we challenge today. It is that the United States is required to install nuclear systems against every threat, assumed or potential. It requires one to think of the loss of millions of human beings as if there were no rational alternative.

There is a rational alternative. Our country has the opportunity to strive through negotiations to halt the arms race. We ask that the decision to approve Safeguard—a new weapons system—shall not be made at this time, so that the United States may enter negotiations, supported not only by its overwhelming nuclear power, but also with the power that proceeds from the best purposes of our system of government, from the belief in world order and moral force.

I know the heavy responsibility that bears upon all who will vote today—opponents and proponents of deployment alike. All are moved with a common purpose—the ultimate and true security of our country.

We ask the Senate to take the course of reason, with confidence in the strength of our country, to seek ways to reduce, rather than accelerate, the nuclear arms race. This course offers the only hope of true security for our country and the endangered world.

The PRESIDING OFFICER. Who yields time?

Mr. STENNIS. Mr. President, I yield 4 minutes to the Senator from Arizona.

First, may we have order in the Chamber?

The PRESIDING OFFICER. The Senate will be in order. The Senator from Arizona is recognized for 4 minutes.

Mr. GOLDWATER. Mr. President, I would not want the debate to end without clearing up a few technical points. I would not want the future readers of the CONGRESSIONAL RECORD to think that we could let go unchallenged some rather erroneous—and I think—foolish statements made on technical points.

We have been told that the radar will not work. We have been told that the computer system will not work. I know a little about radar. I have used them. I know a little about computers. I have used them.

The present state of our radar art is an exceptionally high one. We have three-dimensional radar available. We have excellent range and excellent definition. We have a radar system at Eglin Air Force Base. It is called the PSR 85. That is the phase search radar.

This is used to locate the position of satellites, some of them traveling much higher than radar search would be required in the event of incoming missiles. We have the MSA system already operative in the Pacific. The PAR is under construction. It is a 5,000 element radar, about which there is no question as to its feasibility and workability.

As to the computers: We are told that the state of the art is not far enough developed to have a computer to figure out what to tell the missile as it goes out to seek the incoming missile.

I would like to remind Senators that there are available—in fact, in use—two commercially made radars that are nearly twice as big in capacity and required ability as the computer about which we are talking here. These are run by enlisted men. A doctorate is not required to run these computers. The computers at NASA headquarters, for example, after the Apollo flight, have 5 million words stored. This is the biggest computer in the world, and in history, and probably will never be equaled.

What are the problems this computer and radar face that are so gigantic? They really are not gigantic. We know the location of every missile site in Russia, just as they know the location of every missile site in this country. We can tell fairly well which silos of hers are aimed at which targets of ours, and she can do the same we can. Any missile launched from Russia to hit any target in this country probably would not deviate more than 2 or 3 degrees in its trajectory, the two countries being so far apart. We know the height of the trajectory it would have to attain; we know the speed that the missile would have to attain. In other words, we are looking through a tube—if we think of a trajectory as a tube—about 2 or 3 degrees in extreme width, to enable a missile to hit a target in this country.

This is not complicated. If you tell me that a man is going to shoot me and he is in the corner over there and I can see him and he has a rifle aimed at me, I can do something about it. I do not have to have a lot of computered facts.

We know where they are coming from; we know the height of the trajectory; we know the speed. The computer merely has to react to the radar telling the computer “Here comes an enemy bogey,” and off goes the missile, if that is desired.

Mr. President, I merely wanted to clear up this point. I know it is not going to change one vote. I just do not want future generations to think that the Senate would allow erroneous statements to continue about the ability of American science and American technology and American know-how to produce what is a much simpler system than the system we developed, against the advice of noted scientists, to get men to the moon.

That is all I have to say on that subject, Mr. President.

Mr. STENNIS. Mr. President, how much time remains for those in opposition to the amendment?

The PRESIDING OFFICER (Mr. EAGLETON in the chair). Seven minutes.

Mr. STENNIS. Mr. President, I yield myself 7 minutes, or so much thereof as I may actually use.

I realize that this matter has come to the point at which all phases of it have been discussed; but I think that, for the Committee on Armed Services, I should make a brief summary, at the expense of some repetition, of just what is involved.

In the first place, Mr. President, with respect to this missile system, which we have and which Russia has and which Red China may have, the best possible defense and the best possible chance is for those systems to stay there unused. That is what we all pray for. In other words, take Russia first. I would have a very happy thought if I knew we had an effective ABM and they had one, also. I believe that would be the best guarantee that they would not be used. And let each know the other has it. But perhaps it is not possible to have a perfect one, anyway. Certainly, they are on their way—there is no denial of that—and we are burning up daylight now if we let a situation develop in which they have an effective one, or one they believe is effective, and they know we do not have one.

Even if they never fire theirs, there is the blackmail, there is the uncertainty, there is the gnawing void in our mind on everything. So the blackmail value to them would be tremendous. And whatever perfection we had in ours would certainly be a great investment in negotiation, peace of mind, and other proposals.

I say that as one who is deeply concerned about the effectiveness of these ICBM's; and there might not be anyone left, anyway, if each turned loose on the other.

I wish to make a further point, Mr. President, with respect to the proponents of the Cooper-Hart amendment. They say, “Yes, there is a threat”—they have said it until a few minutes ago—and we think that threat ought to be met. There is a threat of some kind. We ought to have an ABM system. We favor the research for it.” That, without limit, has been the story here until a few minutes ago. So that is the recognition of a threat.

They have gone so far as to say: "Yes, we need ABM; we need this system. We want this money to stay in here for the Safeguard." That is what the vote showed a minute ago. "We want that money in here for the research on the Safeguard system." So they must believe there is something to the idea of a threat and that this is a step in meeting that threat.

Until this afternoon, the only difference between the bill as reported by the committee and the Cooper-Hart amendment pertained to this relatively small amount of deployment, which is another phase of advance testing; and that is what the President trimmed it down to—the absolute minimum, to keep from losing all that time. So under the Cooper-Hart amendment and the bill itself, there is no difference except as to those very small items.

It has been said over and over—I do not wish to take the time now just to repeat—that this is a defensive weapon, after all. And that is what it is—purely defensive. I never can be made to believe, with what little commonsense I have, that Russia or anyone else would consider that as an act of aggression. No one blames anyone else for self-defense. Self-defense is natural and it is inherent. There is an old saying: "Even the worm will turn to protect itself." I do not follow one iota the argument that this is aggression. But some of those who make that argument turn right around and say: "Do not go into a Maginot Line concept; do not get on the defensive in a Maginot Line concept." That is a total contradiction of the idea of the others that this is aggression.

May we have a semblance of order, Mr. President?

The PRESIDING OFFICER. The Senate will be in order.

Mr. STENNIS. Mr. President, this just reduces it to the hard, practical matter of whether we are going to cut this off now, after admitting that we need a system and that this one has shown promise, to keep it going—whether or not we cut it off entirely for this last step.

What are the circumstances? The President of the United States, who is planning to go to this conference, has said, "Before I go, before I leave, I want your backing on this weapon." That is what he said, and I know that is what he meant.

What are we going to tell him? Let us not fool ourselves. We are going to jerk the rug out from under him, and not give him anything to stand on except a lot of words. "Oh, Mr. President, we are going to trust you to negotiate, but you do not have judgment enough to say what kind of backing you think you need in weapons and also in moral support. We are not behind you either way. We will not let you have the weapons. Therefore, we take away our moral support."

They deny it, but that is where we are going to leave it. I am going to stand by our Chief of State, and it makes no difference who he is. He wants this weapon to protect us; I think he should have it.

The PRESIDING OFFICER. The Sen-

ator from Michigan has 6 minutes remaining.

Mr. HART. Mr. President, I yield the time remaining to the able majority leader.

The PRESIDING OFFICER. The Senator from Montana is recognized for 6 minutes.

Mr. MANSFIELD. Mr. President, I deny that those of us who are opposed to the ABM system are undermining the President or are adopting a morally indefensible position. I think that we should get away from the emotion and get down to as many of the facts as we possibly can, recognizing no matter what our position, none of us, not a single one of us, is infallible.

We are approaching a high water mark in the debate on the ABM. For the record I wish to reiterate that three times last year I voted with the distinguished Senator from Kentucky (Mr. COOPER) and the distinguished Senator from Michigan (Mr. HART) against the ABM under a previous Democratic administration.

There have been emotions displayed in this debate today. That is understandable as the heat generates and the arguments become a little bit more personal. There have been many illustrations of what went on in 1898, 1905, and 1912, as if that had anything to do with the question of the ABM, even if the illustrations were correct, and they were. But by and large this debate has been solid, it has been statesmanlike, it has been nonpartisan, and regardless of one's position, in my opinion, it has been in the national interest.

The President made a judgment. He brought about a drastic configuration of the Sentinel system, which he inherited. After a reassessment and reevaluation, he came up with the Safeguard. The President faced up to his responsibility, made a judgment, and rendered a decision; and I honor him for it.

But as Senators we also have to face up to our responsibilities, render a judgment, make a decision, cast a vote, and then we are responsible to the people of the States from which we come for what we do in this and in other instances. That is the way it should be.

For all I know, the advocates of the anti-ballistic-missile system may be right and I may be wrong. But I have to make a decision. I cannot take a walk. I do not wish to avoid a vote. So one has to do what one thinks is best and be prepared to accept the consequences, good or bad.

The statement has been made that some of us are advocating giving up the ABM unilaterally. No such statement has been made by anyone in opposition to this proposal because, as a matter of fact, I am not aware that we have any ABM's at the present time.

I would point out, though, that even though we do not have radars and computers, Sprints and Spartans, we do have parity as of this moment with the Soviets in the matter of ICBM's; that we are infinitely superior in the field of the Polaris missile, where we have about a 12-to-1 or 13-to-1 advantage. If I read the press correctly this morning, there is a decidedly greater advantage because

we have some multiple warheads, I understand, on some of the Polaris missiles. In the field of heavy bombers, the nuclear bombers, we have at least a 4-to-1 and possibly a 5-to-1 superiority.

The question has been raised about cost and that has bothered me. It was my understanding that originally the cost was to be \$6.3 billion for the entire system. The distinguished Senator from Maine this afternoon on the floor of the Senate estimated the cost to be about \$12.5 billion.

I am worried about the question of reliability, too, and I must disagree with my good friend, the Senator from Arizona (Mr. GOLDWATER) who seems to have such faith in the radar which would be installed but which would be very vulnerable, very soft, and very dangerous as far as the missiles themselves are concerned. I have little in the way of faith, as yet, on the question of computers and much needs to be done.

I wish to say in conclusion that what we want to achieve is balance, balance between our offensive needs and our domestic problems.

One priority that we should hold out is hope to our people and the world so that we can get away from a possible mad momentum engendered by an arms race. We should do all we can through negotiations and otherwise to achieve peace, not just for ourselves but for all mankind.

The VICE PRESIDENT. All time has expired. The question is on agreeing to the amendment offered by the Senator from Kentucky (Mr. COOPER) and the Senator from Michigan (Mr. HART).

Mrs. SMITH. Mr. President, I send to the desk an amendment and ask that it be stated.

The VICE PRESIDENT. The amendment will be stated.

The ASSISTANT LEGISLATIVE CLERK. The Senator from Maine (Mrs. SMITH) proposes an amendment in the nature of a substitute. In lieu of the matter proposed to be added by amendment No. 101, add the following:

SEC. 402. None of the funds authorized by this or any other Act may be used for carrying out, after the date of enactment of this Act, any research, development, testing, evaluation, or procurement of the antiballistic missile system known as the Safeguard system, or to carry out any research, development, testing, evaluation, or procurement of any part or component of such system; *Provided*, That funds contained herein or elsewhere for research, development, test and evaluation of components, and related procurement, of any other advanced antiballistic missile system or other weapons system shall not be affected.

Mrs. SMITH. Mr. President, I yield myself 2 minutes.

Mr. GORE. Mr. President, I make the point of order that the Senate is not in order.

The VICE PRESIDENT. The Senate will be in order. The Senator from Maine may proceed.

Mrs. SMITH. Mr. President, the observations I made on my original amendment apply to this amendment, for this amendment merely clarifies my original amendment.

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I think that the additional language suggested by the Senator from Tennessee (Mr. GORE), the Senator from Kentucky (Mr. COOPER), and the Senator from Michigan (Mr. HART), is most acceptable.

Mr. STENNIS and Mr. HART addressed the Chair.

The VICE PRESIDENT. The Senator from Mississippi is recognized.

Mr. STENNIS. Mr. President, I ask for the yeas and nays on the last amendment offered by the Senator from Maine.

The VICE PRESIDENT. Is there a sufficient second? There is a sufficient second. The yeas and nays are ordered.

Mr. HART. Mr. President, a parliamentary inquiry.

The VICE PRESIDENT. The Senator will state it.

Mr. HART. Mr. President, is the amendment now pending subject to the agreement earlier entered into, namely, that there will be 1 hour of debate equally divided?

The VICE PRESIDENT. The Senator is correct.

Who yields time?

Mr. STENNIS. Mr. President, a parliamentary inquiry.

The VICE PRESIDENT. The Senator will state it.

Mr. STENNIS. Mr. President, the situation on the division of time now is the same as it was on the first amendment offered by the Senator from Maine. Is that correct?

The VICE PRESIDENT. The Senator is correct.

Mr. STENNIS. Mr. President, since it falls to me on this side I do want representation had with that time. I assume the Senator from Maine would use time first. I make that announcement.

The VICE PRESIDENT. The Senator from Maine is recognized.

Mrs. SMITH. I yield to the Senator from New York.

Mr. JAVITS. Mr. President, I think it is important that the Senate have something of the rationale which went into the additional language we now find—

The VICE PRESIDENT. The Chair would inquire of the Senator from Maine how much time is yielded to the Senator from New York.

Mrs. SMITH. I yield 3 minutes to the Senator from New York.

The VICE PRESIDENT. The Senator from New York is recognized for 3 minutes.

Mr. JAVITS. Mr. President, I think it is important that the Senate have some concept of the additional language which went into the Smith amendment and why I shall vote for it. I hope very much, as Senators HART and COOPER have announced, that other Senators who support the Cooper-Hart amendment will vote for it, too.

What it does is to make, in my judgment, a very substantive difference in opening up research and development, testing, evaluation, and related procurement to advance ABM systems other than Safeguard.

This does not mean that if Safeguard has a transistor that we cannot deal with that transistor in another system, or a weapon, or a Sprint, or a PAR, or

anything else that happens to be in the Safeguard system. But it does take off the restraints on the ambit of research and development which we are authorizing so as to reject Safeguard as the system upon which the research and development will be focused and extend it to the most advanced, the best ABM system our people may wish to research and experiment with.

It seems to me, as the Senator from Kentucky (Mr. COOPER) has said, that represents the fundamental concept which we have had in respect of the Cooper-Hart amendment, and represents acceptance by the Senate of responsibility for a weapons system of such major character, with such portentous political effect as we have been debating here that, therefore, it should be acceptable to those of us—

The VICE PRESIDENT. The time of the Senator from New York has expired.

Mrs. SMITH. I yield 1 additional minute to the Senator from New York.

The VICE PRESIDENT. The Senator from New York is recognized for 1 additional minute.

Mr. JAVITS. Who found the previous amendment too restrictive in terms of its being negative, but now it introduces a positive note which we had hoped to preserve and, indeed, it amplifies and expands that in terms of the area and the field it will cover.

Mr. FULBRIGHT. Mr. President, will the Senator from New York yield?

Mr. JAVITS. I yield.

Mr. FULBRIGHT. To make it plain and concise, this amendment will allow the research and evaluation, but it will delay at least for a year any further authorization.

Mr. JAVITS. The Senator is exactly right.

Mr. FULBRIGHT. That is its effect.

Mr. JAVITS. Yes. It will have the same effect and, at the same time, give a broader field for research and development, which all of us agree to.

Mr. FULBRIGHT. The actual deployment will be delayed.

Mr. JAVITS. The Senator is exactly right. I thank the distinguished Senator from Maine for yielding to me.

Mr. HART. Mr. President, will the Senator from Maine yield me 1 minute?

Mrs. SMITH. I yield 1 minute to the Senator from Michigan.

The VICE PRESIDENT. The Senator from Michigan is recognized for 1 minute.

Mr. HART. Mr. President, not being certain that there would be opportunity available under controlled time, under the Smith substitute, I indicated earlier, as we were approaching the closing of controlled time on the Cooper-Hart amendment, my strong hope that the Smith amendment would be supported by all of us who, over the months, have had a deep conviction that it would be wrong at this period, in the development at this moment in the world's negotiations in search of arms control, to deploy any ABM system.

This amendment, which is against deployment, as the Senators from Arkansas and New York have indicated, makes clear the fullest opportunity for

the Department of Defense to undertake research on behalf of what may never be found; namely, a good system.

Mr. DOMINICK. Mr. President—

Mr. STENNIS. Mr. President, the Senator from Texas is ready to speak and waive time on the other. I yield 4 minutes to the Senator from Texas.

The VICE PRESIDENT. The Senator from Texas is recognized for 4 minutes.

Mr. TOWER. Mr. President, I think it should be made adequately clear that the proposal by the distinguished Senator from Maine, as it has been modified from its original form, actually changes nothing. I repeat, it changes nothing. It still wipes out the ABM. It wipes out research and development on Safeguard.

Now I have heard Senators in this Chamber say that they favor research and development on Safeguard to determine whether it will be made workable.

If this amendment is adopted, there will never be any research and development on Safeguard, at least not next year. The fact is, those who say they want ABM research and voted against the Smith amendment the first time, would be inconsistent if they failed to vote against it the second time. Certainly, those who said that they would accept a system with some modifications would be inconsistent if they vote for this amendment, because it will wipe out the Safeguard program. It will wipe out any research, any development, any testing, or any evaluation on Safeguard. It will wipe it all out. Let me make that clear.

This is a much stiffer proposal than the Cooper-Hart amendment. I think that Senators had better vote very carefully on this amendment because they may be wiping out for a year any Safeguard research and development, if the amendment is agreed to.

We know that the Russians possess the SS-9 which is not the type of system designed for soft targets. It is the type of system designed for missile sites. I think we can draw the conclusion that they are building towards a first strike capability.

I do not see why we have to listen to a lot of talk about provocation. On the one hand, the opponents say that it will not work and the Russians will have it. If that is the case, then there is no provocation.

On the other hand, even if they do not, the Russians have said they do not regard such deployment as a provocation.

This is a system which is not aimed at people. It will not harm the hair on one Russian's head, even if it were fired off.

So far as escalation of spending is concerned, we spent much less money on strategic weaponry during the last year of the Eisenhower administration beyond that which the Soviet Union spent—about twice as much as we did—on strategic weaponry. That is one of the few things our intelligence community all agree on.

I think that we would be taking a tremendous chance if we relied on the good will and good intentions of the Soviets, when they have got a "gun" already at our temple.

Make no mistake about it, there is no change in the second amendment. The latter just clarifies the language.

If we want to wipe out the ABM altogether, that is what we will be doing if we vote for the second amendment. We will be wiping out research and development on Safeguard altogether.

Mr. STENNIS. I yield 3 minutes to the Senator from Missouri.

Mr. SYMINGTON. Mr. President, with all due respect to the Senator, to say that this amendment wipes out all development of the ABM is not accurate. Some of us, years ago, opposed the Nike X. Some of us, years ago, opposed the Nike-Hercules.

Mr. TOWER. Mr. President, will the Senator yield?

Mr. SYMINGTON. I will be glad to yield shortly.

Mr. TOWER. The Senator has called this inaccurate. I request that he yield.

Mr. SYMINGTON. I am tight for time but would be glad to yield on the Senator's time.

Mr. TOWER. All right; if the Senator from Mississippi will grant it.

Mr. STENNIS. I yield 1 minute to the Senator from Texas.

Mr. TOWER. The Safeguard system is described in specific language.

Mr. SYMINGTON. I thought the Senator from Texas referred to any ABM system, not just the Safeguard system.

Mr. TOWER. I said the Safeguard system.

Mr. SYMINGTON. If I am wrong on the record, I am glad to apologize. We have had the Nike-Ajax and then the Nike-Hercules; then we had the Nike-Zeus and later the Nike X. One is the Spartan part of the present Safeguard system, formerly the Sentinel system. The Sprint is the former Nike X.

Therefore what we have had is an ever-shifting, ever-changing group of components.

I noticed the word carefully placed in the amendment of the Senator from Maine—"components." There will be the right to research all these components in effort to develop an ABM system that will be satisfactory. I happen to believe the proposed system may not work. Therefore, I would rather see more research and development before we ask the American people to spend additional billions of dollars for deployment. That is what, in my opinion, this amendment says; and also that is the thrust of the Cooper-Hart amendment. Therefore, I support the amendment of the distinguished Senator from Maine.

Mr. STENNIS. Mr. President, I yield 5 minutes to the distinguished Senator from Georgia.

Mr. RUSSELL. Mr. President, I congratulate the distinguished Senator from Maine. If she succeeds in having her amendment adopted in its present form, she will have carried the original amendment, or it will have that very effect. There cannot be any possible question about that. I feel that the distinguished Senator from Maine is too good a legislator not to know that if this amendment carries, it will have the effect of her original amendment and will prohibit "any research, development, testing,

evaluation, or procurement of the anti-ballistic missile system, known as the Safeguard system, or to carry out any research, development, testing, evaluation, or procurement of any part or component of such system."

If there can be any more far-reaching language than that to strike down and eliminate any research and development on this system, a system which has been researched now for some 8 or 10 years at a cost of more than \$5 billion, I do not know how it could possibly be drafted.

To say that this additional language which is now proposed has no effect on the Safeguard project—which is referred to by the name of Safeguard in the submission of the Department of Defense and in the report of the committee to this body—is to me something that is incomprehensible, because the additional language only says that nothing herein contained shall affect "any other"—note that language; not the Safeguard but "any other"—system.

So this amendment if adopted will kill all the research and all the development of the so-called Safeguard system after Senators have stood here on the floor day after day and stated they were in favor of research and development, but not deployment. This strangles it in the crib. There is no chance for it to have another breath of life in the bill if this amendment goes into effect. There is nothing in this additional language that mitigates the effect of that statement in any degree. It refers to "any other advanced anti-ballistic-missile system or any other weapons system shall not be affected."

If this amendment had not been offered with this language added, it would have had exactly the same effect on the other weapons system which this language has, which is none; but the basic thrust of the original amendment advanced by the distinguished Senator from Maine to eliminate the Safeguard is not mitigated in the slightest degree or affected in any way by this additional language. I do not see how Senators can possibly construe it as affecting it in any way, because it does not relate to any exemptions for the Safeguard program or any components thereof.

It says "provided that funds for other advanced" systems shall not be affected. But the amendment would kill any project that is embraced within the Safeguard system. Of course that includes all the generation missiles the Senator from Missouri referred to, the Nike-Zeus, which grew up to the other systems, such as Hercules, and was carried on, but they are today all components of the Safeguard system.

I will say this much: It is my solemn opinion that, if this amendment is agreed to and if the Department of Defense moved forward in the slightest degree with research and development of any component of the so-called Safeguard system, it would be in defiance of this mandate from the Congress and the Department of Defense would subject itself—very properly—to very drastic criticism.

Mrs. SMITH. Mr. President, I yield 2 minutes to the Senator from New Jersey (Mr. CASE).

Mr. CASE. Mr. President, I asked for this time to make two points, both related to the same matter, the substantial difference between the original amendment proposed by the Senator from Maine and the amendment now pending before us. I could not have supported the original amendment because I believed it was necessary for us to attempt to develop, by research and development, an anti-ballistic-missile system for the defense of our Minuteman, and I was very doubtful that the language of the original amendment would have permitted that.

Clearly, the present language does permit it. It is substantially different. It would be possible, for example, under the amendment, to take components of the Safeguard system, do research on them as a part of another system, the Sprint missile, the Spartan missile, radars, computers, and what-not, all of which, although a part of the Safeguard system, could be worked over and changed for inclusion as another anti-ballistic-missile system—that is the difference—an anti-ballistic-missile system which has a chance of doing the job.

That bears directly on the question of whether we have a substantially different amendment. Otherwise, I for one would not be able to support it.

Mr. SYMINGTON. Mr. President, will the Senator yield me 1 minute?

The PRESIDING OFFICER. The Senator's time has expired.

Mrs. SMITH. Mr. President, I yield 1 additional minute to the Senator from New Jersey so he may yield to the Senator from Missouri.

Mr. CASE. I yield to the Senator from Missouri.

Mr. SYMINGTON. Is it not true that the Safeguard system is part of the Nike X system, and part of the Nike-Hercules system, and part of the Nike-Zeus system, and part of the Sentinel system; and therefore we would continue to utilize all these various components and their improvements in the engineering and evaluation of any new system.

I would respectfully present that if we followed the opinion of some people as to what under the revised Smith amendment we could or could not do, we could not take even one transistor used in the Safeguard system and utilize it in any new system. Of course the amendment does not mean that. In all good humor, I suggest we should do again what we have already done some five or six times before, and that is change the name. Let us call the new development the Life-guard system. Then everything will be all right and we can proceed with further research and development.

Mr. JAVITS. Mr. President, will the Senator yield?

Mrs. SMITH. I promised to yield to the Senator from Tennessee.

The PRESIDING OFFICER. How much time does the Senator from Maine yield?

Mrs. SMITH. I yield 4 minutes to the Senator from Tennessee.

Mr. GORE. Mr. President, the pending amendment is considerably different from the amendment previously voted

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upon. If Senators will turn to pages 21, 22, 23, and 24 of the report, they will find four pages of missiles for which the pending amendment would provide research, development, test, and evaluation of components and related procurement.

Mr. President, these include all of the Navy missiles, and all of the Air Force missiles. Let me read the names of some of them: Polaris, Sidewinder, Phoenix, Standard missile, Tartar, Terrier, Talos, Chaparral, Redeye, Hawk, Pershing, Tow missile, Minuteman I, Minuteman II, Minuteman III, Shrike, Sparrow, Sram.

The pending amendment would not touch any funds available in this bill or, to quote from the amendment, "elsewhere," for research, development, testing, and evaluation of components related to procurement of any of these items.

Moreover, it would permit research and development on components common to both Safeguard and these other missiles. It is, Mr. President, the deployment of the Safeguard ABM system toward which the pending amendment is pointed. The adoption of the pending amendment, as would the adoption of the Cooper-Hart amendment, would prevent the deployment of the Safeguard antiballistic missile. It would not prevent research and development, evaluation and testing, or funding thereof, on any other missile system listed on these four pages.

Therefore, Mr. President, I hope that a point of order will not be made against the amendment. If it were not a material change, why would the junior Senator from Mississippi and the junior Senator from Arizona object to the distinguished Senator from Maine modifying her amendment according to her stated legislative will?

The VICE PRESIDENT. The Senator's time has expired.

Mrs. SMITH. Mr. President, I yield 1 minute to the Senator from New York.

Mr. JAVITS. Mr. President, I rise only to ask the Senator from Maine, who is the author of the amendment, a question.

The Senator has heard interpretations of her amendment made by me, by the Senator from New Jersey, and by the Senator from Missouri. The interpretations are substantive. Does the Senator accept those interpretations as stating her intention in offering the amendment?

Mrs. SMITH. Mr. President, the proof that there is a substantial difference between my original amendment and this new amendment as proposed is that the latter has been accepted by the sponsors of the Cooper-Hart amendment.

Mr. JAVITS. And the Senator does accept these interpretations to which I have referred as stating her intention in offering the amendment?

Mrs. SMITH. That is correct.

Several Senators addressed the Chair.

Mr. STENNIS. I yield 1 minute to the Senator from Kentucky.

Mr. COOPER. Mr. President, as one of the sponsors of the Hart-Cooper amendment, I should like to say that neither of us ever saw the Smith amendment until it was sent to the desk. We voted against the original amendment of

the Senator from Maine because we did not believe it met the purposes of our amendment. I opposed, and Senator HART opposed, the original modifying language proposed by the Senator from Tennessee (Mr. GORE). But in discussions, and with various objections being made—some made by Senator HART and me, and some by others—the amendment which the Senator from Maine has now sent to the desk was agreed upon for these reasons:

I have the greatest respect for the Senator from Mississippi, but I must say that commonsense leads me to disagree with him.

The VICE PRESIDENT. The Senator's time has expired.

Mr. COOPER. One-half minute more. What we, who oppose the ABM, are seeking is to prevent its deployment. It is the insistent, compulsive reasoning of those who favor deployment that they want a premature decision to deploy a future system—a step which we oppose.

First, our amendment provided for full research and development of ABM technology; and second, its purpose was to see if it was possible, by intensive research and development, to develop a system which might work, and which would be surer to work than the one which has been proposed by the administration. If it was ever necessary to deploy a system we might then have an effective system.

The amendment offered by the Senator from Maine as her first proposal, was perfectly in accord with one of our views, that this system should not be deployed now; but we felt that research and development should go on.

The VICE PRESIDENT. The Senator's time has expired.

Mr. COOPER. Ten seconds more. She added that provision of research and development to her second amendment. Thus it differs. It certainly differs from her first amendment; and what she has said shows that what she intends is in accord with the intentions of Senator HART and myself and our supporters in offering our amendment.

Several Senators addressed the Chair.

Mr. STENNIS. Mr. President, I yield to the Senator from Florida 1 minute.

Mr. HOLLAND. Mr. President, is it not true that the Senator's amendment does provide for the use of the funds provided in this bill for research and development on the Safeguard?

Mr. COOPER. It provided for the use of the funds—

Mr. HOLLAND. To the extent of \$400.9 million, did it not?

Mr. COOPER. Will the Senator let me finish?

The VICE PRESIDENT. The Senator's time has expired. Who yields time?

Mrs. SMITH. Mr. President, how much time do I have remaining?

The VICE PRESIDENT. The Senator from Maine has 10 minutes remaining.

Mrs. SMITH. I reserve that for the time being.

The VICE PRESIDENT. Who yields time?

Mr. STENNIS. Mr. President, I think the Senator from Kansas had asked me first. I yield 2 minutes to the Senator from Kansas.

Mr. DOLE. Mr. President, I take this time to address a question to the Senator from Maine. Do I understand correctly that her original amendment would have prohibited the use of any funds for deployment, research, and development of the Safeguard?

Mrs. SMITH. That is correct.

Mr. DOLE. Do I understand that her present substitute has the same purpose, to prohibit funds for Safeguard research or development?

Mrs. SMITH. Of the Safeguard; that is correct.

Mr. DOLE. So my point is that there is really no difference between her first amendment and this substitute, because what was implied in the Senator's first amendment she is spelling out in her second amendment. I think the intentions are the same; if you are totally against the Safeguard system, you will vote for the Smith amendment; if you are for research and development, as was the Hart-Cooper amendment, you vote against the Smith amendment.

Mr. STENNIS. Mr. President, I yield next to the Senator from Colorado, 3 minutes.

Mr. DOMINICK. Mr. President, I shall not take long on this, but I have been sitting here for 5 weeks listening to this debate on the Cooper-Hart amendment, and until today, I have never heard them say they were against research and testing of the Safeguard system. Over and over again, I have heard the Senator from Kentucky and his supporters get up and say, "We want to test this on Kwajalein; we do not want it in North Dakota, and we do not want it in Montana. We will do it on Kwajalein. We have MSR out there, and we are going to test it there."

If we accept this amendment, according to its language, you cannot test it with the MSR on Kwajalein; as a matter of fact, you cannot test it anywhere, because it is a component of the system. You cannot put together a PAR, or do any of these things we have been talking about for 5 weeks.

All of a sudden, we are faced with a complete turnabout, in about a half hour, where the Cooper-Hart group all of a sudden say they are in support of this amendment.

On what basis? On the basis of what facts do we suddenly find ourselves no longer in favor of research and development on the component parts of the Safeguard missile? I certainly must confess that I am confused and concerned, and I think what we are doing is avoiding the real issue, which is the vote on the Cooper-Hart amendment. We have already voted on that of the Senator from Maine.

Mr. STENNIS. Mr. President, I yield 2 minutes to the Senator from Florida.

Mr. HOLLAND. Mr. President, notwithstanding the positive assertions of the Senator from Tennessee, shown at page 25 of the report, it breaks down the requested authorizations for the Safeguard antiballistic missile system under three items—(a), (b), and (c).

The largest item is (b), and it reads as follows:

(b) The request for an authorization for funds for research and development for the

Safeguard system in the amount of \$400.9 million.

That amount was continued available for research and development under the Cooper-Hart amendment.

That amount is cut out and will not be available for research on Safeguard or anything else under the pending amendment.

I would want that to be clearly understood by every Senator.

Mr. STENNIS. Mr. President, will the Senator yield?

Mr. HOLLAND. I yield.

Mr. STENNIS. Mr. President, I think the Senator is absolutely right, without any doubt whatsoever.

Mr. HOLLAND. I thank the distinguished Senator.

Mr. GORE. Mr. President, will the Senator yield?

Mr. HOLLAND. I will yield in a moment.

I have also inquired of the clerk of the committee, who advises me that the other funds available for research are \$141 million for the Nike X missile.

But that is all that would be available under the particular amendment, and not for use on the components of the Safeguard missile at all, but simply for use on the components of the latest Nike model.

There is not any comparison between the two objectives. I state this because I know it is true. The Cooper-Hart amendment does permit the retention of \$400.9 million in the bill. However, the pending amendment would cut it out for all practical purposes.

Mr. GORE. Mr. President, will the Senator yield?

Mr. STENNIS. Plenty of time remains on the other side.

Mrs. SMITH. Mr. President, I yield 3 minutes to the Senator from Tennessee.

The VICE PRESIDENT. The Senator from Tennessee is recognized for 3 minutes.

Mr. GORE. Mr. President, the senior Senator from Tennessee referred to pages 21, 22, 23, and 24. Funds are untouched for any missiles or any components thereof or funding thereof on any of those four pages.

Funds would be prohibited for the items on page 25 which do not contain components identical or necessary for the four previous pages.

Let me read it. It reads:

One missile site radar, (Grand Forks).

Funds would be denied by the pending amendment for that.

It reads:

One missile site radar data processor, (Grand Forks).

Funds would be denied for that.

The VICE PRESIDENT. The time of the Senator has expired.

Who yields time?

Mr. HOLLAND. Mr. President, will the Senator yield me 1 minute?

Mr. STENNIS. Mr. President, I yield 1 minute to the Senator from Florida.

Mr. HOLLAND. Mr. President, I want to make it very clear, and there is no doubt about it, that the \$400.9 million which would have been retained in the bill for research and development of

Safeguard by the Cooper-Hart amendment would be cut out by the pending amendment.

The Senator from Tennessee nor anyone else will deny that, because that is the fact. And Senators should realize that it is a fact.

Mr. GORE. Mr. President, will the Senator yield?

Mr. HOLLAND. I yield if I have time remaining.

Mr. GORE. The Senator is incorrect, because the amendment would not deny any funds available in this bill or elsewhere for components of advanced ABM or other missile systems. That is plain.

What it does prohibit, let me read again from page 25:

Advance procurement for one other perimeter acquisition radar . . . (Malmstrom).

It prevents the deployment at Grand Forks and also—it runs over to the other page—it prevents the deployment in both North Dakota and Montana.

If, however, components needed for the missiles on the previous four pages are identical with those that would be used in Safeguard, research and development can continue upon those.

That is perfectly plain from the amendment.

Mr. HOLLAND. Mr. President, I ask unanimous consent that section 402 of the amendment, as rewritten, be printed at this point in the Record.

There being no objection, section 402 of the amendment, as rewritten, was ordered to be printed in the Record, as follows:

SEC. 402. None of the funds authorized by this or any other Act may be used for carrying out, after the date of enactment of this Act, any research, development, testing, evaluation, or procurement of the antiballistic missile system known as the Safeguard system, or to carry out any research, development, testing, evaluation, or procurement of any part or component of such system; provided that funds contained herein or elsewhere for research, development, test and evaluation of components, and related procurement, of any other advanced antiballistic missile system or other weapons system shall not be affected.

Mr. STENNIS. Mr. President, I yield 1 minute to the Senator from California.

Mr. MURPHY. Mr. President, I point out to my distinguished colleagues that in the colloquy in committee if the missiles on pages 21, 22, 23, and 24 would have done the job, we would not have had to include page 25, which is headed, "Safeguard Anti-Ballistic-Missile System."

I would like to make clear one other point. In the heat of the debate, there is one very important consideration in the judgment of those who have asked for this system, and that is the time when this system will be ready.

For every year that goes by now, in the judgment of our best scientific brains, we lose 2 years in the time when the system would be ready.

I hope that my colleagues will bear that in mind at this moment. This cannot be delayed. That is why the President has asked for it at this time.

Mr. STENNIS. Mr. President, I yield 2 minutes to the Senator from New Hampshire.

Mr. COTTON. Mr. President, we have been hearing utterances to the effect that Congress was going to assert itself and that Congress was not going to let itself be subjected to this military-industrial complex, whatever that is, not let the Pentagon do anything that Congress does not know about and authorize.

If the wording of the pending amendment is not an open invitation and is not a mandate to the Pentagon to do by subtlety and circumvention what the Cooper-Hart amendment would let them do openly, they would have to go ahead with research for the Safeguard system. However, at the same time what they would be doing would be also research for some other kind of system or defense.

I can easily understand those—although I do not agree with them—who want to authorize research and development but not the installation of the Safeguard or an ABM, whichever we wish to call it. But when we agree to an amendment upon which the debate here has been so confusing, anyone who tried to establish a legislative history would realize it is simply an invitation to the Pentagon, after all our protestations that Congress was going to assert itself and no one was going to put anything over on Congress, to go ahead and, by subtlety, do what the proponents of the Cooper-Hart amendment would let them do.

Mr. RUSSELL. Mr. President, will the Senator yield?

Mr. COTTON. I yield.

Mr. RUSSELL. Mr. President, I have been very curious as to why all of a sudden the very carefully drawn Cooper-Hart amendment was abandoned and scuttled in favor of this amendment, the meaning of which, to say the least, is somewhat controversial.

Everyone can understand the Cooper-Hart amendment. It very clearly said we could go ahead with research and development, but that we could not deploy the system.

We now have an amendment that says we cannot go ahead with research and development of even any component, but that we can go ahead with other systems.

I think it is noteworthy that all those who proposed to vote for the original amendment have very vigorously shifted their support to the amendment of the Senator from Maine.

There cannot be any question that if one reads the amendment it carries out completely the intention of the original amendment of the Senator from Maine.

If the Senate keeps its faith, and it should, as to the matter, it will not drop suddenly, like a hot cake, the very clear amendment that we have been debating for some weeks and on which long speeches have been written and delivered on both sides, in favor of some other amendment, brought here at the very last minute.

Mrs. SMITH. Mr. President, I yield 3 minutes to the Senator from Illinois.

Mr. PERCY. Mr. President, I think it is very important that we clarify the distinction here between what we truly do mean.

If the distinguished Senator from Georgia, the chairman of the Appropriations Committee, is correct, I would find

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myself in a position to vote against the amendment. But my understanding is entirely different. I think it is almost a question of semantics as to what we mean by a name.

I understood the Sentinel system had Sprints, Spartans, PAR's, MSR's, and computers and software for the computers. As I understand it, the Safeguard system has Sprints, Spartans, PAR's, MSR's, and computers and software for the computers. However, its mission is different.

It has been moved from the cities and put at the missile sites and is hard protection rather than protection of areas.

I would like to ask the distinguished Senator from Maine whether, under the amendment, as now modified, we could accomplish the things that I feel are necessary to be accomplished. Is it possible, under the amendment offered, as it is now being debated, for the MSR to be redesigned so that it can be made harder and less vulnerable than the present system?

Mrs. SMITH. That is my understanding.

Mr. PERCY. It can?

Mrs. SMITH. That is my understanding.

Mr. PERCY. Is it possible to replace the one, single, exceedingly expensive MSR, missile site radar, which costs an estimated \$150 to \$165 million each, and there is only one at each site—a radar that could be destroyed by an SS-11, much less an SS-9, if sent by the Russians, and, therefore, highly vulnerable and much more vulnerable than are hardened missile sites themselves—and do research, design, development, evaluation, and testing with a multiplicity of radars then, that could be hardened and made less vulnerable?

Mrs. SMITH. My interpretation would be "Yes."

Mr. MURPHY. Under the distinguished Senator's amendment, would it be possible to continue the testing and evaluation of Sprint's, a program that is intended to be carried on a Kwajalein?

Mrs. SMITH. Yes.

Mr. PERCY. Could we then continue the testing and evaluation of Spartan?

Mrs. SMITH. Yes.

Mr. PERCY. Could we develop the software for the computers that would be required for a ballistic-missile system that could be named other than Safeguard, because it would be slightly modified and changed, just as the distinguished Senator from Missouri has indicated we have changed and taken the genesis of the whole development of ABM from the beginning to systems that successively we decided not to deploy until we have finally come to Sentinel and Safeguard, and we would attach this to the next advanced stage of a perfected ABM system? Does the Senator from Maine perceive that we could do this under this modification?

Mrs. SMITH. That would be my interpretation, yes.

The PRESIDING OFFICER (Mr. EAGLETON in the chair). The time of the Senator has expired.

Mr. PERCY. Will the Senator yield me 30 seconds?

Mrs. SMITH. I yield 1 additional minute to the Senator.

Mr. PERCY. Is there, then, this distinction between the original amendment, which was overwhelmingly defeated, and this amendment? Could all the things I have named be done under the original amendment which the Senator feels we can do under the modified amendment?

Mrs. SMITH. I would say no.

Mr. RUSSELL. Mr. President, will the Senator yield?

Mr. PERCY. May I conclude on one point?

If the answer is in the affirmative on everything that needs to be done, I intend to vote for the modified amendment of the distinguished Senator from Maine.

I yield to the Senator from Georgia.

Mr. RUSSELL. The Senator has described the various systems. Does he not consider all those as components of the Safeguard system?

Mr. PERCY. All the items I have listed?

Mr. RUSSELL. That the Senator from Illinois has enumerated.

Mr. PERCY. Yes; I do.

Mr. RUSSELL. How does the Senator view the language that says no research, testing, or evaluation shall be done on any part or component of the Safeguard system?

Mr. PERCY. Also, the language is clear: It says, "provided that funds contained herein or elsewhere for research, development, test and evaluation of components, and related procurement, of any other advanced anti-ballistic-missile system—"

Mr. RUSSELL. "Any other."

Mr. PERCY. "Or other weapons systems shall not be affected."

Mr. RUSSELL. If the word "other" does not take it completely away from Safeguard, I do not know what word in the English language could be used.

Mr. PERCY. If the distinguished Senator from Maine feels that we can carry out all the missions which we feel must be carried out, I can support it.

The PRESIDING OFFICER. Who yields time?

Mr. STENNIS. Mr. President, I yield 2 minutes to the Senator from Tennessee.

Mr. BAKER. Mr. President, I am much concerned with the developing and evolving distinction, or apparent distinction, between the original Smith amendment and the modified Smith amendment. In a most respectful way, I suggest that we are dealing with something more than semantics, but, rather, something that is very vital to the interpretation of what we are about to do. Words, after all, are more than semantics; and any fair reading of the amendment proposed by the distinguished Senator from Maine is to the effect that you cannot go ahead with research, development, testing, the evolution, or the procurement of the Safeguard system by name.

Mr. RUSSELL. Or any component.

Mr. BAKER. Or any component thereof.

The modification goes on to say, "provided that funds contained herein," and so forth, "and related procurement of any other advanced anti-ballistic-missile system."

Mr. President, I respectfully suggest that any other advanced missile system taken in context with the description of Safeguard by name positively excludes any evolutionary changes or differences from the Safeguard system, and that, as a matter of law, as a matter of statute, we are about to preclude the evolutionary development of any improvement of even the concepts developed in the Safeguard system thus far. I do not believe that is the intention of the Senate today. I do not believe we intend to scrap what we have done so far and require our scientists to start over from scratch with some other system; but I believe that is the fair intentment and the inevitable effect of the words that are before the Senate in the new amendment.

The PRESIDING OFFICER. The time of the Senator has expired.

Who yields time?

Mr. STENNIS. Mr. President, I yield 1 minute to the Senator from Texas.

Mr. TOWER. Mr. President, it occurs to me that what the distinguished Senator from Illinois has just suggested is that if we change the name of the system and go ahead and do all these things, it will not matter. I wonder if it would be in order for us to offer an amendment to change the name of the system to something other than Safeguard.

The PRESIDING OFFICER. Who yields time?

Mrs. SMITH. I yield 1 minute to the senior Senator from Vermont.

Mr. AIKEN. Mr. President, I note that everyone who has spoken so fervently in opposition to the proposal of the Senator from Maine has been even more outspoken against the Cooper-Hart amendment. Everyone who has been in the Senate more than 6 months knows that if the amendment offered by the Senator from Maine is as bad as the devotees of ABM say, they would be working to attach it to the Cooper-Hart amendment instead of killing it. That is just practical politics.

Mr. STENNIS. Mr. President, I yield 1 minute to the Senator from Iowa.

Mr. MILLER. Mr. President, the Senator from Missouri, who originally supported the Cooper-Hart amendment, now says he supports the amendment of the Senator from Maine because it would knock out the Safeguard system, and he says he does not think the Safeguard system will work.

The Senator from Missouri well knows that you cannot determine the answer to that question until you have service testing, and you cannot have service testing until you have deployment. That is what the Cooper-Hart amendment is all about.

So I suggest that we get on and defeat this amendment and then defeat the Cooper-Hart amendment, so that we can have service testing to prove who is right and who is wrong on whether this can work.

Mr. STENNIS. Mr. President, I yield 1 minute to the Senator from Arizona.

Mr. GOLDWATER. Mr. President, I ask the distinguished Senator from Maine two questions.

Both the Senator from Texas and the Senator from Missouri have inferred that all we need to do is to change the name of Safeguard to something else, such as Rightguard or Outguard, and we can get around the Senator's amendment. Is that correct? Does the Senator say "Yes" to that?

Mrs. SMITH. I could not give a yes or no answer to that.

Mr. GOLDWATER. I think the Senator should be able to give an answer. One of the Senator's supporters has made the charge that it could be. One of the Senator's opponents has made the charge. I think it is something the Senator should consider.

One other question. The Senator from Maine serves on the committee. Does the Senator know of any other advanced anti-ballistic missile system that is being considered at the present time?

Mrs. SMITH. No; I would have to say I do not.

Mr. GOLDWATER. So, in effect, the Senator is suggesting that we rub out approximately 15 years of testing and ask the scientists and the engineers to start again.

Mrs. SMITH. Of course, it could be that the Nike X is advanced development.

Mr. GOLDWATER. But not under the language of the Senator's amendment, as I understand it.

Mrs. SMITH. It would not be my understanding. There is money in this for the Nike X and the Nike-Zeus.

The PRESIDING OFFICER. The time of the Senator has expired.

Mr. STENNIS. Mr. President, I yield myself such additional time as I may have.

This is tragic; this is a tragedy.

The PRESIDING OFFICER. The galleries will be in order.

Mr. STENNIS. It is a legislative monstrosity, when there is not time to analyze, to find the meaning of words, to check and doublecheck, and to throw this in like a double-barreled shotgun and fire both barrels at the same time. Let us listen to the words.

There are \$400 million, in round numbers, in the bill for research and development for Safeguard. The first Smith amendment would knock it as high as the sky and take it out by name.

The amendment states:

None of the funds . . . may be used for . . . any research, development, testing, evaluation, or procurement of the anti-ballistic missile system known as the Safeguard system . . .

The Safeguard system went down the drain there.

Then, there are the words, "or to carry out any research, development, testing, evaluation, or procurement of any part or component of such system." That is the Safeguard. The Senator from Maine wanted to cancel all research and would do so by that language.

Now, I read the remainder of the language. The foregoing language was the language voted on a few moments ago. That would be the law, just like the Medes and the Persians. [Laughter].

Provided that funds contained herein or elsewhere for research, development, test and evaluation of components, and related procurement, of any other advanced antiballistic missile system.

Other than what? Other than the Safeguard, of course. It states, "or other weapons system."

Other than what? Other than the Safeguard. Then, it states, "shall not be affected."

Of course, they are not affected. They were not affected by the original Smith amendment. They are not affected by this amendment. The same language is here, "shall not be affected."

Mr. President, every word that was in the first Smith amendment about Safeguard is in this amendment. Senators who have been saying they are for research for Safeguard and for this amendment are going to have awfully red faces and they are going to be trying to get out of that situation. That is why I say it is tragic; it is compounded tragedy. It is legislating in the dark where we do not know what these words mean.

I yield back my time.

SEVERAL SENATORS. Vote! Vote! Vote!

The PRESIDING OFFICER. The Senator from Maine has 4 minutes remaining.

Mr. JAVITS. Mr. President, will the Senator yield to me for 1 minute?

Mrs. SMITH. I yield.

Mr. JAVITS. Mr. President, one thing has now been made clear by the Senator from Mississippi in his speech. He has failed to account for the fact that the amendment introduced by the Senator from Maine (Mrs. SMITH) does not affect the money in the bill. The bill states in section 201 that there is \$1,638,600,000 for research, development, testing, and evaluation. Now all the Senator from Maine is doing is to put a restriction on how that money can be used. If that restriction allows use of \$400 million for research on an ABM system, it is still in the bill. Section 402 does not take it out of the bill. Therefore, the interpretation of the Senator from Maine controls rather than the interpretation put on it by the Senator from Mississippi.

Mr. HARTKE. Mr. President, there are only two questions at issue in our votes today:

First. Will the ABM work?

Second. Do we need it for our national defense?

Question is not, Can we trust the Russians?

Question is not, Do the Russians have an ABM?

Question is not, Does the President of the United States carry a heavy and lonely burden?

Question is not even how much the system would cost, because if it is needed and would work, no price is too high, but if it is not needed or will not work, a single dollar is too much.

Those are the only, the operative questions: Will it work? Do we need it? All other questions turn on the answers to those two questions.

Will it work? Opponents and defenders alike admit we do not know. That is why those of us who favor the Hart-Cooper approach are willing to authorize sub-

stantial funds for R. & D. We are not unreasonable—we are not dogmatic. We say only that the scientific doubts are so weighty that further R. & D. is called for.

For me, the far more crucial question is the second: Do we need it for our national defense? The answer is perfectly clear: We do not.

The only justification offered for Safeguard is that it—and it alone—can protect our deterrent force against a Communist first strike.

That is simply untrue.

Our second-strike force is invulnerable. Even the most massive and successful Soviet attack on the two Minuteman bases could not save the attacker from an utterly devastating response from our Polaris submarines, from our manned bombers, and from our thousands of other ICBM's and IRBM's both here and abroad.

And that is the meaning of second-strike invulnerability—that the Nation which sustains a first strike will still have enough offensive capacity left to punish the attacker beyond endurance.

We have that now—without our ABM. We shall continue to have it—and to an even greater extent as our multiple warhead missiles are deployed on land and sea—without an ABM.

The Communists dare not attack us—with or without an ABM—because they know they would suffer utter devastation if they did.

It is that simple. Deterrence is deterrence. Adding a multibillion-dollar ABM system will add nothing—not one iota—to our present overwhelming deterrent force.

The rest, Mr. President, is oratory. And I think we have had enough of that.

Mr. RANDOLPH. Mr. President, a distinguished American has said:

The present tensions with their threat of national annihilation are fostered by two great illusions. The one, a complete belief on the part of the Soviet world that the capitalist countries are preparing to attack them; and sooner or later we intend to strike. And the other, a complete belief on the part of the capitalist countries that the Soviets are preparing to attack us; that sooner or later they intend to strike. Both are wrong. Each side, so far as the masses are concerned, is desirous of peace. Both dread war. But the constant acceleration of preparation may, without specific intent, ultimately precipitate a kind of spontaneous combustion.

Those are the words of a man of unquestioned patriotism—a man who was probably the greatest soldier of the 20th century, the late Douglas MacArthur. That illusion of which he speaks has been a dominant theme running through the arguments of those who advocate deployment of the Safeguard ABM. And it is that illusion which continues to lead us down the path of nuclear weapons proliferation.

I have the very distinct impression that those who support deployment of the Safeguard system have reacted to this issue as if the toxin of war with Russia has sounded, as if the gauntlet has been thrown down. Yesterday we talked of possible accommodation, of arms control, and of consultation. To-

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morrow we may discuss such matters. But today it is nuclear war. Every scare, every ghost, every hostile phrase and activity have been paraded through this Chamber to justify the Safeguard as a protection against the Soviet threat. Any indication of relaxing tensions between the United States and Russia has been downgraded. Frankly, I sense the tone and the temper of some of the arguments simply as scare tactics. The issues cannot be separated—peace yesterday—nuclear war today—peace tomorrow, hopefully. This Senate dialog constitutes a critical element of any future arms control initiatives undertaken with the Soviet Union. After frightening the people of our country with the prospect of a fantastic Soviet superiority over the United States in weaponry, it is inconceivable that we can reverse our field to talk of accommodation.

There are persons who deny that the decision to deploy an ABM potentially stimulates the arms race and induces a reaction from the Russians. These individuals completely disregard a basic theory of conflict. The installation of any measure to protect an offensive capability generates from your opponent—if he is totally committed to the proposition of superiority over you—the effort to counteract your advancement. To state that the system which you install is "defensive" and therefore not provocative, is illogical. It seems to me that during this debate many proponents of the ABM have used a reference to comments from the Soviet Union that an ABM system is defensive and not meant to be provocative to justify their position. Of course, the Russians issue such statements, because they are utilized as rationale for a Russian ABM. Curiously, this proposition from the Soviet Union is accepted, while other comments are dismissed as being purely Soviet trickery. There is little reasoning here. Because the Soviet Union has installed ABM facilities surrounding Moscow and because we are stating that our system is primarily as a defense of retaliatory forces, the proponents of the ABM theorize that it follows accordingly that Russia will not construe this as a hostile action. Here is the failure to recognize the proposed phased deployment of the ABM in other areas of the United States, purportedly as a defense against China, leaving open the question of later modification as an enlarged defense system. Thus, the Soviets are to leave this unanswered question on the side of our good will, rather than taking the initiative to move forward with nuclear weaponry to counteract the more frightening prospect of an expanded American ABM system. Here is the assumption that the Soviet Union is willing to take the risk—while ours is to be a no risk policy. In my mind, there is no doubt the ABM stimulates the arms race. It is provocative. Be that as it may there are other facets to this very difficult problem which auger against the proposed deployment of the Safeguard system.

Mr. President, I believe it is critical to dispel a false and dangerous impression that has been generated during the months of discussion of the ABM. The United States is not without a massive

deterrent force. Our Republic is not defenseless. Time has not run out on the American system. Our Nation has a strong and viable offensive capability. In fact, we have the capacity for overkill. Let there be no mistake about this fact. And our defense posture will continue to be strong.

Mr. President, I comment on a number of vital factors. Earlier, I used the phrase "scare tactics." This is to be avoided. We must present the facts to the American public but I submit that we must not leave the citizens of this country with the notion that our land is defenseless.

A Russian first strike against the United States is not inevitable. Secretary of Defense Melvin Laird has stated that in the event of a Russian attack:

I am hopeful that we would be able to react immediately to an attack. . . . I do not want to frighten people about this I want the Soviet Union, and I want any potential aggressor to understand that we are going to be in a position where we will respond immediately.

It is my belief that we are in that position to respond. What does the Secretary of Defense refer to when he talks of our ability to respond immediately? America possesses an intricate system of radar and early warning devices which provides a capability to detect a hostile attack. This elaborate system is composed of the distant early warning—DEW—line, the ballistic missile early warning system—BMEWS—the SAGE system and other systems. There is no need now to again discuss the functions of these systems in detail. This has been done. We know that they provide an extensive and flexible early warning system. We continue to pursue research and development programs to refine our existing capability and to develop more sophisticated equipment. Thus, to speak only in term of the number of missiles and warheads disregards a critical element of our deterrent capability.

The early warning device facilities which give credibility to our offensive weapons systems cannot be ignored. And I suspect that we are in a better position and have a better prospect of major advances in this system than in any area of our weapons system.

What is behind this early warning system? What is the immediate response capability to which Secretary Laird has referred? The United States possesses a deadly arsenal of weapons, consisting of approximately 1,054 ICBM's, 41 Polaris submarines with over 600 missiles, over 500 bombers and hundreds of carrier-based fighter bombers with a nuclear weapons capability. This capacity involves nuclear tonnage sufficient to destroy the Soviet Union. The minority statement contained in the report on the procurement had this significant comment:

We do believe that any primary defense against the threat of nuclear attack lies in our deterrent capacity. In this connection, we believe that with our Polaris fleet, our land-based ICBM's, our strategic bombers, and the thousands of additional nuclear warheads we have at sea and abroad, if we were attacked we could destroy the Soviet Union some fifty times over.

The term is "overkill."

It is particularly significant that our Polaris missiles cannot be targeted by enemy missiles as in the case of our fixed base ICBM's. The Polaris striking force, which has within its arsenal the nuclear force to destroy the Soviet Union, is not restricted to set geographic coordinates. We continue to develop advanced missile systems for the Polaris submarine. And this arsenal is adaptable to expansion to meet increased threats. There is no substantial indication that the capability of the Polaris system is being threatened by Russian countermeasures.

Against this present—I emphasize present—array of weaponry, we have the statements by the Secretary of Defense that the Soviet Union could have approximately 2,500 ICBM's by 1975 and 1,000 submarine-launched missiles for a total of 3,500 missiles. We do not know that the Soviets will have this total. These are intelligence estimates, about which Secretary of Defense Laird said:

Our national intelligence projections for the mid-1970's involves a large measure of judgment rather than hard evidence.

Yet, the proponents of the ABM persist as if the projected Russian force for 1975 were a reality today. And it is equally fallacious to lump in the Soviet capability the numbers of intermediate-range or medium-range missiles. This may be indicative of the Russian global deployments, but it is not indicative of meaningful levels of weapons in terms of the ABM issue. Yes, the Russians possess the same overkill capacity we have. Thus, in discussing the achievement of nuclear superiority, we do not mean the advantage of a few additional missiles. Rather, one must visualize thousands of missiles, which, if developed by any one nation, negates an effective ABM as conceived under the present proposal.

Against this background of nuclear weaponry we are asked to support the deployment of a defensive system which protects only a part of the American offensive capability—the ICBM. This part does not contain probably our most valuable deterrent, the Polaris submarine striking force. Even acknowledging the necessity of this protection the proposed ABM system has been not only questioned by scientific experts but also has been determined by many of them to be unworkable. It is my feeling that there are questions with regard to the reliability of the Safeguard missiles in this system in view of the number of weapons failures experienced in the most optimum testing conditions.

However, the ABM does not merely involve the effectiveness of the missiles. The heart of the ABM is a complex system of radars and computers, parts of which have not been built let alone tested under the optimum conditions. And yet we are to accept at face value the contentions of the proponents that this system—missiles, radars, and computers—will operate under the most horrible conditions imaginable—a nuclear conflict. I am unable to accept that position. I again quote from the minority statement on the ABM:

Safeguard is the most complicated technological development ever planned for op-

eration by man. The system consists of three major component parts: (1) missiles, (2) radars, and (3) computers.

Although we have had a long and therefore disturbing series of failure in missile testing, including another Minuteman failure only last week, there is no reason to conclude that the two Safeguard missiles, the Spartan and the Sprint, will not work. But there is reason to doubt that the long-range radar (PAR) and the short-range radar (MSR), parts of which have not been built let alone tested, will operate successfully together in that almost instantaneous manner which would be necessary in case of sudden attack; and there is even more reason to doubt that the computer, which has been neither built nor tested, and which is admittedly far more complicated than any computer ever yet attempted, will operate properly when called upon to do so.

Finally, it is logical to consider whether, even if these three separate components would operate properly as separate units, would they so operate when combined. For obvious reasons, the testing of any joint operation has not been possible.

The second reason is the vulnerability of the system. Because the resistance strength (PSI) of the MSR radar is less than 10 percent of the strength of the missile site in its present conformation that radar is very vulnerable even to the less lethal, less accurate Soviet SS-11 missile, of which the Soviets have hundreds more than they have SS-9s.

Because the MSR radar is designed to guide both Safeguard missiles to their targets, if it is knocked out the entire Safeguard system would be blinded and therefore worthless.

I think it is particularly significant also to remember that in launching a nuclear attack the enemy has available a multitude of tactics and gimmicks with which to evade a defensive system. Those in our Defense Department are confident we have such an ability to evade or bypass any ABM system which the Soviet Union has deployed. There is a likelihood that the Soviet Union possesses the same capability in this regard as does the United States. I see no merit in taking a system—a system which has not been subject to the extensive research and development procedures normally followed by our Defense Department—and deploying it with the presumption that we will then make it work. In responding to the reliability questions, many proponents of the ABM have utilized the arguments that if we can send a man to the moon we can surely make this system work. In my mind there is a failure in this argument to recognize that the recent moon shot was a result of years and years of preparation involving thousands of scientists and numerous preparatory launchings prior to focusing an entire agency of the Federal Government on a single launching operation. And launching in terms of the ABM we have a vastly different problem. The issue here involves the ability to launch hundreds of missiles against incoming missiles instantaneously as opposed to a single launching operation with a lengthy countdown and preparation period. I do not downgrade our space program. But that effort is not the same as what must be done with an ABM.

Mr. President, there is no doubt in my mind that additional research and development work on an ABM system is absolutely essential. I shall support a

research and development program. I oppose the deployment of a system whose components have not been through even the most preliminary testing stages. I firmly believe that the ABM is a step toward escalation of the arms race at the very time that our Nation and the Soviet Union are creating the climate for arms discussions. We can approach such discussions with a strong position. The United States is not at the mercy of Russia and the United States will not be at the mercy of Russia by 1975.

Mrs. SMITH. I yield back the remainder of my time.

Mr. STENNIS. Mr. President, do I have time remaining?

The PRESIDING OFFICER. The time has expired.

Mr. MANSFIELD. Mr. President, I suggest the absence of a quorum.

The PRESIDING OFFICER. The clerk will call the roll.

The assistant legislative clerk proceeded to call the roll.

Mr. MANSFIELD. Mr. President, I ask unanimous consent that the order for the quorum call be rescinded.

The VICE PRESIDENT. Without objection, it is so ordered.

All time has expired. The question is on agreeing to the amendment of the Senator from Maine to the amendment of the Senator from Kentucky and the Senator from Michigan.

Mr. TOWER. Mr. President, a parliamentary question.

The VICE PRESIDENT. The Senator from Texas will state it.

Mr. TOWER. As I understand, the question is on agreeing to the amendment in the nature of a substitute for the Cooper-Hart amendment. If the substitute fails, the question recurs on the Cooper-Hart amendment.

The VICE PRESIDENT. The Senator is correct. The question is on agreeing to the amendment in the nature of a substitute for the Cooper-Hart amendment. The yeas and nays have been ordered, and the clerk will call the roll.

The bill clerk called the roll.

The yeas and nays resulted—yeas 50, nays 50, as follows:

[No. 65 Leg.]
YEAS—50

Alken	Hart	Muskie
Bayh	Hartke	Nelson
Brooke	Hatfield	Pearson
Burdick	Hughes	Pell
Cannon	Inouye	Percy
Case	Javits	Proxmire
Church	Kennedy	Randolph
Cook	Magnuson	Ribicoff
Cooper	Mansfield	Saxbe
Cranston	Mathias	Schweiker
Eagleton	McCarthy	Smith
Ellender	McGovern	Symington
Fulbright	McIntyre	Tydings
Goodell	Metcalf	Williams, N.J.
Gore	Mondale	Yarborough
Gravel	Montoya	Young, Ohio
Harris	Moss	

NAYS—50

Allen	Dirksen	Holland
Allott	Dodd	Hollings
Anderson	Dole	Hruska
Baker	Dominick	Jackson
Bellmon	Eastland	Jordan, N.C.
Bennett	Ervin	Jordan, Idaho
Bible	Fannin	Long
Boggs	Fong	McClellan
Byrd, Va.	Goldwater	McGee
Byrd, W. Va.	Griffin	Miller
Cotton	Gurney	Mundt
Curtis	Hansen	Murphy

Packwood	Sparkman	Thurmond
Pastore	Spong	Tower
Prouty	Stennis	Williams, Del.
Russell	Stevens	Young, N. Dak.
Scott	Talmadge	

The VICE PRESIDENT. On this vote the yeas are 50, and the nays are 50. The Vice President votes nay. The amendment is rejected.

Mr. STENNIS. Mr. President, I move to reconsider the vote by which the amendment was rejected.

Mr. TOWER. Mr. President, I move that the motion to reconsider be laid on the table.

The motion to lay on the table was agreed to.

The VICE PRESIDENT. The Chair would inform the Senate that the question now recurs on the amendment of the Senator from Michigan.

Mr. STENNIS. Mr. President, a parliamentary inquiry.

The VICE PRESIDENT. The Senator will withhold a moment. The Senate will please be in order.

The Senator from Mississippi will state the inquiry.

Mr. STENNIS. Mr. President, I ask for the yeas and nays on the Cooper-Hart amendment.

The yeas and nays were ordered.

Mr. STENNIS. Mr. President, a further parliamentary inquiry.

The VICE PRESIDENT. The Senator from Mississippi will state it.

Mr. STENNIS. What is the question now before the Senate?

The VICE PRESIDENT. The question now before the Senate is adoption of the amendment offered by the Senator from Michigan, amendment No. 101.

Mr. STENNIS. That is called the Cooper-Hart amendment, is that not correct?

The VICE PRESIDENT. That is correct.

Mr. SYMINGTON. Mr. President, a parliamentary inquiry.

The VICE PRESIDENT. The Senator from Missouri will state it.

Mr. SYMINGTON. Is all time on the Cooper-Hart amendment also—

The VICE PRESIDENT. All time on the Cooper-Hart amendment has expired.

On this question the yeas and nays have been ordered; and the clerk will call the roll.

The legislative clerk called the roll.

The result was announced—yeas 49, nays 51, as follows:

[No. 66 Leg.]
YEAS—49

Alken	Hart	Muskie
Bayh	Hartke	Nelson
Brooke	Hatfield	Pearson
Burdick	Hughes	Pell
Cannon	Inouye	Percy
Case	Javits	Proxmire
Church	Kennedy	Randolph
Cook	Magnuson	Ribicoff
Cooper	Mansfield	Saxbe
Cranston	Mathias	Schweiker
Eagleton	McCarthy	Symington
Ellender	McGovern	Tydings
Fulbright	McIntyre	Williams, N.J.
Goodell	Metcalf	Yarborough
Gore	Mondale	Young, Ohio
Gravel	Montoya	
Harris	Moss	

NAYS—51

Allen	Baker	Bible
Allott	Bellmon	Boggs
Anderson	Bennett	Byrd, Va.

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Byrd, W. Va.	Hansen	Pastore
Cotton	Holland	Prouty
Curtis	Hollings	Russell
Dirksen	Hruska	Scott
Dodd	Jackson	Smith
Dole	Jordan, N.C.	Sparkman
Dominick	Jordan, Idaho	Spong
Eastland	Long	Stennis
Ervin	McClellan	Stevens
Fannin	McGee	Talmadge
Fong	Miller	Thurmond
Goldwater	Mundt	Tower
Griffin	Murphy	Williams, Del.
Gurney	Packwood	Young, N. Dak.

So the Cooper-Hart amendment (No. 101) was rejected.

Mr. STENNIS. Mr. President, I move to reconsider the vote by which the amendment was rejected.

Mr. JACKSON. Mr. President, I move to lay that motion on the table.

The motion to lay on the table was agreed to.

The PRESIDING OFFICER (Mr. EAGLETON in the chair). The bill is open to further amendment.

Mr. McINTYRE. Mr. President, I send an amendment to the desk.

The PRESIDING OFFICER. The amendment offered by the Senator from New Hampshire will be stated.

The legislative clerk proceeded to read the amendment.

Mr. McINTYRE. Mr. President, I ask unanimous consent that the reading of the amendment be dispensed with and that the amendment be printed in full in the RECORD at this point.

The PRESIDING OFFICER. Without objection, it is so ordered.

At the end of the bill, insert the following new title:

"TITLE V—SAFEGUARD ANTIBALLISTIC MISSILE SYSTEM

"SEC. 501. (a) In the case of funds authorized under this Act for the Safeguard antiballistic missile system, such funds may be used only for—

"(1) Research, development, testing and evaluation of the system's radars, computers, and related electronic equipment, and procurement thereof.

"(2) Preproduction expenses of the Sprint and Spartan missiles and the production of such missiles for research, development, evaluation and testing.

"(b) The equipment described in clause (1) of subsection (a) may not be installed at any proposed ABM site, except at or near Grand Forks Air Force Base, North Dakota, and Malmstrom Air Force Base, Montana."

"(c) None of the funds appropriated pursuant to this or any other Act may be expended for the acquisition of land, not now owned by the United States, or the use of land owned by the United States, for the construction or installation of any ABM facilities at any proposed ABM site, except at or near Grand Forks Air Force Base, North Dakota, and Malmstrom Air Force Base, Montana."

"(d) None of the funds appropriated pursuant to this or any other Act may be expended for the procurement, installation, or deployment of any operational missile as a part of any antiballistic missile system, nor for the construction of any silos or other launch facilities for any operational missile as a part of any antiballistic missile system."

Mr. McINTYRE. Mr. President, I also request that the amendment be made the pending business, in view of the lateness of the hour.

Mr. MANSFIELD. And, Mr. President, no action will be taken on the amendment until tomorrow.

The PRESIDING OFFICER. All proceedings will be suspended until there is order in the Chamber, including the upper galleries, or the doors will be closed. Mr. DIRKSEN. Mr. President, will the Senator from New Hampshire yield?

Mr. McINTYRE. I yield.

ORDER OF BUSINESS

Mr. DIRKSEN. Mr. President, I would like to query the distinguished majority leader concerning the program for the rest of the day and also tomorrow.

The PRESIDING OFFICER. We must have order in the Chamber. The gallery doors will be closed, so that Senators can hear each other and be heard.

The Senator from Montana.

ORDER FOR RECESS TO 10:30 A.M. TOMORROW

Mr. MANSFIELD. Mr. President, I ask unanimous consent that the previous order granted for convening tomorrow be changed. I ask unanimous consent that when the Senate completes its business today, it stand in recess until 10:30 tomorrow morning.

The PRESIDING OFFICER. Without objection, it is so ordered.

ORDER FOR RECOGNITION OF SENATOR HARTKE TOMORROW

Mr. MANSFIELD. Mr. President, I ask unanimous consent that immediately after the prayer and the Journal the distinguished Senator from Indiana (Mr. HARTKE) be recognized for not to exceed 30 minutes.

The PRESIDING OFFICER. Without objection, it is so ordered.

ORDER FOR CONSIDERATION OF THE McINTYRE AMENDMENT

Mr. MANSFIELD. Mr. President, I ask unanimous consent that at the conclusion of the remarks of the distinguished Senator from Indiana, the pending business be laid before the Senate and that the Senate start the consideration of the McIntyre amendment, which is now before the Senate.

The PRESIDING OFFICER. Without objection, it is so ordered.

COMMITTEE MEETINGS TOMORROW

Mr. SPARKMAN. Mr. President, will the Senator yield at that point?

Mr. MANSFIELD. I yield.

Mr. SPARKMAN. May committees have the right to sit? We have a very urgent executive session, if we could sit until 12 o'clock.

Mr. MANSFIELD. Until 12 o'clock, but not beyond that hour.

LEGISLATIVE PROGRAM

Mr. MANSFIELD. Mr. President, for the information of the Senate, it is very possible that Calendar No. 214, H.R. 7206, an act to adjust the salaries of the Vice President of the United States and certain officers of the Congress, may be

brought up late in the afternoon tomorrow, if a break occurs, or if not then, on Friday. If it is brought up tomorrow, Members of the Senate had better be prepared for at least one rollcall vote, and perhaps more.

There will be no further business today, except speeches, unless a Senator has any questions.

Mr. MAGNUSON. Mr. President, I ask the majority leader, we have had pending here the merchant marine authorization bill for a long time. Upon inquiry, I have always received the answer that we wanted to finish this pending bill, which I understand.

The PRESIDING OFFICER. The Senate will be in order.

Mr. MAGNUSON. We cannot appropriate anything, we cannot even have the State, Justice, and Commerce Department appropriations continued, until we get this business completed.

The PRESIDING OFFICER. The Senate will be in order.

Mr. MAGNUSON. Until we get this authorization. But if we are going to break into the pending bill with another bill—

Mr. BYRD of West Virginia. Mr. President, may we have order? Senators cannot hear.

The PRESIDING OFFICER. We must have order in the Chamber. The Senators cannot be heard.

Mr. MAGNUSON. There are a great many of us on both sides of the aisle who would like to see this authorization out of the way.

The PRESIDING OFFICER. The occupants of the gallery are reminded that they are the guests of the Senate, and will be courteous and quiet.

Mr. MANSFIELD. The Senator knows there is a "hold" on it; amendments will be offered, and the matter cannot be disposed of in 1 day.

Mr. MAGNUSON. I know where the "hold" comes from, but I think the Senator from Delaware and I have always agreed on a time limitation. He will have an amendment on ship construction, which he normally has every year.

Mr. MANSFIELD. May I say to the distinguished Senator from Washington that I do not care whether the bill I announced is coming up, perhaps tomorrow, on the Post Office Department, ever comes or not, though something ought to be done for the Vice President. It is not my intention, except under the most unusual circumstances—and the joint leadership is in agreement on this—to set aside this measure for anything which will take up any length of time; and I dare say the bill which the Senator mentions—and it is a most important bill, and I recognize its need—will have to wait until we get through with the present business.

Mr. MAGNUSON. I do not think it will take up much time. I am sure the "hold"—I am just assuming this, but it usually is—is from the Senator from Delaware. If that bill cannot be taken up out of order, I am going to have to object to other bills also.

Mr. DIRKSEN. The other bill is not our bill. If the Senator wants to object

to the Speaker and the Vice President, that is his privilege.

Mr. MAGNUSON. I have objected to the Speaker and Vice President many times.

Mr. MANSFIELD. And I am sure that will continue in the future.

Mr. MAGNUSON. Many times. But I am not objecting in that sense. I am trying to point out the urgency of getting at this authorization bill. It is holding up the State, Justice, and Commerce Department appropriations, and holding up all kinds of things, if it goes over until October; and if the Senator from Delaware is here, I need not stand here and tell him what is happening to the American merchant marine, when we cannot even get it authorized, let alone get the money. The Senator from Delaware and I are going to have a big argument, as we do every time, about the money. But I say, let us at least authorize the money to let the merchant marine continue to exist, before it sinks.

Mr. MANSFIELD. We will get to it as soon as possible.

Mr. MAGNUSON. I am for the Vice President and the Speaker of the House of Representatives, and the majority and minority leaders.

Mr. MANSFIELD. Mr. President, may I raise the possibility of a Saturday session this week? The joint leadership is prepared to come in early to meet the convenience of the Senate, and do everything we possibly can to expedite the passage of the pending business.

Several Senators addressed the Chair.

The PRESIDING OFFICER. The Senator from New York is recognized.

Mr. JAVITS. Mr. President, since I shall require about 5 minutes, I yield 1 minute to the Senator from Nevada.

DEATH OF JOHN GOSNELL, EXECUTIVE OFFICER AND GENERAL COUNSEL OF NATIONAL SMALL BUSINESS ASSOCIATION

Mr. BIBLE. Mr. President, our Nation, our private enterprise system, and especially the small business community has suffered a great loss in the recent death of John A. Gosnell.

John Gosnell was both executive officer and general counsel of National Small Business Association. He made many significant contributions to the small business community in his 13 years of distinguished and dedicated service to the association.

The many Members of Congress who knew him were indeed fortunate. We could not fail to realize the measure of his worth, and somehow share it. John Gosnell was a forthright man without pretension, a man who possessed a sense of high obligation and a sense of humor.

In addition to his service on the National Advisory Council of the Senate Select Committee on Small Business; he was a member of the Advisory Council on Federal Reports; former vice chairman of the Small Business Committee of the American Bar Association; and was formerly a member of the Export Expansion Council of the Department of Commerce.

Mr. Gosnell was a member of the American, Federal, Arkansas, New York, and District of Columbia Bar Associations. Born in Little Rock, Ark., he was a 1925 graduate of Vanderbilt University. He was a specialist in the law of unfair competition and in trademark protection, and practiced law in El Dorado, Ark., Atlanta, Ga., New York, N.Y., and Washington, D.C. In earlier years he served with the Reconstruction Finance Corporation and the War Production Board.

Numerous tributes have been paid to him. Carl A. Beck, King of Prussia, Pa., chairman of the board of trustees, National Small Business Association said:

John Gosnell had a great many friends, a host of acquaintances, and was widely known in the Washington community. The high personal esteem in which he was held reflected substantial recognition and stature to our Association, and opened new avenues of service and representation to the Small Business policy. His incisive analyses, coupled with a ready wit and delicious sense of humor, built esprit de corps and teamwork among both staff and trustees. He will be sorely missed both within and without our organization, but the structure and relationships he built stand as a tribute to his contribution.

This is a time of bereavement for John's lovely wife, Relda, and his wonderful family. It is a time of sorrow for all the small business community. John Gosnell would surely feel, however, that there must not be mourning but renewed dedication to achievement of the principles in which he so strongly believed.

He once wrote these fundamental truths:

The truth is that the small enterpriser (entrepreneur) is the leaven of the socio-economic process, in a free economy, never static, hard to identify and define except by standards which are both arbitrary and temporary.

John Gosnell was a man capable of incisive appraisal, an articulate spokesman for private enterprise and a dedicated friend and supporter of the small business community.

Mr. JAVITS. Mr. President, may we have order?

The PRESIDING OFFICER. The Senate will be in order.

S. 2789—INTRODUCTION OF THE HEALTH, NUTRITION, AND HUMAN NEEDS ACT OF 1969

Mr. JAVITS. Mr. President, I introduce today the Health, Nutrition, and Human Needs Act of 1969, designed to eliminate poverty-related hunger and malnutrition among the Nation's urban, rural, and migrant poor.

I am the ranking member of the so-called Hunger Committee, and joining me in introducing this measure are the Senator from Wisconsin (Mr. NELSON), the Senator from Pennsylvania (Mr. SCOTT), the Senator from Connecticut (Mr. DODD), and the Senator from Oregon (Mr. HATFIELD). Other Senators will undoubtedly join in sponsoring the bill; and I shall provide their names for the RECORD in due course.

As a result of initiatives taken by Senator MCGOVERN and other members of

the Select Committee on Nutrition and Human Needs, by other committees and Members of the Congress, and by concerned private citizens and groups—the Nation has “discovered” hunger in America.

The President's historic message of May 6, 1969, calling for “an end to hunger in America for all time,” and the actions taken by Secretary of Agriculture Hardin, Secretary of Health, Education, and Welfare Finch and others in the administration—overcoming some of the redtape that entangled their predecessors—have brought us from discovery of a national problem to a commitment to take appropriate action. Food stamp and other legislation proposed by my colleagues to deal with particular facets of the problem are welcome steps down the road from commitment to resolution.

The Senate established the Select Committee on Nutrition and Human Needs to determine what steps would be necessary “to establish a coordinated program” to assure “every U.S. resident adequate food, medical assistance, and related basic necessities of life and health.”

The “Health, Nutrition, and Human Needs Act of 1969,” which I introduce today, would provide, for the first time, a complete spectrum of programs designed to eliminate the disgrace of poverty-related hunger and malnutrition in the United States.

The act would establish six major programs:

First, a program of nutrition outreach is authorized to improve the effectiveness of our food and nutrition assistance programs at the local level by involving the Office of Economic Opportunity, and particularly Vista and other volunteers.

Second, the Nutrition Education and Information Act is designed to inform the Nation, and particularly its low-income citizens, of the nutritional and economic aspects of food use and acquisition and to determine the extent and effects of the failure to meet the nutritional requirements of human development.

Third, under the Maternal and Child Nutrition Act, low-income mothers, infants, and children would receive nutrients, supplemental foods, and health services related to malnutrition.

Fourth, the Private Industry Nutrition Assistance Act would provide incentives to small businesses, reform the Food Stamp Act of 1964, and establish a Private Sector Advisory Committee on Nutritious Foods, to increase the private distribution of nutritious commodities to low-income households.

Fifth, the Human Needs Act would direct the Secretary of Agriculture to utilize commodity distribution programs to supplement the food stamp and school feeding programs.

Finally, a National Advisory Council on Malnutrition would be created to make a continuing evaluation of all food and nutrition assistance programs, and to advise the President and the Congress. Extensive provisions in this act were designed to promote greater administrative cooperation among the Federal agencies involved in food programs.

REPORT ON OPERATIONS OF THE INTERNATIONAL COFFEE AGREEMENT—MESSAGE FROM THE PRESIDENT

The PRESIDENT pro tempore laid before the Senate the following message from the President of the United States, which, with the accompanying report, was referred to the Committee on Foreign Relations:

To the Congress of the United States:

I transmit herewith the 1968 report on the operations of the International Coffee Agreement.

This treaty, in force since 1963, is vital to the economic well-being of many friendly developing countries in Latin America and Africa. It has provided them stable and predictable earnings from their principal export crop and thus has encouraged their economic development. The United States consumer in turn has benefitted from stable prices considerably below the peaks reached before the Agreement entered into force. I hope to see the Agreement continued and strengthened. I reaffirm our support of the Coffee Diversification Fund, designed to encourage a shift of resources away from the production of surplus and unneeded coffee. Discussions with the Coffee Fund on the terms and conditions of a United States loan to the Fund are expected to begin fairly soon.

The report reviews the operations of the International Coffee Agreement in 1968. On April 30, 1969 agreement was reached with the Brazilian Government regarding Brazilian soluble coffee exports. This has obviated any immediate need for United States' action.

RICHARD NIXON.

THE WHITE HOUSE, August 5, 1969.

EXECUTIVE MESSAGES RECEIVED

As in executive session, the Presiding Officer (Mr. Young of Ohio in the chair) laid before the Senate messages from the President of the United States submitting sundry nominations, which were referred to the appropriate committees.

(For nominations this day received, see the end of Senate proceedings.)

MESSAGE FROM THE HOUSE

A message from the House of Representatives by Mr. Hackney, one of its reading clerks, announced that the House had passed the bill (S. 714) to designate the Ventana Wilderness, Los Padres National Forest, in the State of California, with an amendment, in which it requested the concurrence of the Senate.

The message also announced that the House had passed the bill (S. 1611) to amend Public Law 85-905 to provide for a National Center on Educational Media and Materials for the Handicapped, and for other purposes, with an amendment, in which it requested the concurrence of the Senate.

The message further announced that the House had agreed to the amendment of the Senate to each of the following bills of the House:

H.R. 1632. An act for the relief of Romeo de la Torre Sanano and his sister, Julieta de la Torre Sanano; and

H.R. 2336. An act for the relief of Adela Kaczmariski.

The message also announced that the House had passed the following bill and joint resolution, in which it requested the concurrence of the Senate:

H.R. 11959. An act to amend chapters 31, 34, and 35 of title 38, United States Code, in order to increase the rates of vocational rehabilitation, educational assistance, and special training allowance paid to eligible veterans and persons under such chapters; and

H.J. Res. 764. A joint resolution to authorize appropriations for expenses of the President's Council on Youth Opportunity.

HOUSE BILL AND JOINT RESOLUTION REFERRED

The following bill and joint resolution were each read twice by their titles and referred to the Committee on Labor and Public Welfare:

H.R. 11959. An act to amend chapters 31, 34, and 35 of title 38, United States Code, in order to increase the rates of vocational rehabilitation, educational assistance, and special training allowance paid to eligible veterans and persons under such chapters; and

H.J. Res. 764. A joint resolution to authorize appropriations for expenses of the President's Council on Youth Opportunity.

AUTHORIZATION OF APPROPRIATIONS FOR FISCAL YEAR 1970 FOR MILITARY PROCUREMENT, RESEARCH AND DEVELOPMENT, AND FOR THE CONSTRUCTION OF MISSILE TEST FACILITIES AT KWAJALEIN MISSILE RANGE, AND RESERVE COMPONENT STRENGTH

The PRESIDING OFFICER. The hour of 1 o'clock having arrived, the Chair lays before the Senate the unfinished business, which will be stated.

The ASSISTANT LEGISLATIVE CLERK. A bill (S. 2546) to authorize appropriations during the fiscal year 1970 for procurement of aircraft, missiles, naval vessels, and tracked combat vehicles, and research, development, test, and evaluation for the Armed Forces, and to authorize the construction of test facilities at Kwajalein missile range, and to prescribe the authorized personnel strength of the Selected Reserve of each reserve component of the Armed Forces, and for other purposes.

The PRESIDING OFFICER (Mr. ALLEN in the chair). Under the unanimous-consent agreement, there will be 4 hours of debate on the pending amendment, the time to be equally divided between the proponents of the amendment and the opponents.

Who yields time?

Mr. HART. Mr. President, on the time allocated for those in support of the amendment, I yield 25 minutes to the able Senator from Massachusetts (Mr. KENNEDY).

The PRESIDING OFFICER. The Chair recognizes the Senator from Massachusetts.

Mr. KENNEDY. Mr. President, the debate over deployment of an anti-ballistic-missile system has engaged the Senate

intensely now for some 5 weeks. In general framework, however, this debate has been going on for more than a year—since June of last year, when Senators JOHN SHERMAN COOPER and PHILIP A. HART, in company with others, first moved to strike out the deployment funds.

Tomorrow, we arrive at a critical juncture in this year-long debate, when we vote on the Cooper-Hart ABM amendment to the Defense procurement authorization bill. In its simplest aspect, this vote will determine whether the Senate authorizes a \$350 million down payment on an \$11 billion military weapons system. But, in a larger context, the significance of the vote is much more broad, for the ABM may well prove to be the point at which a whole body of conventional wisdom was laid aside in favor of realism in defense planning and budgeting.

Because the realities of nuclear age defense planning have become so technical, it is highly significant that many in Congress and in the country at large are making a determined effort to remove the cloak of mystery which so long has shrouded national defense programs. It is simply irrelevant, in this climate of increasing sophistication, to fall back on the slogans and shibboleths which have traditionally passed as explanations in our consideration of multi-billion-dollar defense bills. Because so much is at stake, we must instead ask hard questions and demand full answers.

The ABM debate has taught us the value of looking closely at defense programs. As we approach tomorrow's vote, we do so prepared by weeks of hearings and months of discussion, both in committee and here on the floor. We also approach the vote with sharp and honest divisions of opinions and judgment. These divisions were apparent in the testimony of witnesses in the hearings conducted both by the Armed Services Committee and the Foreign Relations Committee. They were apparent in "ABM: An Evaluation," edited by Dr. Jerome Wiesner and Prof. Abram Chayes, and the books which appeared in rebuttal to it. Finally, they were apparent in the many public meetings and debates over the ABM which have been held through the spring and summer.

Here on the Senate floor in the past few weeks, the arguments for and against deployment have been many and detailed. We owe a debt of gratitude, I think, to those of our colleagues who have carried the burden of this enlightening debate. Senator STENNIS, particularly, should be singled out, because of the even-handed, open way he conducted the hearings on the ABM, and because of his continuing good grace in floor managing the bill and in bringing the matter to a vote. He has been joined by Senator JACKSON in presenting the bulk of the case for deployment, and together they have presented a careful series of arguments. On the other side of the issue, Senators COOPER, HART, SYMINGTON, FULBRIGHT, GORE, and MANSFIELD have repeatedly sought to match the claims and statements of many of those not in Congress with logic,

EFFECT OF CHANGES IN THE STANDARD DEDUCTION UNDER THE PROPOSAL ON PERSONS BELOW THE POVERTY LINE,
 CALENDAR YEAR 1969

Family size	Exemptions and minimum standard deduction allowed		Poverty income levels, 1969 ¹	Estimated number of poor persons (in thousands) ²			
	Present law	Proposal		Total	Number of poor now taxable	Number made nontaxable	Number helped, but still taxable
1	\$900	\$1,300	\$1,735	4,620	1,150	550	600
2	1,600	2,000	2,240	5,200	1,220	790	430
3	2,300	2,700	2,755	2,640	460	400	60
4	3,000	3,400	3,535	2,550	490	360	130
5	3,700	4,000	4,165	2,620	270	220	50
6	4,400	4,800	4,675	2,590	250	180	70
7 or more ³	5,800	5,800	5,755	7,600	450	50	400
Total				27,820	4,290	2,550	1,740
Total family units				10,630	2,180	1,250	940

¹ 1969 poverty levels are assumed to be 6 percent above the HEW nonfarm level for 1966. This conforms to the method by which the number of poor was projected.
² Includes both adults and children.
³ Averages about 8 persons per family.

Mr. MOSS. Mr. President, under the present law a single individual begins paying tax at an income level of \$900. With this new provision he would not incur any tax liability until his income exceeded \$1,300. A married couple with two children who now pays taxes on everything above \$3,000 will not begin to pay taxes under the new provision until their income exceeded \$3,400.

This proposal's most profound effect is on the 28 million individuals below the poverty line. I ask unanimous consent that a table which demonstrates this effects be printed in the RECORD.

There being no objection, the table was ordered to be printed in the RECORD, as follows:

EFFECT OF INCREASING THE PRESENT \$200 PLUS \$100 MINIMUM STANDARD DEDUCTION TO \$600 PLUS \$100 WITH \$1,000 CEILING
 (Dollar amounts in millions; number of returns in thousands)

AGI (in thousands of dollars)	Percent law tax	Tax decrease	Tax decrease as percent of present law tax	Number of returns with tax decrease	Number of returns made nontaxable	Number of returns shifting to standard deduction
0 to 3	\$1,159	\$415	35.8	9,760	2,025	870
3 to 5	3,177	420	13.2	7,870	320	1,120
5 to 7	5,439	200	3.7	5,940	15	980
7 to 10	13,925	95	.7	4,330		400
10 to 15	18,916					
15 to 20	7,550					
20 to 50	12,795					
50 to 100	6,326					
100 and over	6,202					
Total	75,490	1,130	1.5	27,900	2,360	3,370

Note: Details may not add to totals because of rounding.

Mr. MOSS. Mr. President, of these 28 million poor, 4.3 million of them are now taxed, but with this change in the minimum standard deduction this number would be reduced to 1.7 million. Much more, of course, must be done for the impoverished in this country, but at least we can begin by nearly eliminating the tax burden on the poor. The revenue loss of this relief is only \$1.2 billion. The Ways and Means package contains essentially the same proposal. Congress should delay this relief no longer.

Second, I recommend increasing the maximum standard deduction from the present 10 percent and \$1,000 maximum to 14 percent and \$1,800 maximum. This form of relief is primarily directed at the middle income groups since individuals with higher incomes will continue to find it advantageous to itemize their deductions. I ask unanimous consent that a table showing the effects of this provision be printed in the RECORD.

There being no objection, the table was ordered to be printed in the RECORD, as follows:

14 PERCENT WITH AN \$1,800 CEILING

Adjusted gross income class (in thousands of dollars)	Revenue loss (in millions of dollars)	Number benefiting (in thousands)
0 to 3	21	2,264
3 to 5	161	6,380
5 to 7	259	6,316
7 to 10	436	7,551
10 to 15	664	6,489
15 to 20	179	1,263
20 to 50	89	474
50 to 100	6	19
100 and over	1	2

Mr. MOSS. Mr. President, besides providing the bulk of the benefit to those in the \$5,000 to \$15,000 income brackets, this revision also promotes the goal of tax simplicity. In 1944 when the 10 percent standard deduction was first offered, 82 percent of the Nation's taxpayers chose to use it. Since then that percentage has been eroded to only 57 percent in 1969. If this proposal is enacted, the Treasury estimates that over 80 percent of those filing returns will again use the standard deduction. Such simplicity, by the way, would save the Treasury \$100

million in collection costs. The net revenue loss to the Treasury is estimated at \$1.8 billion.

The Ways and Means bill proposes that the standard deduction be increased in steps over the next 3 years to 15 percent with a \$2,000 maximum. I am not wedded to any magic figures, I want only that the relief for the middle income taxpayer be substantial and that it be immediate.

Third, I plan to offer an amendment which would allow those individuals using the standard deduction to deduct in addition any donations to charity which exceeded 3 percent of their adjusted gross income. The present tax structure encourages those who itemize their deductions—usually the more affluent—to donate to charity, but our tax laws withhold this incentive from those who take the standard deduction. The 3 percent threshold would exclude the minor charitable contributions but would still act as a stimulus to meaningful private giving by the 80 percent of the Nation's taxpayers who are expected to use the standard deduction. The revenue loss of this measure is estimated at \$440 million.

Fourth, I am cosponsoring the bill introduced by the Senator from Minnesota (Mr. McCARTHY) which would extend the head of household benefits to unremarried widows and widowers, and individuals who have attained the age of 35 and who have never been married or who have been separated or divorced for at least 3 years, and who maintain their own households. This equitable reform will cost the Treasury about \$300 million.

These four tax relief measures can and should be enacted immediately. The cost is only about \$3.7 billion. Over a longer period, I believe the relief must be even greater. I propose, therefore, that for the next 4 years the amount allowed for each personal exemption will be at \$1,000.

The present \$600 exemption has been in effect since 1948 and no one can claim that it is still adequate. But because of the present budgetary restraints and because this reform is costly, I regret to say that I feel the increase must be gradually instituted. But at least we can begin.

Mr. President, I have offered 15 proposals. Some of them are complex and all of them will be resisted by a multitude of special interests who have escaped their share of taxation in the past. But the public is angry and the Congress is listening. We can have comprehensive tax reform this session if we keep the pressure on. I hope that the House will pass the Ways and Means package. As I noted, the Ways and Means bill is not completely satisfactory, but at least it is a real beginning on which the Senate can build when a tax bill arrives in this body.

MESSAGES FROM THE PRESIDENT

Messages in writing from the President of the United States were communicated to the Senate by Mr. Geisler, one of his secretaries.

clarity, and reason. They have insisted that the debate should be kept on a high level, to the great benefit of the debate itself as well as of the Senate as an institution.

As we approach the conclusion of this discussion, it may be well to review where this complex issue now stands. With all respect to those who have so ably presented the case in favor of deployment, there remain three principal unanswered questions:

First, will the Safeguard ABM strengthen our national security?

Second, will the Safeguard ABM heat up the arms race?

Third, will the Safeguard ABM unnecessarily drain billions of dollars from other pressing needs?

The answers to these questions are not easily forthcoming. They were not easy for President Johnson nor for President Nixon. They are not easy for us. But they are so full of ramifications that we must exercise the greatest care in seeking a reasoned position on them.

I will not take the time of the Senate to review in detail all the arguments made so well in the past few weeks. Rather, I intend only to try to put some of them into perspective; for, as we vote, it is the long view of the implications of the vote itself which should concern us, and not the narrow arguments over one or two of the dozens of facets of the ABM debate.

If the Senate accepts the Cooper-Hart amendment, and if the amendment remains intact throughout the remainder of its legislative journey, then the Defense Department will be foreclosed from beginning deployment of phase I of the Safeguard ABM in fiscal year 1970. It will, however, have about half a billion dollars in fiscal 1970 to press research, development, testing, and evaluation of the whole variety of defenses to a hypothetical missile attack on this country.

It may prove useful to outline the implications of accepting the Cooper-Hart amendment, as one way of gaining a measure of perspective.

First, the amendment would put the United States on record against starting another lap in the arms race. It is self-evident that no one can really win the arms race, instead, we and our adversaries are forced to run around and around the track, spurring each other on by each new tactic, strategy, or weapon. One basic tenet of today's war planning is that the best defense is a good offense, because the attacker has so many advantages over the defender. We have no evidence that the Soviets can destroy or seriously damage our diverse and dispersed nuclear forces. Nor do we have any convincing evidence that they will have the ability to do so in the reasonably foreseeable future. Thus, acceptance of the Cooper-Hart "no deployment" amendment would be a clear signal that the United States, far and away the world's most powerful nation, was seeking to slow and eventually stop the otherwise perpetual motion of the arms race.

Second, it would put the Pentagon on notice that it no longer had a blank check from Congress, for far too long,

we have acted as if we believed the Pentagon had an exclusive license on knowledge and judgment in matters relating to national security. Our vast Pentagon budget; our overly large foreign commitments; our crazy-quilt draft laws—these are some of the legacies of our uncritical acceptance of Pentagon recommendations and practices. There is no reason in logic or procedure for us to treat the Department of Defense differently than we treat the Department of Labor or the Department of Health, Education, and Welfare when we review their budget requests. When the Pentagon seeks program funds, then we should examine the justifications for these programs with the same care we examine those for education, health, housing and all the others. The scrutiny to which we have put the ABM has indicated to roughly half the Senate that the justification for beginning deployment immediately is not a compelling one. This indication should have a salutary effect on our Pentagon planners, because in the future they may take increasing care to send to the Congress programs based more on the realities of the threat to our security and less on a desire for new weapons systems.

Third, it would indicate to those disenchanted with our present inattention to our domestic needs that the Congress both recognizes these needs and intends to do something about them. So long as we support marginal military projects, we will be woefully short of funds to help relieve the pressures here at home. And these pressures come not only from the poor among us; they come from our students, from our middle-income taxpayers, from our conservationists, and from many, many others. These pressures rise because the Government seems less to be governing than to be drifting, with no clear percepts or priorities. I see no reason whatever that we in Congress should avoid the very difficult question of priorities. If we do, inflation will take an even larger toll; cynicism and uneasiness will spread; and doubts that we can be masters of our own fate will be more widely held. Because the case for beginning ABM deployment is so marginal, this debate is an unequalled place to begin demonstrating that the Congress, at least, can develop and articulate a sense of national priorities and goals.

Fourth, it would put the Congress on record against premature deployment of complex electronic weapons systems. The cost overruns, overoptimism, and specification shortfalls in these systems are more and more shocking as more and more specific information becomes available. We all know that Apollo 11 was a stunning technological triumph, and we applaud those who contributed to it. But we must not forget the Mercury and Gemini flights which went before it, nor the previous Apollo flights themselves which taught lesson after lesson and gave us the confidence to proceed. Perhaps we can make the ABM work as it is designed to, despite the reservations voiced by many of our most outstanding scientists. But we cannot make any reasonable judgment about whether it will or will not work so long as many of

Safeguard's components remain unbuilt or untested, even in prototype, as Senator SYMINGTON pointed out on July 28. And because all the different components must work in complete concert, they should be tested as a complete unit. We should build prototypes of the system's components where the fullest evaluation and testing can be carried out. We should not build these prototypes on an operational site, because the tests can be neither as extensive nor as varied in the continental United States as they can be on a remote island. Once the prototypes are built and tested, we would then know whether the system worked or whether, like Apollo, we must refine and redesign before we rely upon it.

Fifth, it would put the Congress on record as seeking real value for its defense dollars. Even if Safeguard worked as designed, a number of studies—both classified and unclassified, both from within the Pentagon and from outside it—have demonstrated that the Soviets could easily neutralize it. When the evidence was made available, a few years back, that the Soviets were constructing a small and obsolescent ABM around Moscow, Defense Department officials assured a concerned Congress that it was a routine matter for us to overwhelm the Soviet ABM. Similarly, it is no less difficult for the Soviets to do the same thing to our ABM.

Thus, while Safeguard might work in a technical sense, it would not protect. This is one of the key points on which we must all be absolutely clear. If we spend the billions to construct phase I of Safeguard—placing defensive missiles around one-third of our Minuteman force—we have not bought an effective defense of those Minutemen because the Soviets can easily overwhelm it. I have previously, on July 10, read into the Record a table showing just how simply the Soviets can overcome Safeguard, using technology which exists today. Furthermore, if we spend those billions on Safeguard phase I, we have not added any protection to the rest of our deterrent—the remaining two-thirds of our Minuteman, our bombers, our submarines, or our tactical aircraft stationed around the world.

It has been argued here in the Senate that should the Soviets choose to counter our ABM by building more offensive missiles, then we could despond by adding more defensive missiles, thus nullifying their counter step. But if this is our intended response, then it seems to me we are deploying not a thin ABM, but the foundation of a much larger, thick ABM. If this is so, then we should be debating an ABM of far different dimensions and far larger cost than the one presented to us.

We might well ask what we would have bought if we deploy Safeguard phase I. We would have bought a number of radars, of computers, and of missiles. But they would be nothing more than idle monuments to the ingenuity of our scientists and engineers; their relative to the realities of weapons planning would be nil.

We might also ask what we would have bought if we deployed the full

Safeguard ABM, as it was outlined in testimony by Defense Department officials. We would not have bought any meaningful protection against the Soviets—nor against a determined Chinese attack. We may, though, have bought some degree of protection against accidental launches, if one makes certain assumptions about the state of readiness of our ABM and the level of crudeness of the attacking missiles. But neither the President nor the Secretary of Defense nor any of Safeguard's proponents have suggested that this alone is sufficient justification for proceeding with deployment of Safeguard.

Thus, in the absence of any convincing testament that Safeguard would add a solid element to our defense capabilities, we would be well advised to avoid spending our limited tax dollars on it.

Sixth, the Congress would indicate its concern over a continuing reliance for our strategic deterrent upon a land-based, fixed-site missile. As the ICBM's in both the Soviet's and our own inventories become more sophisticated, their accuracy increases. This in turn increases the vulnerability of the missile silos, and is presumably one reason behind the decision to deploy an ABM. If we assume that at some time in the future the Soviets—and we, too, of course—are able to refine ICBM guidance systems sufficiently, then the credibility of the fixed-site ICBM as a deterrent is gravely impaired because of the accuracy of the attacking warheads. This is so no matter how hard the silo is, because a detonation would throw dirt from the crater over the silo door, thus preventing it from opening to launch the retaliatory missile.

But this line of reasoning does not support deployment of Safeguard phase I, primarily because of the serious doubts about Safeguard's efficacy and the relative simplicity of neutralizing it. What it does support is intensive research and development into ballistic-missile defenses generally, to discover if there is some ABM system which offers a reasonable chance of success. Fixed-site ICBM's are not now obsolete, nor are guidance systems sufficiently refined. But it does appear folly to spend billions constructing an ineffective defense around missiles which may themselves soon be obsolete.

One of the most frustrating aspects of war planning in the nuclear age is the rapid rate of obsolescence of modern weapons systems. Thus, we are only now learning how to perfect MIRV's—which may be the most unsettling arms race development of the 1960's. We plan to install MIRV's on both Minuteman and Polaris missiles. Yet, as I have just outlined, the fixed-site Minuteman—to be fitted with MIRV's—may be obsolete. But we plunge steadily onward, spending billions, acting not so much rationally as reflexively. Every step we take requires a counterstep by the Soviets; every step the Soviets take requires us to take a counterstep. We develop and deploy a weapons system; the Soviets render it obsolete. And, of course, vice versa. All this absorbs billions of dollars, postpones the arrival of better lives for men and women and children

the world over, and throws cold water on our hopes for a stable and peaceful world.

Seventh, it would go far toward making the Department of Defense more candid in its dealings with the Congress. Traditionally, we are aware only of the tip of the iceberg in defense matters. Only grudgingly has the Pentagon filled out the record with the Congress on such items as the chemical and biological warfare program, the Cheyenne helicopter, the C-5A, the main battle tank, cost overruns, and of course the ABM. In each of these cases, the industry of an individual Senator or Congressman brought the facts out into the open, and serious abuses—actual or potential—were corrected.

In the case of the ABM, many of us have known for some time of the existence of studies or reports commissioned by the Defense Department which were critical of one or another aspect of the ABM. Yet, it has been the most difficult task to obtain these reports or studies, or even, in some cases, to get an official acknowledgement that they exist. It is my understanding that one such Defense Department classified study is similar to an unclassified study which I placed in the Record on July 17. Both studies examine various alternative ways of strengthening the credibility of our deterrent—as by deploying an ABM system, building more Polaris submarines, further hardening of our missile silos, or constructing more ICBM's. These alternatives are weighed, one against the other, in the studies—and the ABM is determined to be the worst of the four alternatives.

Now, it is reasonable to ask why we in the Congress, at some point during these past few months, were not told of this and of the other studies. There may be powerful and compelling reasons for choosing the ABM over the other alternatives, but we are not told what the reasons are. As a result, we must make assumptions as to the reasons, and this does not create an atmosphere of confidence in our dealings with the Pentagon.

I have listed seven possible implications of Senate acceptance of the Cooper-Hart amendment. There are of course more. But even the ones I have listed, it seems to me, argue in favor of postponing the deployment decision while pressing ahead with ballistic missile defense research and development, and while concurrently seeking to get the long-stalled arms control talks with the Soviet Union back on the track to consummation. We are just 3 weeks short of a year from the date once set for announcement of arms control talks. Yet there appears no urgency on our part to reopen those negotiations. Instead, we push MIRV testing and ABM deployment—all factors detrimental to the climate of cooperation so essential to successful talks.

We all seek a safer world and a better world. Yet we cannot have a safer world while we press forward toward a new and intensified lap in the arms race. Neither can we have a better world—either here at home or abroad—while we pour

two-thirds of our controllable budget expenditures into military programs. We are learning that the assumptions upon which our defense postures and budgets are constructed may well be unrealistic and out of date. If they are, and if we continue to stock our arsenals of war while neglecting our tools of peace, then the world we pass on to our children will be far worse than it is today.

We must think, as we consider our vote on the ABM, what shape we want for the world our children inherit from us. We can begin now to shape a safer and better world for them, or we can continue on as we have in the past. I have chosen the former course, and my vote against deployment of the ABM reflects that decision.

Mr. HART. Mr. President, will the Senator from Massachusetts yield?

Mr. KENNEDY. I am glad to yield to my good friend from Michigan.

Mr. HART. Mr. President, I rise not only to thank the Senator from Massachusetts for a speech that is cogent, persuasive, thoughtful, and balanced in its presentation, but I rise also to thank him for the many hours he has given to developing a broader understanding of the proposed ABM, its doubtful effectiveness, its assured cost, and its threat to successful arms control negotiations.

For many months the Senator from Massachusetts has been perhaps the one most effective Senator in encouraging the scholarly community of this country, those who have the technical understanding which none of us can approach, to come here and counsel with us, both in private discussions and in open sessions. It has been his invitation to which many of those distinguished American scholars have responded. It is largely as a result of the patient willingness on the part of these distinguished American scientists that has enabled us this year to be more comfortable in our belief that we do more fully appreciate and evaluate all the elements involved than was the case when the Senate confronted the ABM issue last year.

Senator KENNEDY's reasoned speech and its balance are a hallmark of his entire distinguished career in this body. The publication of the scientific papers that were assembled at the request and under the counsel of the Senator from Massachusetts are now in paperback form. Encouraging such publication reflects the understanding of the Senator from Massachusetts that, indeed as he said, the decision we take tomorrow will affect enormously the kind of world our children will have.

It would have been a less promising world had we not, largely with the help of the public, rescued ourselves from the decision to deploy the ABM system labeled "Sentinel" last year.

With him, I believe that it will be a better world if we avoid deploying the ABM system labeled "Safeguard" this year.

If that decision is made, it will be in very large part a consequence of the thought, energy and counsel of the Senator from Massachusetts.

Mr. MANSFIELD. Mr. President, will the Senator from Massachusetts yield?

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Mr. KENNEDY. It is always a pleasure to yield to the distinguished majority leader.

Mr. MANSFIELD. Mr. President, I must apologize for being delayed, but there was some official business I had to attend to. I did, however, have a chance to read the speech of my distinguished colleague, the assistant majority leader, and I want him to know that I join the distinguished Senator from Michigan (Mr. HART) by adding my commendation to the Senator for the work he did initially, not only this year but also last, and for the impetus which he gave to this issue and for the breadth of knowledge which he made available to the Senate. I assure him that, as always, he is rendering a great public service which will redound to the benefit of this body and to the country as a whole.

His well thought out, closely reasoned, and wholly logical proposal, in conjunction with the remarks made today by the distinguished Senator from Alaska (Mr. GRAVEL), has resulted in two of the finest contributions which have been made in this Chamber during this most important debate on one of the most important subjects to have come before this body during this decade.

Again to the Senator, my thanks and appreciation for a job well done and a presentation well made.

Mr. MUSKIE. Mr. President, will the Senator yield?

Mr. KENNEDY. I yield to the Senator from Maine.

Mr. MUSKIE. I would like to express my regret that I was not on the floor to hear all the Senator's presentation. I have had an opportunity to examine it, and it is consistent with the high quality of leadership that the Senator has shown on this issue over the past month. I like especially his choice of the seven implications to analyze the meaning of this debate and the issues which it involves. I am sorry I was not on the floor to get the full impression of what the Senator had to say. I compliment him.

Mr. COOPER. Mr. President, will the Senator yield?

Mr. KENNEDY. I yield to the Senator from Kentucky.

Mr. COOPER. I wish to compliment the Senator on his statement. I agree with the Senator from Michigan that the debate on the ABM issue has been a process of education. All of us in the Senate have been required to educate ourselves on this question and to provide information to the country, and we have had to learn a great deal. The initiative taken by the Senator from Massachusetts in calling to our help and that of the public the knowledge of a great number of noted scientists, those without predisposition or bias, in my judgment, it was a service of incalculable value to the Congress and the country, for which we thank the Senator from Massachusetts, Senator KENNEDY.

Mr. SYMINGTON. Mr. President, will the Senator yield?

Mr. KENNEDY. I yield to the Senator from Missouri.

Mr. SYMINGTON. I join my colleagues in congratulating the assistant majority leader for an excellent talk. The Senator points out that the Soviets could easily

neutralize any addition in defense which came from Safeguard, and that is one of the more important aspects of the criticism of this system that has never been answered.

In recent hearings, when it was shown to my mind conclusively that a relatively slight addition in the production of the new Soviet SS-9 missile—a type we abandoned years ago as not being the right type or character of missile—would neutralize any effective defense provided by the deployment of Safeguard the Defense Department fell back into the question of cost.

It is very difficult for me to understand what, in dollars the SS-9 missile would cost the Soviet Union. More on that later. In any case I am glad the able Senator brought this out and congratulate him on his presentation.

The PRESIDING OFFICER. The time of the Senator has expired.

Mr. HART. Mr. President, I yield 2 additional minutes to the Senator from Massachusetts.

Mr. KENNEDY. I thank the Senator from Missouri for his comments. I believe one of the great contributions to this whole debate and discussion was the very important information the Senator from Missouri developed in demonstrating what would be necessary to overwhelm the implementation of phase I of the Safeguard system. I know there have been those who have argued that all we would have to really do is expand phase I into phase II, phase III, or phase IV. There were those who suggested this expansion in response to the arguments raised by the Senator from Missouri. What we were talking about then was not the thin system, which has been debated; but a thick system, which increases the magnitude dramatically and increases cost significantly, even above the cost that has been estimated here. The thick system is really a different kettle of fish. So I think the point the Senator from Missouri made in bringing that information into the debate was extremely important in helping resolve this issue in the minds of many Senators.

I think one of the other important contributions the Senator made was with reference to the status of the testing of the Safeguard components themselves, to which I referred in my statement.

Mr. FULBRIGHT. Mr. President, will the Senator yield?

Mr. KENNEDY. I yield to the distinguished chairman of the Foreign Relations Committee.

Mr. FULBRIGHT. I want to join in commending the Senator for his statement, which I have just had a chance to read. I am sorry I was not able to be on the floor. There is one point I wanted to mention again, which is like the point made by the Senator from Missouri: I noted in the newspapers recently that Mr. Kissinger, one of the President's principal advisers, was reported to have said that even if the ABM did not work, it would be worth it because the Russians would not know it did not work.

The PRESIDING OFFICER. The time of the Senator has expired.

Mr. HART. Mr. President, I yield 2 minutes.

Mr. FULBRIGHT. Therefore the Russians would have to do all their planning on the assumption that it would work.

This may be a very good assumption in an academic atmosphere, but the Russians have experimented with the ABM. They started to install a system and then quit deploying it. They did so because they believed that, in the present state of the art, it would not work. So we are not kidding anybody. The Russians are not fools. They would know it did not work. So the idea of going ahead with it on the theory that, even though we knew it would not work, they would not know about it, and they would spend all their money trying to overcome it, does not make sense.

It seems to me that in considering the question of whether it will work, or whether it will not work, or the various difficulties it has, or will encounter, there has always been the assumption that it does not matter what it would cost. We seem to feel that in the realm of defense it would somehow be unpatriotic to raise the question of cost.

I do not agree with that, especially when we consider the fact that the President spent a great amount of time in promoting extension of the surtax. In other words, the importance of the financial condition of the country and approving the surtax indicate the administration's concern with inflation. We already have inflation. We have a very serious financial condition. Therefore, I do not think we should ignore the question of cost.

Does not the Senator agree that if we proceed to give the President authority tomorrow, if the vote is to authorize the ABM, the decision will be made and there will be no turning back on it?

The PRESIDING OFFICER. The time of the Senator has expired.

Mr. HART. Mr. President, I yield 1 additional minute.

Mr. FULBRIGHT. It seems to me, having had such a serious debate about it, and having won the vote, we will be committed indefinitely and at incalculable cost, which would be anywhere from \$10 to \$50 or \$75 billion, to proceed. Does not the Senator agree with that?

Mr. KENNEDY. I agree with the comments made by the distinguished Senator from Arkansas. I would say that this is indeed a watershed in the decision made by the Senate in confronting this issue.

Second, I agree with the Senator completely about the openendedness of the whole deployment of the system, not only in the potential of the increased cost of the weapons system, as we have seen in recent times with respect to overruns and all the rest—

The PRESIDING OFFICER. The time of the Senator has expired.

Mr. HART. I yield 1 additional minute.

Mr. KENNEDY. But I think, as I mentioned to the distinguished Senator from Missouri, in response to the materials which he brought to this debate, it would take a relatively short period of time for the Soviets to overcome phase I of the Safeguard system. The proponents of the system have said all we would have to do is build more—phase II, phase III, and phase IV. What we are getting into is an additional cost of tens of billions of dol-

lars, if we follow that logic to its legitimate end. The Senator has stated it accurately. I am in agreement with that observation. I think it is a most important one.

Mr. YARBOROUGH. Mr. President, will the Senator yield?

Mr. KENNEDY, I yield.

Mr. YARBOROUGH. I would like to associate myself with the remarks of the majority leader and his comments on the work of the assistant majority leader in the months of the debate that has been going on.

The PRESIDING OFFICER. The time of the Senator has expired.

Mr. HART. Mr. President, I yield 1 minute.

Mr. YARBOROUGH. And the knowledgeable people he has brought to Washington and the meetings that have been held and all the important work he has done. In addition to being the assistant majority leader, he has done much work off the floor to see that that information was obtained and that discussions were had in order to enable Senators to make up their minds on this question.

I compliment the Senator not merely for what he has said, and not merely for his work as assistant majority leader, but for the months of dedicated work he has done on and off this floor in connection with this crucial issue.

Mr. KENNEDY. I thank the Senator for his kind remarks.

Mr. MAGNUSON. Mr. President, I have decided to vote for \$760,000,000 for continued research and development of the missile defense concept. I will not vote, however, to deploy the antiballistic missile at this time. I am even somewhat reluctant to support this huge sum for research, because the great mass of scientific opinion on the ABM casts grave doubt on the likelihood that it will ever become a workable defense system.

As one Member of this body, and as a member of the Defense Appropriations Subcommittee, I have conscientiously examined the testimony, the reports, and all the technical data available to me on the subject of the ABM.

On the basis of that evidence, it is obvious to me that public debate has tended to obscure the real issue with which the Senate is faced. That issue is not whether America should be protected: we all agree that it should. The real issue is whether or not the ABM system, as proposed, would in fact add to that protection; if so, at what cost, and with what advantages over alternative defense programs.

The testimony I have heard, in scores of open and closed sessions of the Senate, suggests that the ABM may never work. Further intelligence indicates that even if ABM can be perfected technologically, it may not provide true defense against the weapons of tomorrow. In addition, the very Minuteman ICBM's the proposed system is designed to protect may themselves be an obsolete part of our nuclear arsenal within a few years.

These factors make it necessary to question this particular proposal, but this is not to question the value of defense. The decision to commit the already overburdened taxpayer to a multi-billion-

dollar weapons system is one we should not make hastily, particularly when that system may not provide defense at all. The cost of deployment, with its inevitable overruns amounting to billions, is too high a price for the illusion of defense without the substance.

We all want to provide America with the best defense system possible. To this end, I have voted for \$976 billion in defense spending since World War II—and there will be more to come. In that tradition, and in the desire to give America the benefit of every possible defense, I am willing to go the extra mile and approve this huge sum for research and development of the ABM concept. I hope this money will not be wasted, but if it is, it will still be a fraction of what we might have wasted on premature deployment of this proposal.

The alternative is to blindly buy an untested system, a weapon in search of a mission; to accept, from "A" to "Z," every proposal the Pentagon puts forth. But this alternative does not provide defense, nor is it my idea of how best to represent the people.

Deployment is a commitment that is sure to cost billions. It is a commitment to a weapon whose reliability is presently uncertain; a commitment to a weapon that might easily become the most expensive piece of ineffective military hardware in history. Let us face the facts: weapons system failure is a common occurrence in the history of the Pentagon.

What exactly is the system we are discussing? The very name—"Safeguard"—may prove to be the greatest misnomer in recent years. For there is neither the plan nor the expectation that this system, even if proven, could protect our cities. That was the task set last year for the Sentinel ABM system—a task the Pentagon finally abandoned, and a task that is presently impossible, for this year the military freely admits that there is no known method of defending a city from massive nuclear attack. Even before that fact was conceded, however, many people in the cities to be "protected"—and my hometown of Seattle was one—indicated they did not want an ABM for a neighbor.

Faced with the end of the Sentinel project, the military has retreated to the present alternative, whose alleged purpose is to protect a small number of Minuteman sites around the country. The theory behind this proposal is that if some of our Minutemen survive a nuclear attack, and can be fired in retaliation, the initial attack might never take place at all.

This might work—provided that the ABM's computer, its complex radars, and both its missile systems worked flawlessly. It is this last point—whether or not it has demonstrated the potential to perform reliably—that raises such persistent doubts in the minds of able Americans, in and out of Congress. The ABM may prove workable, after further research and development, but its projected performance simply does not justify its deployment now.

Some people have argued that even if the system doesn't work, the Senate

must vote to deploy it in order not to undermine the President's prestige in the coming arms talks with the Soviet Union. This theory is based on assumptions that are tenuous at best.

The Soviets will negotiate on arms settlements when it serves their political interests to do so—regardless of whether we deploy the ABM. That is their style; that is the way they do business with the West.

If any weapons will affect the Soviet's willingness to talk, it is our offensive ones that will do so. These we have perfected; these alone present a threat to which the Soviets might respond. Minuteman missiles, Polaris, and Poseidon submarines, perhaps even new manned or nuclear-powered bombers—these are weapons over which the Soviets might wish to negotiate. There is nothing very compelling to negotiate over a defensive missile system that may not even work.

These are the realities of nuclear strategy—whether or not the Pentagon admits it—and these are the realities upon which the President does not appear to have been objectively advised.

These are my honest doubts about the system we are debating, yet even with these doubts, I am not abandoning the ABM. I have stated that I will vote to give it a reasonable chance, a chance to prove itself through the research and development process. This is a process that is continuing: just this week, the Senate Defense Appropriations Subcommittee, of which I am a member, approved an \$80,000,000 extension of a contract for the development of improved missile defense system technology.

By deferring a deployment decision on the ABM until it is better developed, we do not jeopardize our security. We simply acknowledge that the ABM does not appear to be proper at this time.

Although America has a great many capabilities, the overburdened taxpayer cannot afford poor investments. A "no think" policy toward military spending—the type of policy that produced the TFX, nerve gas, the main battle tank, the C-5A, and countless others—will prevent us from solving both our military and our domestic problems.

Much of what I have said had already been said by others. I have come to my conclusion as a result of long hearings, discussions, questions of and answers from all kinds of people in the military field and the scientific and technological field. Members of the Senate and the House of Representatives, and members of the committee; and from discussing at some great length with many able Americans both in and out of Congress the matter before us.

Just as we must reexamine our military spending, we must take a new look at the strategic considerations to which that spending should be geared. We must not lull the American people into thinking that this system can defend them against the terrible threat of nuclear war.

We must convince ourselves, as well as our adversaries, that the only way to defend against a nuclear war is to prevent it: the only way to win a nuclear war is not to fight it.

August 5, 1969

CONGRESSIONAL RECORD — SENATE

S 9201

The PRESIDING OFFICER. Who yields time?

Mr. HART. I yield 10 minutes to the Senator from Texas.

Mr. YARBOROUGH. Mr. President, no one can deny that the issue confronting the Senate today is one of the most important of these Vietnam war years. For what faces us is not only a matter of preparation for war but also a matter of national priorities. This is another big war expense, piled on top of the Vietnam war which is now costing about \$36 billion a year.

The clear lesson of the past 5 years is that this Nation cannot afford to squander exorbitant sums for weaponry to be used helter-skelter all over this world, and at the same time address its attention to the rising needs of health, education, employment training, and other domestic needs. We cannot engage in this exorbitant squandering of our resources, and escape the highest interest rates in history, high taxes, and runaway inflation. Our economy cannot stand the reckless spending; our taxpayers are getting too wise to swallow it any longer. So we must choose now where we will place the greatest emphasis—on continued, wasteful, unrestricted, wild military adventures, or on the search for more effective solutions to our many problems here at home.

Of course, this is not an either/or matter; no rational man would advocate abandoning an adequate national defense. But as demands on our financial resources grow, so must the need carefully to examine each new request for military spending grow, in much the same way as we have been doing with domestic spending in the past. We must distinguish between essentials and non-essentials, between necessities and boondoggling.

The ABM proposal is one matter which should be examined with the greatest care before action is taken on it, because of the scores of billions of dollars it will ultimately cost. We must decide whether this is a billions of dollars boondoggle, or a valuable insurance policy.

From my study since the ABM proposal was made, and as the debate progressed, I have concluded that this is one project which is not necessary.

First, there are grave doubts about the technical feasibility of an antiballistic missile at this time. They have been debated too thoroughly on the floor to require further debate by me, and the Senate has heard of the tremendous technical problems which the ABM system must still surmount if it is to be a workable defensive device. Nothing has been said on the floor of the Senate to change my opinion on this score. This raises the economic question of why spend these billions, when money more wisely spent might obtain a more effective defense?

The ABM accelerates the arms race, without increasing the superiority to our arms. What we build, Russia will build. We now have complete arms superiority over the Russians. They are playing catch-up. If we build a new weapon system, they copy. It is needless proliferation built upon proliferation.

But the matter of gravest concern to me, the one closest to my heart, is the matter of national priorities. The estimated cost of this system since the debate started has already increased from slightly more than \$6 billion to \$11 billion; informed persons estimate the ultimate cost to approximate \$60 billion. Before 1 cent has been approved by Congress or one site has been built, the projected cost has increased by almost \$5 billion. How much higher will these costs go before the system is completed? Furthermore, even the arguments of the ABM proponents give grounds for grave doubts about our future expansion of this system into a hardened, "thick" antimissile system at a ultimately fantastic cost.

What is being talked about, then is no moderate sum. We are talking about a beginning of at least \$11 billion in the next few years. Those who support this proposal should stop and ask themselves how hastily they would want to proceed were this sum being requested for domestic programs and domestic progress. How quickly would they vote for an \$11 billion domestic program to elevate the standard of living in this country? Not very fast, I think, I do not believe in waste. I do not believe in spending vast sums of money for a boondoggle. And I think we need to proceed with the greatest care on this proposal for that very reason.

Furthermore, we are told by this administration that we must cutback in almost every domestic program in the Federal Government—cutback in education, cutback in housing, cutback in economic development, cutback in medicare and medicaid, cutback in health. They have cut the Hill-Burton hospitalization request by 60 percent, or more than half—cutback in child care, cutback in rural programs—cutback, cutback, cutback—cutbacks are being made in all these domestic programs. The reductions in the fiscal year 1970 budget recommended by this administration in April total \$1,211.3 million. Every domestic program has been funded at a level far below its authorization. Why? Because we are told that the money is needed for military spending. The Congress has authorized \$9 billion for education this year, but the administration requests that only \$3.2 billion be appropriated, or about 35 percent of the moneys authorized.

This administration has requested that we spend \$5.2 billion for ammunition to be shot at the Vietnamese, for the fiscal year beginning July 1 of this year. There are an estimated 240,000 North Vietnamese and north Vietcong now in South Vietnam. If we take that 240,000 and divide it into the \$5.2 billion they want for ammunition alone, Mr. President, that is \$21,666.67 for ammunition to shoot at each Vietcong and North Vietnamese soldier, whether they hit him or not. But they ask only \$3.2 billion for elementary and secondary education for the 72 million schoolchildren in America, which is \$44 for each child. They are willing to spend \$44 for education on each American child, and \$21,666.67 to

shoot at each Vietcong or North Vietnamese.

It is time, Mr. President, that we stop to think about what his Nation is doing, what our objectives are, and what should be the course of reason, intelligence, and rationality.

The proposed authorization for the ABM for this fiscal year, they keep saying, is "only \$759.1 million" for this year.

Mr. President, if this sum were deleted and the money applied to other uses, it would be possible from this sum to restore all cuts made in the budgets of OEO, the Department of Agriculture, EDA, HUD, and the Veterans' Administration together, plus \$156.3 million of the cuts made in the HEW budget. And we could do this without raising the total budget 1 cent.

I realize that the Cooper-Hart amendment now under consideration deleted none of the funds authorized in fiscal year 1970. I think the proper place to do this is in the appropriations measure and I hope it will be done at that time. But what the Cooper-Hart amendment does is delay the initiation of this ABM project. It gives us more time—time to evaluate the need for such a system, time to find other means to protect our retaliatory capacity, and hopefully, time to reach a meaningful agreement on arms limitation so that no expenditure of this type will be necessary. My point in reciting these figures is merely to give a graphic example of what this type of expenditure means in terms of domestic programs.

Let us be perfectly clear about what we are talking about here. We are talking about human beings and their hopes, aspirations, and lives. We are talking about children who may not be able to get an education, people who may not be able to build a home or start a business or improve a small farm. We are talking about people who may not be getting adequate health care or enough food to eat.

The administration cut back the loan funds for college students. It cut the funds for work studies in all five programs. We had to enable students to work through college. They cut back last year on the 6,000 fellowships financed 2 years ago. They cut it back to 3,500 fellowships.

The quality of American life is being pulled down to pay for this type of adventure.

We are talking about people not getting adequate health care—about 35 million of them. We are talking about people not getting enough to eat—some 20 million.

That is what is involved. Human beings are involved. Tens of millions are hungry in our country. Tens of millions in our country are without medical care. This is what is involved, not just dollars and cents. And how can we do this to them in good conscience and tell them we are doing it all for a weapons system which is not needed this year, and which might be of dubious worth in the first place?

Furthermore, as many of the opponents of this proposal have pointed out, weapons systems, once deployed, seem to develop a self-sustaining momentum of their own, even when obsolete. Once initiated, they are extremely difficult to dis-

continue, even if they will not do the job. So, knowing this and knowing the demands we will have on our budget in the coming years, why should we start on something potentially as costly as this proposal when there are such grave scientific doubts that it will accomplish the purpose?

The PRESIDING OFFICER. The time of the Senator has expired.

Mr. KENNEDY. Mr. President, I yield an additional 5 minutes to the Senator from Texas.

The PRESIDING OFFICER (Mr. GRAVEL in the chair). The Senator from Texas is recognized for an additional 5 minutes.

Mr. YARBOROUGH. Mr. President, as an example of an area—just one—in which our Nation will face great challenges in the coming years, let me bring to the attention of the Senate what this administration's own U.S. Commissioner of Education, Dr. James E. Allen, Jr., was quoted as saying recently. The New York Times of July 9, 1969, reports that Dr. Allen predicted that by 1980, public spending on education would total \$100 billion annually, "with the Federal Government tripling its share of the cost for elementary and secondary schooling."

Using Dr. Allen's predictions, the Federal expenditure for elementary and secondary education alone will increase from the present \$4 billion per year to \$25 billion in 10 years. This is just an estimate of the Nixon administration. Many education experts say that Dr. Allen is too conservative in his estimate, and predict that the Federal share will increase to 50 percent of the total public outlay on education which would mean a \$50 billion annual Federal outlay by 1980.

We can thrash around in the quagmire of histrionics and rhetoric all we want, but there is no way that we can teeth out the bit placed in our mouth by the educational needs of our children and the other needs of all our people. We have a hard choice to make, and it is time that the chosen representatives of the American people face up to it. All of us would like to be able to tell our constituents that we took no chances at all with our military demands and that we met every military spending proposal presented to us, even proposals the value of which was questionable.

But, the realities of projected Federal revenues, of present inflation and Federal military spending, of the runaway interest rates and of the limits of the tax burdens that can be placed on our people, tell us with candor we cannot escape, that we cannot escape what we cannot continue to finance every demand that comes from the Pentagon and still meet the unyielding obligation we have to our children and their education and to our Nation and its inner welfare. We cannot continue to do both, Mr. President, and we all know it.

We know it from the inflation, high interest rates, the impaired living of the people of our Nation. Talk to them on any street in the country. Talk to them in the ghettos. Talk to the people who are rich in stocks. Talk to them all.

I think we would be wasting our money

were we to spend it on the ABM proposal. We would be spending to protect ourselves from imaginary demons beyond our borders and ignoring the very real enemies—hunger, poverty, ignorance, and physical suffering—here in this Nation that are boiling over in every class of our society. We should reexamine our priorities in this area and stop spending money on exorbitantly expensive unproven, doubtful projects such as the ABM. For this reason, I oppose without any hesitation the ABM deployment provisions of this bill this year.

The Military Establishment says that the ABM is necessary for our safety. But they say that about the War in Vietnam, when I know the war in Vietnam is doing more harm than benefit to this country. When the military leaders are so wrong about Vietnam that a blind man could see it these past years, why should we believe them to be infallible on the ABM? If the ABM is really necessary, let our military leaders close out the unnecessary \$35 billion a year war in Vietnam, and spend that money in a more sensible way.

I no longer believe, as I once did, that the military is wiser than the Congress about the necessity and the limits of military spending. My experience in 12 years in Congress convinces me that Congress is wiser and that Congress must reassert its constitutional power over the purse strings of our country before our economic system collapses from an overweight military burden.

Mr. President, I ask unanimous consent to have printed at this point in the RECORD a telegram under date of August 2, 1969, from a number of my constituents.

There being no objection, the telegram was ordered to be printed in the RECORD, as follows:

AUGUST 2, 1969.

Senator RALPH YARBOROUGH,
U.S. Senate,
Washington, D.C.

We support your opposition to deployment of the "Safeguard" ABM system. We urge you to speak out and vote for the Hart-Cooper amendment to the military procurement authorization bill S.R. 2546. We believe the "Safeguard" ABM system is unworkable and a waste of resources needed for vital domestic needs. We fear that deployment of the ABM will increase the arms race and will not give us any increased national security.

Mrs. Shirley Taylor, Mrs. R. T. Dutton, Groves, Tex.; Rose Durham Port, Neches, Tex.; Rev. Jim Jones, Rev. Robert C. Sneed, Groves, Tex.; Robert Chavey; Hector Ramirez, Fort Arthur, Tex.; Frank Rojas, Phillip Bordages, Brick Logan, Orange, Tex.; James Carter, Mr. and Mrs. George Cowart, Mr. and Mrs. Theo Kresser, Mr. and Mrs. Bobby C. Williams, Mr. and Mrs. C. A. Brink, Mr. and Mrs. W. L. Stertz, Sr., Tim Kidwell, Kurt and Kathleen Schroeder, James Blair, Wayne Sullivan, Larry Albright, Loretta Oliver, Gem Logan, Orange, Tex.; Mr. and Mrs. Jerry Hanks, Nederland, Tex.; Robert Briggs, Duane Force, Bob Heid, Tobe Duhon, Tommy Pitts, Don Humphrey, Ron Platt, and Phil Richey.

Mr. KENNEDY. Mr. President, I yield 4 minutes to the distinguished Senator from Utah.

The PRESIDING OFFICER. The Senator from Utah is recognized for 4 minutes.

Mr. MOSS. Mr. President, as we approach the historic vote set for tomorrow, I want to reaffirm my support of the Hart-Cooper amendment. I recognize the need for continued research and development of an ABM system, but I object to deployment at this time for the following reasons:

First. The technical difficulties involved in establishing an operative, reliable Safeguard system are at present insurmountable, in my opinion. Why should we burden the already overloaded middle-income taxpayer with a Presidential delusion?

The Hindenberg Zeppelin and the unsinkable *Titanic* demonstrated that even with man's best effort and most advanced technology, disaster can still follow. The difference of then and today is that today the disaster would not be localized; instead, the disaster would claim the world.

Second. The spiraling nuclear arms race will be escalated one step closer to holocaust and doom. The U.S. Senate must assume its position of leadership in the world's quest for peace. When our military superiority is as great as it is today, it seems utter folly to pour more taxpayer's money down the never-ending, always-increasing military appropriations drain—a drain, might I remind Senators, that is based on destruction of life and property, as opposed to constructive improvement of quality of life and environment.

Third. Last, and perhaps most important for the survival of the human race, is the false state of security that a questionable Safeguard system would create. In my remarks earlier to the Senate, I discussed the very real threat of defense planners becoming less reluctant to utilize nuclear weapons in their overall defense program. If this were to become the case, the chances of nuclear war occurring approach the absolute. The chances of maintaining the nuclear non-proliferation treaty, with smaller countries becoming more and more acutely aware of the increased dependence of the great powers on nuclear weapons, would become an impossible dream. The chances of a lasting peace based on trust would also be greatly diminished with passage of the ABM Safeguard system.

Mr. President, our country is facing a crisis in trust and confidence perhaps unparalleled in our Nation's history. People are beginning to ask why the Government spends \$85 billion plus a year on defense when the real threat to the common man is right within his own city or State. The threats of crime, poverty, unemployment, and disability—and of air and water pollution—are far more real to the average citizen of the United States than are his awareness and fears of the Russians or the Chinese.

In this new crisis situation we must come up with new answers to the old questions. We simply cannot go along with tradition because it is tradition; we simply cannot approve every military appropriation because it is a military request. We have to demonstrate to the

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citizens of this great Nation, and indeed the world, that we are taking a new direction; that we, as U.S. Senators, are concerned about and are working on how to correct the local threats of crime, poverty, and unemployment.

If we do not begin to work to solve these domestic problems, I am afraid that we, as a nation, are going to become victims to what the 19th century historian McCall predicted would be the reason for the fall of the United States. He foresaw that the United States would not succumb to external invasion but would instead fall to internal subversion caused by discontent and extremism.

The PRESIDING OFFICER. Who yields time?

Mr. TOWER. I yield myself 3 minutes.

Mr. President, there is a very excellent letter in the July issue of Science magazine from David C. Williams of the Space Power Research Division, Sandia Laboratories, Albuquerque, N. Mex.

It is a very devastating attack on the Chayes-Wiesner report, and I would like to read one of the points made, because it is a point we have tried to make over and over again in this debate:

According to the Chayes-Wiesner report, Secretary of Defense Laird's assertions (that the Soviets seek "superiority" or first-strike "counterforce" capability over the United States) are "not based on any intelligence about new weapons systems" but are, instead, merely his reinterpretations of older data that were not previously viewed with much alarm. Actually, of course, new intelligence has come in during the last year, but the key point—evidently overlooked by the report—is that earlier estimates of Soviet intentions optimistically assumed that their extremely rapid missile deployment was only aimed at achieving parity with the United States, not superiority. Unfortunately, in the past year the assumed leveling-off point has been passed, yet Soviet deployment continues unabated. Ergo, it is probable that they seek superiority after all.

Mr. President, I ask unanimous consent to have this letter in its entirety printed at this point in the RECORD.

There being no objection, the letter was ordered to be printed in the RECORD, as follows:

CHAYES-WIESNER REPORT CHALLENGED

The Chayes-Wiesner report (16 May, p. 807) criticizing the Safeguard ABM system is of such questionable quality that some comments must be made. Many of the relevant data are (unfortunately) classified, and arguments based upon such data inevitably degenerate into exchanges of the "So I say—So you say" type. I therefore eschew refutations based upon classified information and restrict myself to some more general comments:

(1) According to the Chayes-Wiesner report, Secretary of Defense Laird's assertions (that the Soviets seek "superiority" or first-strike "counterforce" capability over the United States) are "not based on any intelligence about new weapons systems" but are, instead, merely his reinterpretations of older data that were not previously viewed with much alarm. Actually, of course, new intelligence has come in during the last year, but the key point—evidently overlooked by the report—is that earlier estimates of Soviet intentions optimistically assumed that their extremely rapid missile deployment was only aimed at achieving parity with the United States, not superiority. Unfortunately, in the past year the assumed leveling-off point has been passed, yet Soviet deployment con-

tinues unabated. Ergo, it is probable that they seek superiority after all.

(2) The report asserts that we can afford to delay Safeguard because the Soviets will face a long "lead-time" in developing and deploying any new systems. Actually, the Soviet systems of such concern to Secretary Laird are already developed and even deployed in large numbers. That lead-time is already gone.

(3) I was startled by the recommendation that Safeguard not be deployed because each of its components "is at the extreme of sophistication for its type." Does this mean that the authors would have been more favorably inclined if Safeguard were already obsolete? Its advanced technology undoubtedly will require much time for debugging, especially with respect to integration of its components, which is one more reason for avoiding unnecessary delay in deployment.

(4) It is almost embarrassing to find the F-111 (TFX) listed among alleged Pentagon bloopers. Military men mostly opposed that system; it was passed anyway by civilian "experts" under then Secretary of Defense McNamara, during the Kennedy Administration whose science adviser was—remember?—Jerome B. Wiesner.

(5) Many of the report's arguments conflict with each other. For example, it is asserted that: (i) Even China will be able to penetrate the Spartan-only defense of our cities with ease; (ii) Safeguard will escalate the arms race, implying that even the Soviets will so respect the Spartan-only defense that they will fear it represents an attempt to erode their second-strike capability; (iii) the Spartan-plus-Sprint defense of our missiles will not increase the credibility of our second-strike capability, which implies that the Soviets will be so contemptuous of the combined system that they will feel certain they can penetrate it with nearly 100 percent efficiency in a very brief time (anything less will not save them from U.S. retaliation, and Safeguard will have "worked"). Make up your minds, boys: Is Safeguard bad because the Spartan defense won't even work against China or because it might even work against the Soviets; because the U.S.S.R. won't respect the system or because they will?

Though I favor Safeguard deployment, there are unquestionably many technological points that may be legitimately debated. Unfortunately, this hastily compiled report contains enough flaws and inconsistencies, many obvious even to intelligent laymen, that it is apt to damage the credibility of the scientific community more than it will damage the credibility of Safeguard.

DAVID C. WILLIAMS,

Space Power Research Division, Sandia Laboratories, Albuquerque, N. Mex.

Mr. COOPER. I suggest the absence of a quorum.

Mr. TOWER. Mr. President, I ask unanimous consent that the time consumed by the quorum call requested by the Senator from Kentucky be charged to neither side.

The PRESIDING OFFICER (Mr. MONDALE in the chair). Is there objection to the request of the Senator from Texas? The Chair hears none, and it is so ordered.

The clerk will call the roll.

The bill clerk proceeded to call the roll.

Mr. COOPER. Mr. President, I ask unanimous consent that the order for the quorum call be rescinded.

The PRESIDING OFFICER. Without objection, it is so ordered.

Who yields time?

Mr. COOPER. Mr. President, I yield 20 minutes to the Senator from New York.

The PRESIDING OFFICER. The Senator from New York is recognized for 20 minutes.

SAFEGUARD: THE TONKIN GULF OF THE NUCLEAR ARMS RACE

Mr. JAVITS. Mr. President, in these closing hours of debate on the ABM, I wish to raise an issue which I believe goes deeply to the experience of the Senate and the Nation within the past few years. It relates to the significance of our vote on the ABM in terms of future of governmental policy.

One of the great adages in Washington is that it is not enough to say so; we have to prove it either by action or by vote. That goes for politics and policies as well. The significance of the vote on Safeguard is that it could restore or begin to restore the authority of Congress with respect to foreign policy and military policy. Such authority is vested in the Congress by the Constitution but—as was brought out in the debate on the national commitments resolution—it has not been exercised in a significant way in recent years.

The Gulf of Tonkin resolution is a dramatic example.

It is interesting, indeed ironic, that the man in whom it awoke the greatest feeling that Congress was surrendering its power was the manager on the floor of the Senate of the Gulf of Tonkin resolution; namely, our very distinguished chairman of the Committee on Foreign Relations himself, the Senator from Arkansas (Mr. FULBRIGHT).

Mr. President, I see in the ABM vote a watershed in this regard. In my judgment, if we do successfully oppose deployment of ABM, then we will have gone far toward reasserting our constitutional prerogatives and responsibilities in the national security field.

Mr. President, that is the thesis which I should like to lay before the Senate. It is uniquely a Senate issue which will be here decided, precisely because it is so close, precisely because the scientific evidence is so contradictory that we must consider the ultimate effect upon Government policy of what we will be here deciding.

Interestingly enough, Mr. President, I am coming to the conclusion that it may not make so much difference in terms of what actually happens, whether we win or lose, because I have a hunch much the same thing is likely to happen in the end. I doubt very much that this weapon can be deployed even within the period the administration is talking about. We may come out at exactly the same place so far as this weapon is concerned whether the vote is 51 to 59 or 49 to 51 the other way.

What is very important is that we should recapture our constitutional prerogatives.

The eyes of the Nation—indeed of the entire world—are focused on the Senate this week. Tomorrow's vote on the Cooper-Hart amendment will be the "moment of truth" which decides whether or not this Nation can make a concerted effort to freeze the nuclear arms race. I agree with President Nixon when he said:

The choice will affect far more than our foreign policy; it will determine the quality of our lives.

What we decide will indeed have far-reaching consequences.

In his Air Force Academy speech, the President characterized opponents of the ABM program as "new isolationists" and said our objective was "unilateral disarmament."

He said: "I hold a totally different view of the world," and he ruled out compromise in the following language:

When great questions are posed, fundamental differences of opinion come into focus. It serves no purpose to gloss over these differences or to try to pretend that they are mere matters of degree.

The attitude of the President, together with the testimony of Secretary Laird and others, suggest strongly that the Safeguard ABM proposal may well be to the nuclear arms race what the Tonkin Gulf Resolution was to Vietnam. If the Senate acquiesces in the administration's decision to proceed with immediate ABM deployment, we must expect that the Nation and the world will accept Wednesday's vote as a determination that the nuclear arms world will be escalated—bid up—and that the likelihood, of at least, a freeze on strategic nuclear arms as a result of the SALT talks is considerably reduced. This is the way the then-President and the world took the import of the Tonkin Gulf Resolution as to combat involvement of U.S. troops in Vietnam.

The President has stated his position very clearly. In his Air Force speech he said:

The question, I submit, in defense spending is a very simple one: "How much is necessary?" The President of the United States is the man charged with making that judgment.

Moreover, the President has made it clear how he sees it between competing domestic and military priorities:

The aggressors of this world are not going to give the United States a period of grace in which to put our domestic house in order . . .

In my judgment, the Senate cannot accept the exclusive authority of the President to decide on the Nation's priorities and its military budget. In fact, article I, section VIII of the Constitution gives exclusive authority to the Congress "to raise and support armies, to provide and maintain a navy, to make rules for the Government and regulation of the land and naval forces."

An important constitutional question thus has been posed. I do not believe the Senate can duck this question.

It would be well for us to remember Secretary Katzenbach's assertion in 1967 that the Tonkin Gulf resolution was a "functional declaration of war." I do not think any of us felt that way when we voted for the Tonkin Gulf resolution, but later we seem to have had no effective answer to Mr. Katzenbach's assertion on behalf of the Johnson administration.

President Johnson and Secretary Rusk felt just as strongly about the Vietnam war as President Nixon and Secretary Laird feel about the Safeguard ABM. But the attempt of the Johnson administration to subordinate urgent domestic civilian needs to the insatiable budgetary demands of the Vietnam war produced

the gravest kind of domestic strains and strife, and caused the political destruction of the Johnson administration.

The apparent determination of the administration to cross the Rubicon of ABM and MIRV would make an escalation of the nuclear arms race inevitable unless checked by the Senate. In my judgment, it is essential that we defer the crossing of that Rubicon until a thorough effort has been made to negotiate a strategic arms limitation agreement in the SALT talks. We have it in our power—the power of the purse—to do this. It is a power which, in all prudence, we must exercise.

The danger of heedless escalation of the nuclear arms race is a very real one despite the efforts of Safeguard proponents to minimize this aspect of the debate.

Already there is some claim that the reasons for immediate ABM deployment given by Secretary Laird are having a detrimental effect on the commencement of the SALT talks. According to an article in the Washington Post of August 3, the position in Senate testimony by Secretary Laird "may have been seized upon by the Moscow hawks to demand a new review and a delay in the talks."

As much as we all hope that this report proves to be wrong, it is ironic that this very possibility was foreshadowed in the recent pro-ABM study produced by the Hudson Institute. This book, entitled "Why ABM?" has been widely touted by administration supporters as the reply to the anti-ABM study edited by Weisner and Chayes.

It states:

The testimony of Secretary Laird . . . contributed rather significantly to the crystallization of the critical attitudes of the Soviet commentators.

The author concluded:

Secretary Laird chose to invoke the imminent threat posed by alleged Soviet first strike intentions. . . . Hence the way the American Administration chose to argue its case for BMD tended to produce Soviet concerns lest the BMD decisions be used as a vehicle for expanding the strategic arms competition.

The alleged Soviet "first strike" threat, which Secretary Laird leaned on so heavily, was a red herring from the beginning. Even Secretary Laird has more or less backed away from that position now, after being confronted in the Foreign Relations Committee with the intelligence estimates of the CIA. But some damage may have already been done to the SALT negotiations.

The Pentagon's own testimony on "the Status of U.S. Strategic Power," just a year ago before Senator STENNIS' Preparedness Investigating Subcommittee, is sharply contrary to the Soviet "first strike" case which has been used by Secretary Laird.

The technological lead of the United States is unquestioned—and today should be even more so following the Apollo moon landing. Still, according to General Wheeler, the Chairman of the Joint Chiefs of Staff, an American "first strike" capability is not possible. His reasoning is significant:

It is literally impossible to buy sufficient forces at the present level of the art to de-

stroy the enemy strike capability before it is launched . . .

During these same hearings on the status of U.S. strategic power, Dr. John Foster, Director of Defense Research and Engineering, presented a very confident picture of our strategic posture and described the so-called action/reaction cycle in a way which may be very pertinent to the decision before us. He said:

So, in each case it seems to me, the Soviet Union is following the U.S. lead and that the United States is not reacting to the Soviet actions. Our current efforts to get a MIRV capability on our missiles is not reacting to a Soviet capability so much as it is moving ahead again to make sure, that whatever they do of the possible things that we imagine they might do, we will be prepared! . . .

And, as I see no reason to doubt Dr. Foster's statements, then we must conclude that the United States is in a position of sufficiently comfortable security to enter the SALT negotiations before crossing the ABM and MIRV thresholds. These two weapons systems represent a next generation of weapons, so to speak, and if we cross that threshold even before we give the SALT talks a chance, we will automatically escalate the arms race because the Soviets will inevitably follow our lead.

Our military planners seem determined to get ABM and MIRV in under the wire before any moratoria can be worked out. Probably they view this as a prudent holding operation against possible failure of the SALT negotiations. But in terms of prudence it seems to me to be dubious and fallacious.

There has been a big effort in this debate to minimize the question of costs. In my judgment, it would be unwise for Senators to kid themselves in this way. The issue is not the \$759 million in this bill—it is the probably hundreds of billions of dollars which the next round of the nuclear arms race will cost if we do not succeed in heading it off through negotiations.

The administration's approach to the SALT talks must not be the routine approach of the past. Such an attitude would be inadequate to the security needs of our Nation and to the historic opportunity before us to achieve a breakthrough in the limitation and control of nuclear weapons.

The old proverb that an ounce of prevention is worth a pound of cure is especially true as it applies to the nuclear arms race. If we can achieve a stabilization of the strategic arms race at present levels we will certainly have achieved far more in terms of national security than if we challenge the Soviets to a staggering new round of nuclear weapons systems by deploying Safeguard. That race can only end in bankruptcy or nuclear holocaust.

Several theories on the relationship of ABM to the SALT talks have been put forward by the administration. One theory is that Safeguard would have no effect on the SALT negotiations. Another theory is that we need Safeguard as a "bargaining chip" in the negotiations. Now a new theory—the strangest of all—is beginning to emerge. According to this theory, it would help negotiations if both sides have an anti-Chinese ABM. No-

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body has yet explained how an ABM system can be programed to work against only one nationality of missiles.

Implicit in this latest theory on ABM is an assumption that it is in the U.S. interest to side with the Soviet Union in its increasingly bitter dispute with Communist China. A recent article in the New York Times by Harrison Salisbury predicts an imminent possibility of large-scale war between Russia and China. I do not believe that the American people are convinced at this stage that the United States should be committed to the U.S.S.R. in some tacit defense arrangement nor have we the remotest notion of either the U.S.S.R. or the world's attitude on such a major move.

However, the worsening conflict between Russia and China does, in my judgment, have some direct bearing on the SALT negotiations. It indicates that the overall strategic balance is deteriorating from the Soviet viewpoint. The increased prospects for European unity, and the possibility of a joint European nuclear deterrent now under discussion among our NATO allies, are further indications that the Soviet Union will not be free—as Secretary Laird has postulated—to strive for a first-strike capability against the United States. The U.S.S.R. is going to have substantial strategic worries on both its immediate borders, east and west. To me, this contributes to the logic of making a determined effort now to a nuclear arms-control breakthrough.

In terms of U.S. security, Safeguard is clearly not required at this time. Its deferral, on the other hand, could be the catalyst which moves the search for an arms-control agreement to a new and historic plateau.

The alternative to a nuclear arms-control agreement is grim. At home we would not have the resources to deal in an adequate and human way with the exploding crises of our cities and our rural poor. We would not be able to relieve the anguish of black America—which is not prepared to wait any longer to achieve the benefits of equal citizenship. And, by sharpening the alienation of the younger people through the continued distortion of national priorities, we invite a massive repudiation of the whole system of life we have created when authority inevitably passes to the next generation.

Mr. FULBRIGHT. Mr. President, will the Senator from New York yield to me?

Mr. JAVITS. I am glad to yield.

Mr. FULBRIGHT. Mr. President, the Senator from New York made a few remarks which are of special interest to me. I agree with his analysis of the effect of the Gulf of Tonkin resolution and the hearings which the Committee on Foreign Relations held on that resolution. They certainly made a great impression upon me. I think his analysis as to the significance of that is exactly correct.

I disagree with him on the proposition that if the vote goes either way on the pending issue by one or two votes, there may not be very much difference as to its ultimate deployment. It may make a great deal of difference in terms of

money. I would hate to see \$10 billion thrown away on a gimmick, when there is no difference in the end. There should be a difference that will be worth our while.

Before the Senator from New York came into the Chamber, I alluded to a statement made by Mr. Kissinger, at least as reported in the newspapers, that it would not make much difference whether the ABM worked or not, the Russians would not know it and therefore they would have to plan on the basis that it will work. The Russians are not stupid. They have tried to develop an ABM. They cannot make it work. They quit deploying it.

We just passed a tax bill to get enough taxes to stem inflation, so that the question of money is important. I would, therefore, only disagree with the Senator in saying that there is no use throwing away \$10 billion.

Mr. JAVITS. I thoroughly agree with that.

Mr. FULBRIGHT. Now, the other point, as to the role of the Senate, is the important one. As a matter of fact, by coincidence, my own remarks will be devoted substantially to that, because I share the Senator's feeling.

Mr. JAVITS. I am highly honored.

Mr. FULBRIGHT. I think the Senate is in a position for the first time in 25 years, as a body, as the Senate—I am not talking about a committee—where it can make a serious challenge to a major weapons system or any major program involving the Defense Department. If we should lose this vote, I am afraid it will create the impression that the military establishment is simply too strong to be controlled by the Congress or the Senate. That would be unfortunate.

Mr. JAVITS. That is right. It would be unfortunate especially in the thinking of the Pentagon and in the way in which it swings its weight around. It would be the most salutary thing in the world if they were impressed by our power for a change.

Mr. FULBRIGHT. The Senator is correct. When we recall the role of the Senate on the C-5A and the new tank and the helicopter—which has been, fortunately, abandoned now—and when we remember the amounts of money that were spent on them and upon a number of other weapons systems, as described by Bernard Nossiter in the Washington Post a few weeks ago, a negative vote on this issue would have a salutary effect on the Pentagon. The Pentagon would be a little more careful about dispensing public funds.

Mr. JAVITS. And the Pentagon would know that somebody is really looking over their shoulder.

Mr. FULBRIGHT. And is interested.

I want to emphasize one point, because on several occasions serious consideration was given to how we could discourage continuation of the war by cutting appropriations. We always came to the conclusion that, because of the danger to the men in the field, because of the emotional factors associated with the conduct of the war, we simply could not take that route.

When we finally get down to it, this

is about the only really effective power Congress has—that is, the power of the purse. We can talk, we can give advice, we can do all of that sort of thing, but they do not have to abide by it. The only thing they can abide by is this power. That is why the point the Senator has made is a very important one.

Mr. MILLER. Mr. President, will the Senator yield?

Mr. JAVITS. I yield.

Mr. MILLER. In his statement the Senator referred to immediate deployment. Did he not?

Mr. JAVITS. Yes.

Mr. MILLER. It is my understanding there will not be immediate deployment and that it has been estimated officially that the earliest there could be any deployment would be about in 1973 or 1974. That does not seem to square with the immediate deployment concept the Senator has referred to.

Mr. JAVITS. The decision we are taking is the decision to deploy, and great nations do not bluff. If the Senate of the United States votes to deploy, then there is going to be deployment. We cannot assume there is not going to be, and we cannot be misled and put into that dead-end street or booby trap by the statement, "Well, we really may not deploy, though you are authorizing." That is precisely what the Senator from Arkansas (Mr. FULBRIGHT) argued on the Tonkin Gulf resolution. He answered question after question. He said, "This does not mean we will have extensive ground forces involved in Vietnam." He meant it in good faith. It is one of the reasons why he was so deeply hurt by the abuse of the good faith and trust he asked the Senate to put in it.

That would be precisely what we would face in this situation if we were ever taken in by the argument that "Well, fellows, don't worry about it, just give us the authority; we really may not do it."

Mr. MILLER. Would the Senator not recognize that if the Senate made the decision to authorize the President to proceed with long lead time procurement, which could not, before 1973 or 1974, result in deployment, that in 1970, 1971, and 1972, the Senate would have the power to say, "No further work on this, because we do not think it is necessary"? Does not the Senator realize that Congress has that power?

Mr. JAVITS. The Senator says quite properly that Congress would have the power, but it had the power to cut off appropriations for ground combat in Vietnam. The answer is that once a great nation, by a vote of its Senate, commits itself to a certain course, it is very difficult to change it. We may ourselves vote against it thereafter, just as we sought to stay our hand in cutting off appropriations for ground forces in Vietnam. Then, other forces come into play.

The point is that if we are right, we are right now, just as right as we will be after we have spent another \$1 billion, or \$2 or \$3 billion, or \$5 billion. We say we are right now. That is our argument before the Senate, the country, and the world.

I yield to the Senator from Michigan.

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Mr. HART. Mr. President, I ask the acting manager of those in opposition to the amendment if he would be willing to charge the time consumed in colloquy to the opponents of the amendment.

Mr. DOMINICK. Mr. President, I will take the time the Senator from Iowa uses from our time, but not that of the Senator from New York.

Mr. JAVITS. No; that is fine.

Mr. HART. That is all I ask.

Mr. DOMINICK. I yield 5 minutes to the Senator from Iowa.

The PRESIDING OFFICER. The Senator is advised that the time cannot be divided in that manner.

Mr. HART. Would it not be possible that an agreement, assuming the opponents of the amendment concur, could be arrived at that will charge 5 minutes to the opponents of the amendment, of the time consumed in the discussion?

The PRESIDING OFFICER. The Senator's question is answered in the affirmative.

Mr. HART. Then I ask unanimous consent that that occur, if that is agreeable to the Senator from Colorado.

Mr. ERVIN. I object.

The PRESIDING OFFICER. Objection is heard.

Mr. MILLER. Mr. President, it seems to me that there are two answers to the argument of the Senator from New York. The first is that I do not believe there is any comparison between maintaining troops to conduct operations in Vietnam and the renewal of an authorization for continued development and deployment of an ABM system.

There are many people who are opposed to the Vietnam war. In fact, I think there may have been one or two Senators who were opposed to the Tonkin Gulf Resolution originally, who continued to vote for the appropriations, because failure to appropriate money could have caused a considerable loss of American life in Vietnam.

You do not have that situation with an ABM system. It is merely another weapons system. It is about the same thing as authorizing the President to go ahead with long leadtime procurement for the purpose of deploying, for surface testing, a weapons system such as AMSA, an advanced manned strategic aircraft. I do not think this proposal is in the same ball park, at all, as maintaining troops in the field to fight a war.

I think the second answer to the argument of the Senator from New York is that the President of the United States has given Congress his solemn assurance, in his message on this subject, that the entire ABM system will be reviewed periodically, to determine whether we should go forward with it in the light of international developments. I do not think we ever had that assurance on the Tonkin Gulf Resolution. So it seems to me that we have two very essential differences between the ABM deployment authorization now before us and support of troops in Vietnam.

The PRESIDING OFFICER. The Senator's time has expired.

Mr. DOMINICK. Mr. President, I yield 5 minutes to the Senator from New York.

Mr. JAVITS. Mr. President, I will reply to the Senator's statement, and then attempt to complete my remarks.

All the Senator has done, it seems to me, is nicely underline and emphasize my point, because precisely the same points were made in the Tonkin Gulf resolution debate. One point was that it was routine. We were assured that the President did not "need" a resolution to go after those who were attacking us, but it would be a good thing, and very constructive, if Congress backed him up. Congress did.

Then that piece of paper got warm in Lyndon Johnson's pocket as it was flashed on every time he deployed another 100,000 men.

I think in a business like this, we always get to the same point we have in Vietnam, because the enemy reacts. We are not going to deploy this ABM without the Russians reacting. We will never again be in the same strategic position or environment because a deployment decision will inevitably alter the strategic situation as it now exists and will activate the "action/reaction" cycle.

In addition, there is talk about this being an answer to a Chinese missile threat. The only way to make Safeguard meaningful against China is by deploying not two sites, but 12 sites. They admit that.

So, once embarked upon this course, the whole prestige, dignity, and credibility of the country is committed. We will have decided, we will have acted; and it is my judgment that this would lead us in directions, just as in the case of the Tonkin Gulf resolution, which we never anticipated when we passed it.

It seems so innocuous; as the Senator from Iowa stated, it is just a weapons system on which we are going to do a little more experimenting and a little procurement, and nothing is really going to happen.

But when that piece of paper gets into the hands of a President who is deeply convinced that this is what America needs for security, not only against the Soviet Union but against China, then the sky is the limit as far as the use of it is concerned. He will feel perfectly justified, because he says to Senators, "You voted for this. You are all over 21 years old, and should have known what it was you were voting for. If you did not know, Senator JAVITS told you what it meant."

Mr. President, will the Senator yield me 2 more minutes?

The PRESIDING OFFICER. He has no more time.

Mr. MILLER. Will the Senator yield to me for just 1 minute?

Mr. HART. One minute.

Mr. MILLER. Mr. President, I think the Senator is still getting this out of context, because we have involved the difference between a weapons system and fighting a war. I would invite his attention to the fact that just a little over a year ago, against the recommendations of President Johnson and the Defense Department, Congress scrapped the Navy version of the TFX. One could say, following the Senator's argument, that when the TFX was originally authorized by Congress, we committed ourselves to proceed until the very end, and procure all kinds of Navy versions of the TFX.

It was decided by the Senate unani-

mously, in the Armed Services Committee, that we would scrap it, and the same thing can be done in this case.

Mr. JAVITS. May I answer that argument by pointing out that the TFX was nothing the Russians had to react to, whereas this is. This goes to the heart of the strategic struggle between the Russians and ourselves.

Second, Congress scrapped the TFX, if my memory serves me, not less than \$3 to \$5 billion later. That is what we were discussing just before, as the Senator from Arkansas pointed out.

Mr. President, one of the central arguments against the decision to deploy the ABM is precisely because it can be interpreted as an attempt to regain a first strike capability for the United States. This only increases the likelihood of a Soviet reaction, and threatens to make impossible any real agreement to contain the nuclear arms race at roughly present levels and weapons systems in the impending SALT negotiations.

In short, let us take counsel of the portentousness of this decision. Let us not fail to learn from the bitter lesson of the Gulf of Tonkin resolution which should have taught us by now that these decisions do not involve merely routine resolutions. The repercussions could involve thousands upon thousands of lives and, indeed, the fate of mankind.

AMENDMENT NO. 122

Mrs. SMITH. Mr. President, I send to the desk an amendment in the nature of a substitute for the Hart-Cooper amendment No. 101, and ask that it be printed. I shall call this amendment up at the appropriate time tomorrow.

The PRESIDING OFFICER. The amendment will be received and printed, and will lie on the table.

Mr. HART. Mr. President, I yield 20 minutes to the Senator from Arkansas.

The PRESIDING OFFICER. The Senator from Arkansas is recognized for 20 minutes.

Mr. FULBRIGHT. Mr. President, I am very sorry that the time was so short for the Senator from New York. I consider that the emphasis he is putting upon certain aspects of the case are extremely important. To me, they constitute the essentials of the case.

THE ABM IN POLITICAL CONTEXT

As with most of the great questions that come before the Senate, the issues in this ABM debate are broader than the subject officially at hand. Among the questions involved there is first of all the technical question—the workability and practicality of a proposed new weapons system. Then there is the foreign policy question—the probable effects of deployment of the ABM on our relations with the Soviet Union and the prospects for disarmament. Finally, there is the extremely important constitutional question—having to do with whether, how, and to what extent Congress is disposed to exercise its responsibilities under article I, section 8, of the Constitution, which requires Congress, among other things, to "provide for the common defense," "raise and support armies," "provide and maintain a navy," and "make rules for the government and regulation of the land and naval forces."

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The technical questions have been thoroughly discussed by Senators more expert in these matters than I. The only point I would emphasize is that the purely technical questions—whether and how the Russians might acquire the capacity simultaneously to destroy most or all of our Minuteman missiles, strategic bombers, and Polaris-Poseidon submarines, and whether and how that capacity could be denied them by deployment of the Safeguard—are questions which cannot be separated from the largely nontechnical question of intent, that is, whether the Russians actually desire and are actively seeking to acquire the capacity to eliminate our nuclear retaliatory capacity in a preemptive first strike.

The Secretary of Defense has steadfastly asserted that the Soviet Union is going for a "first-strike capability," although he has been less than steadfast in his adherence to any one definition of that term. Numerous experts, with whose testimony most Members of the Senate are now familiar, have contested the Secretary's prediction. Professor Rathjens for one told the Disarmament Subcommittee:

I would not claim that the development by the Soviet Union of such a first-strike capability is impossible, but it is at worst a distant prospect.¹

No one, of course, knows—or can know—for certain whether the Russians actually intend to try to acquire a "first-strike" capability, but we do know what our own capabilities are. On the basis of extensive testimony by leading experts in the field, there is virtually no doubt of our ability—without deployment of the ABM—to counter anything and everything the Soviets might do toward acquiring a first-strike capability. In order to acquire a first-strike capacity, the Soviet Union would have to be able to destroy all three components of our deterrent concurrently, and that, in the view of the experts, is beyond any foreseeable Soviet capability.

Perhaps even more important in this matter of intent is the ability of each side to influence the other by what it does and what it does not do. Even if the Soviets had no interest at all in acquiring a first-strike capability, we could easily arouse such an interest on their part by seeming to be going for a first-strike capacity ourselves. In matters of this kind, the two sides are bound to see a mirror image of each other. The Secretary of Defense cites the possibility that the Soviets may deploy their own extensive ABM system as one basis for his conjecture that they might acquire a first-strike capacity by the mid-1970's. Why would not our ABM arouse the same fears on their part that theirs would arouse on ours? Are they to be reassured by the knowledge that Americans, being good people, would never strike a preemptive blow, while they, being bad peo-

ple, must naturally expect us to guard against them by any and all means available?

Mr. President, in a recent exchange of letters the Secretary of Defense and I summarized our respective views on the ABM. I ask unanimous consent that Secretary Laird's letter to me of July 1 and my reply of July 8 be printed in the RECORD.

There being no objection, the letters were ordered to be printed in the RECORD, as follows:

THE SECRETARY OF DEFENSE,
Washington, D.C., July 1, 1969.

Hon. J. W. FULBRIGHT,
Chairman, Committee on Foreign Relations,
U.S. Senate, Washington, D.C.

DEAR MR. CHAIRMAN: In reviewing the transcript of my testimony before your committee on June 23, 1969, two matters appeared to me to be particularly troublesome from the standpoint of the publication of an unclassified version. The first concerns the wholesale deletion of Mr. Helms' testimony. While I completely agree with the necessity for this action, it does leave the public record incomplete. Since the major purpose of this hearing was to explore whether any differences existed between Mr. Helms and myself or between Department of Defense positions and those taken by the intelligence community, it should be obvious that the deletion of Mr. Helms' testimony from the public version creates certain grave obstacles to a balanced understanding of what transpired. Accordingly, the reader of this record, should be forewarned that no conclusions, one way or the other should be drawn from the printed testimony with regard to the position taken by Mr. Helms on any particular aspect of the intelligence estimates.

The second matter involves, essentially, a problem of semantics. The transcript reflects considerable confusion over such terms as "first-strike weapon," "first-strike capability," and "first-strike intentions." Notwithstanding several hours of intense discussion of these terms before your committee, I fear that a mutual understanding of their meaning will still elude us. This is particularly unfortunate because it is essential that both the Congress and the public understand the character of the threat which led to the President's safeguard proposal. Therefore, I would like to restate the issue in terms that avoid the semantic difficulties which apparently trouble some of the members of your committee when first-strike terminology is used.

As you well know, the strategic nuclear war policy of the United States since the end of World War II has been firmly based on the concept of deterrence. To achieve deterrence we must have what my predecessor Robert McNamara called an assured destruction capability. He defined this term in this last posture statement as follows: " * * * an ability to inflict at all times and under all foreseeable conditions an unacceptable degree of damage upon any single aggressor, or combination of aggressors—even after absorbing a single attack." He went on to say, "One can add many refinements to this basic concept, but the fundamental principle involved is simply this: it is the clear and present ability to destroy the attacker as a viable 20th-century nation and an unwavering will to use these forces in retaliation to a nuclear attack upon ourselves or our allies that provides the deterrent * * *"

Thus the question that presents itself is whether the Soviet Union could achieve by the mid-1970's a sufficient capability, in a surprise attack, to reduce our surviving strategic offensive forces below that critical minimum level required for assured destruction. This, Mr. Chairman, is the crucial issue, because if the Soviets should achieve such a capability, or believe they have achieved such

a capability, our deterrent would be lost and the chances of a global nuclear war greatly increased.

It is my carefully considered judgment, in which all of my principal military and civilian advisors agree, that the Soviet Union could achieve such a capability, or reach a position where they believe they have achieved such a capability, by the mid-1970's—if we do nothing now to offset it. This judgment is based upon the following conclusions:

1. The Soviet Union could acquire a capability to destroy virtually all of our Minuteman missiles. To be able to do so they would need: (a) at least 420 SS-9's with three independently targeted re-entry vehicles which have a capability of separating from one another by some relatively small number of miles; (b) each of these re-entry vehicles would have to have a warhead of approximately 5 megatons and a reasonably good accuracy; (c) the SS-9's would have to be retargetable; and (d) the range would have to be sufficient to reach all of the Minuteman silos. It is my understanding that the technical community and the intelligence community agree that the Soviet Union could have that capability by the mid-1970's.

2. The Soviet Union could acquire a capability to threaten severely the survival of our alert bombers. To do so they would need: (a) a force of about 15 Y-class Polaris-type submarines on station off our shores; and (b) the ability to launch the missiles on a depressed trajectory. It is my understanding that there is not disagreement within the intelligence community that they could have this capability as well by the mid-1970's.

3. Although we confidently expect our Polaris/Poseidon submarines to remain highly survivable through the early to mid-1970's, we cannot preclude the possibility that the Soviet Union in the next few years may devise some weapon, technique or tactic which could critically increase the vulnerability of those submarines. Nor can we preclude the possibility that the Soviet Union might deploy a more extensive and effective ABM defense which could intercept a significant portion of the residual warheads. In any event, I believe it would be far too risky to rely upon only one of the three major elements of our strategic retaliatory forces for our deterrent.

In summary, Mr. Chairman, it is entirely possible that the Soviet Union could achieve by the mid-1970's a capability to reduce, in a surprise attack, our surviving strategic offensive forces below the minimum level required for "assured destruction," and thus gravely weaken our deterrent. In my judgment, the overall strategic balance between the United States and the Soviet Union is much too close to run that risk. Therefore, something more must be done now to insure a favorable strategic balance in the mid-1970's and beyond.

Short of achieving a workable agreement with the Soviet Union on the limitation of strategic armaments, which at best will take some time, we are convinced that the deployment of phase 1 of Safeguard would be the most prudent and economical course we could pursue at this particular juncture. This action would place us in a position to move forward promptly not only with the defense of our Minuteman and bomber forces should the Soviet threat develop as I have described, but also with the defense of our population against the Chinese ICBM threat should that emerge during the next few years.

Mr. Chairman, I believe you will agree that this letter should be made part of the public record and inserted before Director Helms' prepared statement, the text of which cannot, of course, be published.

Sincerely,

MELVIN R. LAIRD.

¹ *Strategic and Foreign Policy Implications of ABM Systems*, Hearings by Subcommittee on International Organization and Disarmament Affairs of the Committee on Foreign Relations, U.S. Senate, 91st Cong., 1st Sess., Pt. I (Washington: U.S. Government Printing Office, 1969), p. 357.

JULY 8, 1969.

HON. MELVIN R. LAIRD,
Secretary of Defense,
Washington, D.C.

DEAR MR. SECRETARY: Thank you for your letter of July 1 regarding the transcript of your testimony before the Committee on Foreign Relations on June 23, 1969. You ask that your letter be made part of the public record and inserted at the beginning of the transcript. I will, of course, accede to your request. I would not, however, want your letter to stand without comment, and so I am also having this response inserted.

In the first paragraph of your letter, you express concern at the possible inferences that could be drawn from the fact that the public record is left incomplete because of "the wholesale deletion of Mr. Helms' testimony." I am sure you remember that originally, you were invited to appear in open session before the Committee on Foreign Relations to discuss your statement of May 22 before a closed session of the Committee on Appropriations of the House of Representatives which was subsequently made public. You took the position that you preferred to come in executive session and that you wished to be accompanied by the Director of the Central Intelligence Agency, Mr. Helms. I acceded to your request.

At the conclusion of our June 23 meeting, when I expressed the hope that it would be possible to release a sanitized version of the transcript of the meeting, you were the first to say that everything Mr. Helms had said would have to be deleted. The deletion of all Mr. Helms' testimony, and of certain portions of your testimony were made by the executive branch and not by the committee. If this procedure has resulted in what you consider to be an "incomplete" record which "creates grave obstacles to a balanced understanding of what transpired," to quote your letter, the responsibility for having brought about this result is surely yours and not mine.

You also say in the first paragraph of your letter that since the major purpose of the hearing was to explore whether any differences existed within the intelligence community, or between the Department of Defense and the intelligence community, you feel that the reader of the record should be warned that no conclusions should be drawn from the printed testimony with regard to the position taken by Mr. Helms on any particular aspect of the intelligence estimates. I would agree that the deletion of Mr. Helms' testimony—and, I should add, of certain portions of your testimony—does create an obstacle to a balanced understanding of what transpired at the meeting on June 23. In fact, as the record now stands it leaves the impression that there have been no disagreements within the intelligence community as far as certain recent developments in Soviet weaponry are concerned. I felt that I had no choice but to agree to the deletions requested by the executive branch on the grounds of national security. But the fact of the matter is that there have been disagreements within the intelligence community on such recent developments, although all the testimony given at our June 23 meeting indicating such disagreements has been deleted from the public record.

As for the second matter you find troublesome, which you refer to as a "problem of semantics," I do not agree with the implication of the statement in your letter that these "semantic difficulties" apparently trouble some of the members of the committee when "first strike terminology" is used. The problem of semantics, as you call it, arose in the course of the June 23 hearing when you were questioned about your statement at a public hearing of the Subcommittee on International Organization and Disarmament Affairs on March 21, that "with the large

tonnage the Soviets have they are going for our missiles and they are going for a first-strike capability." When you were asked on June 23 whether this statement did not mean that you ascribed to the Soviets a desire to achieve a capability to deliver "a knockout blow" against the United States, you denied that you meant to imply that was the Soviet intention and you appeared to redefine "first-strike capability" as meaning, simply, the ability of a weapon to destroy a missile in a hardened site. I think that a reading of even the sanitized transcript shows that semantic difficulties seemed to trouble you at least as much as, if not more than, members of the committee and that the points at issue are far more serious than mere semantics.

Turning to the second and third pages of your letter, you say that you base your judgment that the Soviet Union could achieve a capability to reduce our surviving strategic offensive forces below that critical minimum level required for assured destruction on three conclusions. It strikes me as somewhat simplistic to imply, as you do, that if the Soviet Union continues to build up its strategic offensive forces to the point where they could threaten to reduce our strategic offensive forces below the critical minimum level required, we would not and could not increase our strategic offensive forces. You seem to argue in your letter that the only thing that can be done to offset an increasing Soviet capability to reduce our strategic offensive forces below a "critical minimum" level is to begin deployment of an ABM system to defend Minuteman. For the reasons I have given, I find that argument specious on its face. I also find it questionable on the ground that you seem to take it for granted that the Safeguard system would be able to operate effectively and could do so in the face of a Soviet attack. As you know, questions have been raised by many of the most eminent scientists in this country as to whether the system is far enough along in its development to be deployed or whether further research and development are necessary. Others have raised questions regarding the vulnerability of the radar components. Still other questions have been raised as to whether the system could not be overcome—even when fully deployed—by an increase in Soviet missile strength on the order of only 10 percent. Your letter ignores these questions completely.

The first of your three conclusions is that the Soviet Union could acquire a capability to destroy virtually all of our Minuteman missiles by the mid-1970's if they deployed at least 420 SS-9's with three independently targeted reentry vehicles and if certain other conditions were met with respect to warhead size, accuracy, range, and retargetability. Without recapitulating the technical objections that have been made by experts to this argument, I would simply point out again that your statement assumes that the United States would not deploy additional Minuteman missiles, or other appropriate weapons, if the SS-9 threat continues to develop. Your statement also assumes that the Soviets would not deploy more than 420 SS-9's, or additional smaller missiles to use against radar installations, if they wished to counter the Safeguard system.

The second conclusion is that the Soviet Union could acquire the capability to threaten the survival of our strategic bombers by the mid-1970's providing they have by that time a force of 15 Polaris-type submarines on station and the ability to launch missiles on depressed trajectory. There are, as you know, a number of ways to reduce the threat to our strategic bomber force. One is to disperse bombers, moving more bomber bases inland. A second is to renew the procedure of keeping a certain number of bombers on airborne alert. Finally, while you do not mention the fact, we all know that

strategic bombers can be based abroad, so that Soviet submarines would have to be able to attack these bases as well.

Your third conclusion relates to the time period in which our Polaris/Poseidon submarines will remain effective. You state that "we confidently expect our Polaris/Poseidon submarines to remain highly survivable through the early to mid-1970's." Is it any wonder that the members of the Senate, not to mention the American people, find it difficult to take such a statement at face value when set against the statement made by Deputy Secretary of Defense Packard before the House Armed Services Committee, on April 15, at which time he said: "Based on the data we now have, we expect the Polaris to remain highly survivable until at least the late 1970's." * * * Secretary Chafee, in a recent letter to Senator Gore, said that his views were in accord with Mr. Packard's statement. Other authorities have made similar statements. I note, incidentally, that while you refer to the agreement of the intelligence community with your first two conclusions, you do not mention the views of the intelligence community regarding your third conclusion. You simply refer to what, in your opinion, "cannot be precluded."

You also refer, in your third conclusion, to "the possibility that the Soviet Union might deploy a more extensive and effective ABM defense." * * * Yet you do not mention the steps the Administration is ready to take, whether wisely or unwisely, to counter just such a Soviet development—that is, the conversion to the Poseidon system on our submarines, which will provide us with some 5,000 warheads instead of the 656 we now have, and the plans to fit Minuteman missiles with multiple-independently guided warheads.

I will close with two general comments.

First, by stating separately each of your three conclusions—that is, that the Soviet Union could acquire a capability to destroy virtually all of our missiles, to threaten the survivability of our bombers and to negate the effectiveness of our nuclear submarines—you imply that the Soviet Union could also acquire the capability to destroy all three elements of our deterrent concurrently. Many expert witnesses have pointed out in public Senate hearings that this implication—or perhaps it is an assumption on your part—is unfounded. If all three elements of our deterrent—that is, missiles, bombers and submarines—were not destroyed simultaneously, an attack on one would provide sufficient warning to permit use of at least one of the other two elements. Thus, a Soviet missile attack against our missiles would provide ample time to permit our submarines and bombers to retaliate. Conversely, a Soviet submarine attack on our bombers or our submarines would provide ample warning to permit us to launch our missiles. I will not belabor the point but will add only that, while the intelligence community, or the U.S. Intelligence Board, may agree that the Soviet Union could acquire by some time in the 1970's two of the three capabilities you mention in your letter, they have not agreed that the Soviet Union could destroy all three elements of our nuclear deterrent force simultaneously. Indeed, they have as you know, and as the public record makes clear, never concluded that the Soviets are "going for a first-strike capability."

My second general comment has to do with the assumption, which runs throughout your letter, that the Soviets could achieve certain capabilities in the future and that, before these capabilities are achieved, they must be offset by our development of even greater capabilities. In making this assumption, you ignore the mirror image that the Soviets must see, for on what basis can we assume that the Soviets do not feel about our development of greater weapons capa-

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bilities just as we feel about theirs? Can they assume that we are not intent on being able to pose the same threat to them that the Administration says they could pose to us? You have claimed in your public statements, for example, that Safeguard will be an effective ABM defense able to intercept a significant number of their warheads. Yet you state in your letter, as a justification for your judgment that the Soviet Union could achieve a first-strike capability by the mid-1970's: "Nor can we preclude the possibility that the Soviet Union might deploy a more extensive and effective ABM defense which could intercept a significant portion of the residual warheads." Why would our deployment of an ABM system, which you and your associates claim to be effective, not be interpreted by the Soviets in much the same way?

In sum, Mr. Secretary, I find to return to your phrase, that I too have a "problem of semantics." Mine arises in considering your contention that the deployment of the phase I of the Safeguard system would be "the most prudent and economical course we could pursue at this particular juncture." It strikes me, on the contrary, that the deployment of this dubious new weapons system, virtually certain as it would be to destabilize the present arms balance and to initiate a costly and futile intensification of the arms race, would be the antithesis of prudence, at best wasteful, more probably prodigal, and quite possibly disastrous.

Sincerely yours,

J. W. FULBRIGHT, *Chairman.*

Mr. FULBRIGHT. Mr. President, it is urged that the ABM will be a useful bargaining lever in disarmament negotiations with the Russians. All previous experience shows that, far from facilitating agreement, the introduction of a new weapons system by one side invariably provokes the other side into matching or exceeding it. It was indeed our own apprehension about Soviet antiballistic-missile capacity that gave us the idea of MIRV. Each side tends to assume the worst, planning for what has come to be known as the greater-than-expected threat. When you acquire a new weapons system, you must assume that it may not work as planned while your adversary must assume that it will. The result is the stepping up of the arms race, with mounting danger, skyrocketing costs, and rapidly diminishing security. As a bargaining lever for disarmament, the ABM is likely to be as effective as gasoline shot through a firehose.

A word also seems in order about the cost of deploying the ABM. Taking into account the unrealistically low estimates to which the Pentagon is addicted and the inevitable stepping up of the arms race to which the ABM would surely lead, the ultimate costs are beyond calculation. In addition, as we all know, every new weapons system soon acquires a constituency—a process which is aided and abetted by the perspicacity with which Pentagon officials award lucrative contracts and establish new plants in the districts of influential Members of Congress. I have not the slightest doubt that, if the antiballistic missile is deployed, it will soon acquire its own powerful constituency, and then we will be saddled with it—for reasons wholly independent of its ostensible military utility.

According to current intelligence calculations, made in terms of equivalent real purchasing power, the Russians are spending about three-fourths as much

as we are on defense. Nonetheless, we are told, they threaten to pull ahead of us in strategic weapons and we must be prepared to counter that threat. I do not understand why they should be getting so much more for their money than we are. Perhaps the fault lies in inferior American efficiency—a disconcerting thought. Perhaps it lies in the lack of legislative oversight of the defense budget comparable in rigor and thoroughness to that exercised over the much smaller budgets of the other departments.

Be that as it may, by any standard the amounts spent on defense have become staggeringly disproportionate to the rest of the economy. It fills me with dismay when Department of Defense officials suggest that, as part of a "grand design" for strategic policy, we may be forced to "win" an arms race with the Russians by relying on our superior resources to spend them into bankruptcy. Such a strategy puts me in mind of the practice among the Indians of the Pacific Northwest known as the "potlatch." Starting as a rivalry in gift-giving for the sake of prestige, the practice degenerated, as the tribes became wealthier, into competitive orgies of waste and destruction, in which the competing tribes tried to establish their superiority by spending the others—and themselves—into ruin. If nothing else comes of the debate on this military procurement bill, we will be doing a major service to the Nation by putting the Pentagon on notice that Congress no longer intends to sit by in benevolent passivity while the generals and their civilian bosses vie with the Russians in a suicidal "potlatch."

Possibly the most significant long-term issue in this debate is the question of Congress will—or lack of will—to exercise its constitutional responsibilities for the general superintendence of the Armed Forces, or, as article I, section 8, of the Constitution specifies, for making "rules for the government and regulation of the land and naval forces." On June 25, by a vote of 70 to 16, the Senate expressed its judgment that a national commitment, to be valid, required the consent of Congress. The national commitments resolution was an assertion of the principle of congressional responsibility for foreign military operations; the issue now before us is a test of our determination to put that principle into practice.

Recent Presidents have claimed the authority not only to command the Armed Forces but to deploy them and commit them to hostilities on foreign territory. The current President has gone a step farther, claiming the authority to judge how much we spend on our Armed Forces. As President Nixon put it in his speech at the Air Force Academy on June 4:

The question in defense spending is "how much is necessary?" The President of the United States is the man charged with making that judgment.

Until recently many—perhaps most—of the Members of this body would have concurred passively in this sweeping assertion of Executive authority.

In practice we have concurred in this principle, repeatedly granting the executive anything and everything he has requested in the field of defense, and doing so with little or no debate. We did so because we thought it a patriotic duty, momentarily forgetting that we have a prior patriotic duty to preserve and exercise the responsibilities entrusted to Congress by the Constitution. Vested with the responsibility both for appropriating funds and for regulating the Armed Forces, Congress—and not, as Mr. Nixon asserts, the President—is charged with the responsibility for judging "how much is necessary" in defense spending.

Soldiers, like nature, abhor a vacuum. In the absence of congressional "rules for the government and regulation of the land and naval forces"—to quote once again the language of the Constitution—the armed services have become vigorous and effective partisans for their own favored policies, for new weapons systems and, of course, for funds to finance them. Playing fast and loose in politics, the armed services exert great influence on the executive, actively lobby in Congress, expend enormous sums on contract research in foreign policy, and, in the name of "public affairs," assiduously cultivate public opinion.

Last fall, for example, a nationwide publicity campaign in support of the ABM was outlined in a memorandum prepared by Lt. Gen. Alfred D. Starbird, the Sentinel System Manager, and approved by the Army Chief of Staff.² Prudently canceled by the Nixon administration in March of this year, the Starbird plan is nonetheless instructive as an example of the kind of partisan political activity in which the armed services are at liberty to engage in the absence of diligent congressional oversight.

Noting the rise of congressional and public opposition to deployment of the Sentinel, the memorandum outlined a publicity campaign to "gain public understanding of the reasons" for the ABM, to "gain the understanding of the people of affected communities," and generally to build public support for the ABM. To advance these purposes the memorandum outlined a program of press releases, magazine articles, interviews, and speeches. Press releases were to originate either with an Army official or a Sentinel contractor or subcontractor. Military personnel were themselves to write articles in favor of the ABM and also "to encourage and assist in the preparation of magazine articles on the Sentinel system by civilian scientific or technical writers of national stature." As to the speakers' program, the memorandum specified that senior Army personnel "will participate in this program to the maximum extent feasible."

Far more astonishing than the ultimate cancellation of this military propaganda campaign is the fact that it was contemplated at all. It is totally incompatible with the principle of a nonpolitical military establishment and, in this respect, an unacceptable incursion upon our constitutional processes. One can

² Sentinel System Master Plan, Part No. 3.22, "Public Affairs Plan for the Sentinel System," 12 November 1968.

hardly blame the military itself for these transgressions. It is only human nature for vigorous and intelligent men such as our top ranking military leaders to do all that they can to advance their own stock in trade. The real fault lies not with the soldiers who have taken the opportunity to fill a political vacuum but with the civilian officials who created that vacuum by vacating the field.

In this respect the major fault probably lies with Congress. In the wise and perceptive words of the senior Senator from Louisiana:

For almost 20 years now, many of us in the Congress have more or less blindly followed our military spokesmen. Some have become captives of the military. We are on the verge of turning into a militaristic nation. . . . We have forgotten many of the traditions and values which made this country great, and we have flung men, arms, and material almost heedlessly about the world.⁴

The heart and core of the issue is congressional control of military spending. If this control were thorough and effective, there would be little or no threat of militarism in American society. Insofar as congressional restraints are perfunctory and formalistic, leaving the Pentagon to be in effect its own judge and jury in the choice and funding of its weapons systems, then the military might as well be regarded as a full-fledged fourth branch of Government, with the extra advantage of being free from the checks and balances which inhibit the other three.

No agency or individual in the executive can relieve the Congress of its responsibility for putting limits on military spending. Even the Bureau of the Budget, which effectively controls domestic spending, is a toothless lion in its dealings with the Pentagon. Out of the \$6 billion reduction made in President Johnson's last budget, for example, \$5 billion came from domestic spending. The Defense Department is the only Government agency which is not subject to independent review of its funding requests by the Bureau of the Budget. Instead the Defense Department is permitted to designate an official of its own to work with each Budget Bureau examiner under a system of joint policy review. One Budget Bureau examiner is reported to have said that, whenever a Budget Bureau examiner requests information and his Defense Department counterpart does not wish to produce it, the matter is closed. The Bureau of the Budget's National Security Programs Division has only 26 examiners to review the \$80 billion defense budget; of these only four are concerned with strategic weapons systems such as the Minuteman and the ABM. Once a new weapons system is initiated, according to former Budget Bureau Director Charles Schultze, it is not evaluated again, even though the presumed threat to which it was supposed to respond turns out to be exaggerated or nonexistent.

Secretary McNamara described the relations of his Department with the Bureau of the Budget quite candidly in a

statement to the House Armed Services Committee in 1965. He said:

The Bureau of the Budget has absolutely no authority to determine in any way the budget of the Defense Department . . . I can't remember a single instance in which the Bureau of the Budget and I differed on a recommendation in which the President accepted the Bureau of the Budget view.⁴

Mr. President, my remarks on the Bureau of the Budget and the Pentagon are drawn from an excellent article by Barbara Newman called "Can the Budget Bureau Put the Lid on Pentagon Spending?" I ask unanimous consent that this article, which appeared in the *Washingtonian* for July 1969, be printed in the *Record* at the conclusion of my remarks.

The PRESIDING OFFICER. Without objection, it is so ordered.

(See exhibit 1.)

Mr. FULBRIGHT. A great deal can be done, no doubt, to strengthen the Budget Bureau's ability to regulate military spending. The fact will remain, however, that both the Department of Defense and the Bureau of the Budget are agencies of the Executive, with as much or as little independent authority as the President wishes them to have. As long as the principal restraints on military spending are those within the executive branch, they are optional restraints, only slightly preferable than no restraints at all. Reflecting on the Pentagon's position in the funding process, I am reminded of a Damon Runyon character, a gangster from Detroit who forced his friends at gunpoint to shoot crap with blank dice, pointing out that he "remembered where the spots formerly were."

Only Congress is in a position to put spots on the Pentagon's dice. Aside even from the competence and experience of many members of the Armed Services and Appropriations Committees of the two Houses, Senators and Representatives bring the one indispensable qualification to the task of controlling military spending which not one single agency or individual in the entire executive branch can match. That qualification is the fact that we do not work for the President and, because we do not, we are free—as no one who serves the Executive can ever be free—to make independent judgments about the Executive's policies.

We are free to make independent judgments and, under the Constitution, it is our duty to do so. The question now before the Senate is a test of our willingness to meet that responsibility. Whether and how we do so may well prove to be the most significant long-term issue involved in this debate on the ABM.

I am, for all these reasons, opposed to deployment of the ABM. I am also concerned with certain other provisions of the military procurement bill, most particularly with title IV, which states that funds authorized under this or any other act for the use of the Armed Forces of the United States are also to be avail-

able to support "Vietnamese and other free world forces in Vietnam" and "local forces in Laos and Thailand."

I am puzzled by these clauses and would welcome an explanation of their meaning by the distinguished chairman of the Committee on Armed Services.

First of all, I would like to know whether, under title IV, there is any limit, or any way of imposing a limit, on the funds which could be transferred to non-American forces in Vietnam, Laos, and Thailand. Could the Secretary of Defense, under this provision, use all of the proposed \$20 billion to support South Vietnamese, Laotian, and Thai forces? Or only some specified part of that amount? And if there is a limitation, where is it carried under the law?

I would also like to know whether the chairman of the Armed Services Committee regards title IV as a national commitment of the United States in the sense in which that term was defined by the Senate resolution of June 25. Will we, by approving title IV, be committing ourselves to the defense of the present regime of Laos and Thailand in any manner or degree exceeding the provisions of the SEATO Treaty? More specifically, are the funds authorized by title IV to be used to implement the secret military agreement with Thailand—secret military-executive agreement, I should say—which we have recently been made aware. Perhaps the answer will be clearer when the Foreign Relations Committee is provided with a copy of the official text, which it has repeatedly—and thus far unsuccessfully—requested.

I raise these questions for the consideration of the chairman of the Armed Services Committee. I know that, as one of the 70 Senators who voted for the national commitments resolution, he is as concerned as I am to restore Congress' constitutional authority over the disposition of the Armed Forces and the making of national commitments.

The central issue in this discussion of the ABM, of our military policies and expenditures, and of the responsibilities of Congress in these fields is, of course, our national security. The Senators who support deployment of the ABM are deeply concerned with our Nation's defense. They will readily acknowledge, I am sure, that those of us who oppose the ABM are no less concerned with the national security. Perhaps it can be said that the proponents of the ABM and of large military expenditures are primarily concerned with the means of our defense, while others of us lay emphasis on the ends to be protected and preserved.

I think we would all agree that the central, commanding goal of American foreign policy is the preservation of constitutional government in a free society. That being the case, we are not at liberty, as is a dictatorship, to devise a national security policy solely on the basis of the effectiveness and cost of weapons systems, or even on the basis of military plus political considerations, such as the effect of any new weapons system on international disarmament negotiations. Both of these are of critical importance

⁴ *Congressional Record*, 91st Cong., 1st Sess., April 1, 1969, Senate, p. S3503.

⁴ Quoted by Barbara Newman, "Can the Budget Bureau Put the Lid on Pentagon Spending?" *Washingtonian*, July 1969, p. 62.

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but, as a constitutional democracy, we are also bound to weigh every step—every weapons system and every negotiation—in terms of their compatibility with our constitutional processes. When a new weapons system such as MIRV or the ABM is contemplated, we must ask ourselves not only whether these will effectively counter the Soviet SS-9's and how they will affect disarmament negotiations. We must also ask ourselves whether, by placing still another powerful instrument in the hands of our military, by delegating still greater power to the Executive and accordingly reducing the authority of Congress, we are not weakening the very constitutional processes we are trying to defend.

To fail to make these evaluations, and to give unexceptional priority to purely military considerations, is to sacrifice the ends of security to its means. It is hardly helpful to say that we would rather "err on the side of security" in such matters as the ABM, because security is involved on both sides of the issue. The more pertinent question is whether the instrument is compatible with the objective.

EXHIBIT 1

[From the Washingtonian, July 1969]

CAN THE BUDGET BUREAU PUT THE LID ON PENTAGON SPENDING?

(By Barbara Newman)

Robert P. Mayo is the typical quiet, competent, Nixon-style civil servant. For twenty years, he toiled away at the Treasury Department, specializing in debt management. In 1961, he became vice president of a Chicago bank—the one headed by David M. Kennedy, now Secretary of the Treasury. Mayo now directs the Bureau of the Budget (BOB).

Melvin R. Laird is acid-tongued and supremely confident. In eight terms as a Congressman from Wisconsin, he rose to the top ranks of House Republican leadership through the force of his keen intellect and Machiavellian personality. Laird now heads the Department of Defense (DOD).

The two men, caught up by growing public sentiment that military spending is too high, are on a collision course.

Poor Bob Mayo.

The first round came when Mayo, in an effort to cut the 1969-70 Pentagon budget, gave Laird a list of suggested spending reductions. Laird ignored Mayo. Out of an \$80 billion Pentagon budget, Laird chopped \$600 million, by reducing the number of B-52 bombing runs in Vietnam from 1,800 to 1,600 a month. Laird, the politician, knew that key Congressmen would oppose "selling out our boys in Vietnam" in order to comply with a Budget Bureau request for a defense spending cut.

Mayo was out on a limb. Laird had cut his budget as requested. Congress didn't like it. President Nixon maintained a tight-lipped silence. Mayo lost round one.

There is no question that the Bureau of the Budget, which exercises such potent control over domestic spending, has not been able to get a handle on defense spending. Of the \$6 billion trimmed from the \$199 billion Johnson budget for 1969-70, \$5 billion came from domestic spending. This, despite the fact that Vietnam, urban unrest, and weapons system cost overruns have increased both public and Congressional demand for a review and reordering of our national priorities.

When the new Nixon team appeared before Senator William Proxmire's Joint Economic Committee, Mayo was candid. He said he wanted "a more separate, highly com-

petent, highly skeptical look at the defense budget."

Proxmire, (D-Wisconsin), and Congressman William Moorhead (D-Pennsylvania) are both certain that the Budget Bureau does not exercise strong enough control over defense spending. They both think they have a hot issue—that 1969 is the year to probe Pentagon spending.

This is also the year to look at the Bureau of the Budget. An influential group of House members, led by Deputy Majority Leader John Moss of California, has introduced a resolution asking that a Select Committee be created to investigate Budget Bureau operations. Included in the group are six committee chairmen: Wilbur Mills, Ways and Means; Mendel Rivers, Armed Services; Chet Holifield, Joint Atomic Energy; Thomas Morgan, Foreign Affairs; Wayne Aspinall, Interior; and Samuel Friedel, House Administration. House Majority Leader Carl Albert of Oklahoma says the BOB investigation "is long overdue."

The Bureau of the Budget was set up in 1921 in an effort to coordinate and rationalize Government programs. It started out in the Treasury Department, and in 1939 moved to the White House to become a direct arm of the President. The Budget Bureau director is not a Cabinet officer; he is a Presidential appointee, and he does not require Senate confirmation.

The Budget Bureau has stayed small. It has a staff of 500, of whom 325 are professional staff. The BOB annual budget is only \$10 million. It runs no programs itself. It stays out of politics. Only five positions were affected by the Johnson-Nixon transition—the BOB director and four assistant directors. Of the five, only two—Mayo and Richard Nathan, assistant BOB director for human resources—have a distinctly Republican coloration. Dwight Ink, now assistant BOB director in charge of executive department reorganization, is a career civil servant who worked at the Department of Housing and Urban Development under President Johnson. Deputy director is Philip S. Hughes. Maurice Mann is assistant director for economic affairs. James Schlesinger is assistant director with responsibilities in the national security area.

Despite its size and the quiet way in which it operates, the power of the Budget Bureau is formidable. All budget requests from Federal agencies must be cleared by the Budget Bureau. All legislation proposed by agencies is scanned by the Budget Bureau to make sure it conforms with the President's programs.

The Budget Bureau also conducts efficiency studies of agency operations. It was told by President Johnson to coordinate the conversion by all agencies to the Program-Planning-Budgeting System. Known as PPB, this system was developed by Robert McNamara for the Defense Department. It is an attempt to rationalize the budget process by outlining all options and costing each out.

The power of the Budget Bureau is cited by this statement of a former White House aide: "Without the bureau, the President would be operating in the dark, going by guess and by God. . . . The bureau tells the President the choices available to him, the pros and cons in each case, its own recommendations. How much more influence can you have?"

The Budget Bureau is now housed in two buildings. Director Mayo and half of his staff are in the Executive Office Building just west of the White House. The rest of the staff is in Federal Office Building Number 7, the red brick building near the northeast corner of Seventeenth and Pennsylvania.

As a result of a 1967 reorganization, the Budget Bureau is now divided into six divisions: Human Resources, headed by Rich-

ard Nathan; Natural Resources, headed by Carl H. Schwartz, Jr.; National Security Programs, headed by Ellis H. Veatch; International Programs, headed by James W. Clark; General Government Management, headed by William Pfeiffer; and Economics, Science, and Technology, headed by John D. Young.

These six divisions are the BOB linkage to all Government departments and agencies. Most of the staff members of the six divisions are budget examiners. They review all budget requests, and exert more influence per position than any other people in Government.

In addition to the six divisions, the BOB has four other offices: Budget Review, which puts the budget together after getting all the pieces from the six divisions; Executive Management, which oversees interagency, Federal-state, and Federal-local programs; Statistical Standards, which helps devise Government statistical measurements; and Legislative Reference, which coordinates legislation proposed by departments and agencies.

Of the BOB's 325 professional staff members, 177 are budget examiners in the six divisions. The remaining 148 are supervisory personnel or staffers in the four other offices. The average professional grade is GS-14 (annual salary of \$18,500 to \$24,000). Over half the professional staff has master's degrees. Thirty-two are women. Nine are black. Most are generalists rather than accountants.

Nathan and Schlesinger are two of the more interesting additions to the staff. A Harvard Ph.D. and former associate at the Brookings Institution, Nathan headed the welfare and intergovernmental relations task forces for candidate Nixon. He is both an assistant director and chief of the Human Resources Division; he has been told to tighten up social programs. Schlesinger is Mayo's ace in the hole in his poker game with Melvin Laird. A summa cum laude Harvard graduate, Schlesinger has a Ph. D. in economics and was Director of Strategic Services for the Rand Corporation, an influential think tank operation that does a lot of work for the Government. Schlesinger knows how the Pentagon operates; Mayo wants him to tighten up defense spending.

Schlesinger's operating arm at the Budget Bureau is the National Security Programs Division, which works out of plush carpeted offices on the tenth floor of Federal Office Building Number 7. Division Director Ellis Veatch is considered competent, but not tough or innovative. Schlesinger is clearly the man who will have to rock the boat.

The division, with a staff of twenty-six budget examiners and six supervisory personnel, keeps an eye on \$80 billion a year in defense spending. The division, according to a former examiner, has had a heavy staff turnover. He talked of "winds of discontent" brought about by the division's ineffectiveness. Another Budget Bureau official said he thought National Security Programs Division examiners "are more in bed with the people they work with than the other BOB examiners."

The Defense Department is treated differently. All other agencies and departments are subject to independent BOB review. The Defense Department, however, designates an official of its comptroller's office to work with each BOB examiner. This joint review was put into effect in 1960, as an expediency during the Korean War, and it has never been lifted. Top BOB officials say it is necessary because of the size and complexity of the defense budget BOB Deputy Director Philip S. Hughes says the Defense Department exerts more "muscle" and "power" than other departments, making for a different "climate" in the review of defense spending requests.

During the fall, which is budget season, BOB examiners move from their downtown offices to the Pentagon, where they share an office with their Defense Department counterpart. One examiner says the relationship

is not one of equals; it is one of *primus inter pares*, and the Defense examiners are *primus*. He says if a BOB examiner requests information and his Defense counterpart doesn't want to produce it, the matter is closed. "The Budget Bureau doesn't back up its examiners in requests for information," he says. Another examiner says if the BOB examiner cannot get the information he needs, the examiner is at fault, not the joint review policy. "The Pentagon budget process is highly individual. How effective one is depends on how resourceful he is and how much information he can amass to trade off with his Pentagon counterparts." Another examiner put it this way: "Your position doesn't give you a thing. You have to scratch like hell."

Senator Proxmire and Congressman Moorhead view the C5A matter as an example of weak BOB control of defense spending. At hearings of his House Military Operations Subcommittee, Moorhead—aided by his assistant, Peter Stockton, who had worked at the Budget Bureau—proved that the Air Force had doctored internal reports to cover up a \$2 billion cost overrun on Lockheed production of the \$5.3 billion C5A transport contract. Moorhead had to contend with the protestations of Subcommittee Chairman Chet Holifield, who whispered to Moorhead that he was "a son of a bitch for bringing those documents in here." Holifield told Moorhead, "Now your stooge Nossiter has a story." He was referring to *Washington Post* reporter Bernard D. Nossiter, who assiduously covered the hearings and wrote a series of hard-hitting stories.

The hearings produced evidence that the Defense Department knew that Lockheed's bid on the first fifty-eight C5A planes was low, and that Lockheed might lose heavily on the first run. The losses were to be recouped on the second run of fifty-seven planes. Colonel Kenneth N. Beckman, the Air Force C5A project director, said it was felt that disclosure of the huge C5A losses "might put Lockheed's position in the common (financial) market in jeopardy."

Pentagon sources say the Budget Bureau knew the C5A was over its contract ceiling by early 1967. Yet in March 1968, Air Force Assistant Secretary Alexander Flax told the House Appropriations Committee: "We believe C5A is within the range of target and ceiling at the moment."

The BOB examiner who knew about the C5A overrun in early 1967 was Richard A. Stubbing. His knowledge had zero impact. But in January of this year, Nossiter wrote a story about "The Stubbing Paper."

It turned out that Stubbing, a BOB examiner since 1962, had written the paper in 1968 while at Princeton University's Woodrow Wilson School. The paper exposed information on enormous cost overruns and faulty operation of many aircraft and missile electronic systems. The paper contended that the highest profits often went to the most inefficient firms. BOB press officer Joseph Laitin ruled Stubbing inaccessible to the press. He derided the paper as a "schoolboy thesis" and said Stubbing was "very far down on the totem pole" and "not qualified to talk to the press." A BOB source says he is certain Stubbing gave Nossiter the paper because he was so frustrated at BOB's ineffectiveness.

Both Proxmire and Moorhead think the Budget Bureau needs more examiners looking at defense spending, though Moorhead sardonically says, "For the job it does in Defense, the bureau is overstaffed."

The National Security Programs Division has twenty-six examiners. Ten work on general purpose forces, which include spending for all conventional armed forces, considered the most difficult expenditures to control. Four work on strategic forces, such as the Safeguard ABM and Minuteman. Two work on intelligence and communications, three

on research and development, three on training, medical, and other general personnel activities, one on guard and reserve forces, one on supply and maintenance, one on airlift and sealift, and one on administration and associated activities.

The case is made that not only does the BOB not have enough examiners working on the defense budget, but that the BOB examiners work with the wrong people. Charles Schultze, a hard-nosed pragmatist who was Budget Bureau director from June 1965 to February 1968, says the BOB "tends to get involved too far down the spigot." BOB examiners work with the comptroller's office at the Pentagon. They should work with the Defense Department's systems analysis people. Says Schultze, "BOB should be involved in the formulation of the basic strategic contingencies on which the budget is built."

This lack of outside involvement in strategic decisions allows the Defense Department to justify weapons systems by what the BOB calls "shifting sands" of rationalization. Although the Defense Department insists that it has a "zero base" budget that starts from scratch each year, Schultze contends that once a weapons system gets the green light, it is not evaluated in subsequent years. Schultze points to the plan to convert thirty-one Polaris submarines to carry 496 Poseidon multiple warhead missiles at a cost of \$2.5 billion. The Poseidon was conceived as an answer to the Soviet "Tallinn" anti-missile system, which turned out to be an aircraft defense system rather than anti-missile system. When the threat on which the Poseidon was based turned out to be non-existent, the military developed other reasons for it. Secretary of Defense Laird now says Poseidon is needed as a deterrent against the Soviet SS-9 missile.

The timing of the Federal budget process puts the Budget Bureau at another disadvantage in controlling defense spending. All agencies and departments must have their budgets to BOB by September 15, except for the Defense Department. In December, the defense budget is sent to the President and the Budget Bureau at the same time. Thus the Budget Bureau must petition the President for changes in the defense budget instead of working them out with the Pentagon.

Because the Budget Bureau is an arm of the President, its effectiveness in controlling Government spending in general, and defense spending in particular, depends to a large extent on the attitude of the White House.

Under President Eisenhower, Budget Bureau directors were numbers men—Joseph Dodge, Roland Hughes, Percival Brundage, and Maurice Stans were more interested in bookkeeping than in drawing up options for the President. They were more interested in how many cars an agency had than in evaluating its programs. This narrow budget approach is referred to as "the green eyeshade approach" by BOB staffers.

Presidents Kennedy and Johnson changed all that. Their BOB directors were economists—David Bell, Kermit Gordon, Charles Schultze, and Charles Zwick were interested in evaluating programs and setting up options so that the President could choose between alternatives.

President Eisenhower had kept a relatively tight lid on defense spending. But President Kennedy, on taking office, decided to build up our conventional forces capability and he took the lid off. Ironically, a major influence on Kennedy was a book, *Nuclear Arms and Foreign Policy*, by Henry Kissinger, then a Harvard professor and now President Nixon's adviser on national security. Kissinger argued that the Dulles emphasis on massive nuclear retaliation should be replaced by a more flexible conventional force response. Thus, the military budget which was \$40 billion in 1959 had doubled eight years later.

Under Presidents Kennedy and Johnson, the

Budget Bureau influence on defense spending was diminished by the forceful personality of Secretary of Defense Robert McNamara. In a 1965 statement before the House Armed Services Committee, McNamara made the point this way: "The Bureau of the Budget has absolutely no authority to determine in any way the budget of the Defense Department . . . I can't remember a single instance in which the Bureau of the Budget and I differed on a recommendation in which the President accepted the Bureau of the Budget view."

This inability of the Budget Bureau to exert any influence on defense spending has motivated Congress to probe both defense spending and BOB operations. Defense Secretary Laird says he will cooperate with a General Accounting Office (GAO) study of defense procurement. Many Congressmen are not optimistic about the GAO study, however, because GAO is an agent of Congress and thus subject to pro-Pentagon Congressional pressure.

Again, take the C5A as an example, it is being built in Lockheed's Marietta, Georgia plant. One of the most powerful men in the United States Senate is Senator Richard Russell (D-Georgia), until this year chairman of the Senate Armed Services Committee. He now is head of the Senate Appropriations Committee. On the House side, Congressman Mendel Rivers (D-South Carolina), the chairman of the House Armed Services Committee, has so many military installations in his home city of Charleston, that the situation, once considered faintly amusing, is now viewed on Capitol Hill as a crude absurdity.

Congressional leadership thus would appear to have too much to lose if the full power of the GAO was let loose on the Pentagon. There are indications, however, that public reaction to examples of Pentagon carelessness is being felt on the Hill. In May, Congressman George Mahon (D-Texas), the hawkish chairman of the House Appropriations Committee, tangled publicly with Rivers over military spending after the accidental \$25 million sinking of a nuclear submarine under construction in California.

Budget Bureau officials still hope they will get increasingly more effective control over the Pentagon. More budget examiners with background in systems analysis and defense procurement would be needed. The amount of guts and leadership shown by such Budget Bureau officials as Director Mayo and Assistant Director Schlesinger will be important.

But the critical ingredient is Presidential leadership. The Budget Bureau must have strong White House backing if it is going to stand up to the Secretary of Defense and the Joint Chiefs. As former BOB Director Schultze points out, "Nobody wants the Joint Chiefs to be able to say that you refused to do things needed for the country on budgetary grounds. . . . Most Presidents are unwilling to take on the Joint Chiefs on budgetary grounds."

President Nixon's performance thus far indicates that he will be much tougher on social welfare than on Pentagon spending.

Furthermore, there are indications that President Nixon is pushing the Budget Bureau back toward the role it played under President Eisenhower. The Budget Bureau's Resource Planning Staff, set up in 1967 by Director Schultze in an effort to more effectively set up options and priorities for the President, has been quietly disbanded. According to BOB officials, its functions are being taken over by Presidential Counsellor Arthur Burns at the White House, and Burns is known as a man who tends to keep his hands off military spending. Control of defense spending thus would appear to rest in the hands of President Nixon and Secretary of Defense Laird.

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So Bob Mayo may have lost more than round one. He may have already lost the battle for Budget Bureau control of the peace dividend that will come from the end of the Vietnam war.

Mr. FULBRIGHT. Mr. President, how much time do I have remaining?

The PRESIDING OFFICER. The Senator has 3 minutes remaining.

Mr. FULBRIGHT. Mr. President, does the Senator from Mississippi wish me to yield to him?

Mr. STENNIS. Just briefly, for 1 minute, to make a comment. I can get some time later.

Mr. FULBRIGHT. The question I addressed to the Senator was with regard to title IV of the bill now before us. It is in connection with this broad authority that I asked my questions. I assume that later on in his remarks the Senator will comment on it.

Mr. STENNIS. Very well.

Mr. FULBRIGHT. I had not observed that the Senator was in the Chamber.

Mr. STENNIS. I was listening but it was necessary that I leave the Chamber briefly.

Mr. FULBRIGHT. I thought it would be useful if the Senator would give us his comments on the significance of the final section in the bill.

Mr. STENNIS. I thank the Senator.

Mr. FULBRIGHT. Mr. President, I refer to the earlier remarks made by the Senator from New York which interested me very much. Although I had not talked with him about his speech he emphasized very much the same theme I had emphasized.

It is true, of course, as the Senator from Iowa pointed out, that there always remains in the Congress the power to make changes in a program such as this. But I submit to him and the Senator from New York that actual deployment of the ABM has already commenced.

There was an article in the press the other day about the purchase of rights-of-way into sites in Montana. I wrote to the Department of Defense asking about the authority for this action because it seemed to be clearly part of the deployment of the program. It was. The Department said they were using transfer authority and they are already, in effect, proceeding to deploy in the sense of establishing the sites which are in phase I, contemplated by this program.

I think the answer to the questions raised by the Senator from Iowa were properly and effectively answered by the Senator from New York when he said the decision on this matter is to a very great extent a watershed decision. It is not final in the technical sense; Congress could theoretically undo it, but to approve deployment now would start a process that would be irreversible as a practical matter. There would be no coming back and undoing it. Of course, many other matters of equal or greater importance will come before the Congress, but I doubt there will be more hearings comparable to the hearings that have been held this year on this ABM. So as a practical matter, leaving out the technical authority of the Congress to change it, it will not be changed.

The PRESIDING OFFICER. (Mr.

PACKWOOD in the chair). Who yields time?

Mr. STENNIS. Mr. President, I yield 15 minutes to the Senator from Arkansas.

The PRESIDING OFFICER. The Senator from Arkansas is recognized.

Mr. McCLELLAN. Mr. President, tomorrow we will make a decision which could be crucial to our national destiny and to the future peace of the world. The decision of the Senate to proceed or not to proceed with the first stages of deployment of the Safeguard antiballistic-missile system may well be of that import and gravity. Because of this, I feel compelled to state briefly for the record some of the reasons why I shall vote to proceed with further research and development and with the first stages of deployment of the Safeguard system.

Mr. President, I do not seek to influence any other Senator. Each of us, no doubt, by this time has already reached conclusions that have led us to an irrevocable decision. We have done that primarily upon the basis of how we view current international relations and world conditions and upon expert opinion that has been marshaled on both sides of this vital and highly controversial issue. It is not my purpose to attempt to, nor would I be so presumptuous as to think that I could, change anyone's vote. I do not know that I am right in my judgment, and I am equally sure that none of my colleagues—nor anyone else for that matter—can claim infallibility with respect to his judgment on this question. There are simply too many imponderables involved for either side to contend that the arguments they make—in support of or in opposition to deployment—are conclusive and irrefutable. We simply do not know. We can only make an educated guess and hope for the best.

There is sharp disagreement between the proponents and opponents of the ABM system and likewise among the many who are regarded as experts in this field as to whether this system will work—whether it will be effective once it is installed and becomes operational. In its present state of development, some doubts may be justified. But, on the question of whether it can be developed and made to work, I have no serious doubts. I am confident that it can be done. The astronomical technological advances that American ingenuity has achieved during the past few years and our recent successful journey to and safe return from the moon present overwhelming proof which reaffirms our warranted faith that it can be done.

There may be good reason to doubt that an effective operational system can be adequately researched and developed without deployment. I, therefore, think deployment is necessary to permit the testing this system will require to make certain of the efficient coordinated functioning and effectiveness of the various units of which the system is composed.

In a system of this magnitude and complexity, it is, of course, expected that problems—serious problems—will be encountered. I am confident, however, that

they can and will be overcome by American genius, technology, and resolve.

It can be argued that there is a serious risk of failure, that the effort will be costly, and, if unsuccessful, the money and resources we expended in the effort will be wasted. But the overriding consideration is whether this weapon should be added to our defense arsenal. If it is essential to protect our offensive deterrent system and we fail to provide it, we may well have placed in jeopardy both our national security and the future peace of the world.

I believe it is needed, and the greater risk would be in our failure to reinforce and protect our existing deterrent force to the Communist threat of aggression and conquest.

I cannot agree with those who would pursue a course of weakening our defense potential, letting down our guard, and indulging in the vain hope that we can negotiate reliable and satisfactory agreements with Russia on a limitation of armaments and on all vital issues involving war and peace. I am unwilling to put all of our eggs into the negotiating basket or to assume the nonevident good faith of Communist leaders. Their avowed ambitions of expansion, their past record of treachery and deceit, and their invasion and subjugation of smaller and weaker nations by force of arms are forbidding and indefensible. Their record compels suspicion and continued distrust until there is a discernible and demonstrative change in their policy, tactics, and goals.

Since World War II, the United States has entered into bilateral and multilateral agreements for collective defense with 42 countries around the world in both hemispheres. These commitments were not lightly made. I do not necessarily approve of all of them. But, at the time they were made, our Government believed them to be compelling and necessary. Why? because of the threat of Communist aggression. The most noted of these agreements, of course, is NATO, which was established in August 1949, for the purpose of providing for the collective defense and protection of Western Europe.

Mr. President, we have spent hundreds of billions of dollars since World War II in trying to build a fortress against the would-be conquering forces of communism. We are today fighting a war in Vietnam at a cost of billions of dollars and thousands of lives each year. We fought a war in Korea that cost us 33,000 lives and many billions of dollars. We still maintain a military force in Korea of some 56,000 men. We have spent on NATO and the arming of Western Europe many billions of dollars and are still spending some \$8 to \$10 billion annually to maintain 320,000 troops in the NATO forces in Europe.

Mr. President, we have done all this, and more, because we felt compelled to do so in order to deter Russia and other aggressors of the Communist world. Has Russia changed? I see no hard evidence that she has. The Berlin wall still stands, and the recent invasion and occupation of Czechoslovakia is a most eloquent re-

minder of Communist goals of conquest and subjugation.

I submit that this most recent aggression by Russia continues an international trauma of faith-shattering dimensions.

This does not mean that we should be unwilling or refuse to negotiate. It would certainly be a blessing to all the world—to the entire human race—if the United States, Russia, and other world powers could and would enter into an arms limitation binding agreement—one that could be enforced. Let us ever strive to make progress in that direction, but, in doing so, we must not lose sight of reality.

We must guard against any arms agreement that can be converted into a subterfuge and used to shield secret preparations for war. Such an agreement must permit inspection and supervision which will permit all parties to such agreement to get information at any time, to reassure that the treaty or the agreement is not being violated by any signatory thereto.

We must not be lulled into a sense of complacency by exaggerated expectations and false hopes. Our potential enemies are not relaxing their efforts and determinations to achieve that superiority and supremacy which would permit them to impose their will on all other nations by force of arms. There is very little enthusiasm that I observe, Mr. President, manifested by Russia, and certainly none by China, for an arms limitation agreement.

In my judgment, if Russia were ready, sincere, and in good faith about desiring an arms limitation agreement, we could proceed to the conference table on that issue within the next 60 days, and certainly within a few months thereafter have the finished product before us in the form of a treaty for ratification.

Why is that not being done?

Simply because they are not ready. They are unwilling. They do not wish such a treaty or such an agreement, unless it is one of a kind which will deny inspection, one that can be used as a subterfuge, one that can be used as a shield to deny those party to the agreement the opportunity to know what secret preparations in this field are being made behind that agreement.

This is why we do not have an agreement. That is why no progress has been made, or is being made satisfactorily, at least, toward obtaining such an agreement.

Are we to blame for that?

We hear so much today about our country's being to blame, that our country is to blame for this and for that.

Are we to blame for no arms limitation agreement?

The PRESIDING OFFICER. The time of the Senator from Arkansas has expired.

Mr. STENNIS. Mr. President, I yield 5 additional minutes to the Senator from Arkansas.

The PRESIDING OFFICER. The Senator from Arkansas is recognized for 5 additional minutes.

Mr. McCLELLAN. Mr. President, I do not believe that world conditions and the attitude of the two leading Com-

munist powers—their international policies—permit us to let down our guard and cease to maintain a strong military deterrent to their expansion goals—goals which they seek to attain by use of force where necessary. The building and maintaining of such a deterrent has been costly, as I have already illustrated. It will continue to be costly, but its cost, however great, cannot compare with the cost and horrible consequences of the war that it is designed to prevent.

I think we must ask whether our armed might—our military posture—has been a major factor since World War II in preventing a global war and particularly in preventing the invasion and subjugation of Western Europe by the invading armies of communism. If there had been really no threat or danger to Western Europe when NATO was created, then we would be forced to concede that the billions of dollars in expenditures which we have made to provide an armed deterrent for the protection of the NATO countries were wasted and spent in vain. It was prudent and in our national interest for us to provide that deterrent at the time NATO was established. Have conditions then so changed that it is no longer advisable for us to maintain or strengthen it? I find that no such change is evident. Therefore, prudence and our national interest continue to dictate that we act accordingly.

A decision whether to deploy or not to deploy the ABM system involves risks, but consider how different are the risks involved. If we begin deployment and it should turn out that the system will not live up to expectations or that the Soviet and Chinese offensive threats fail to materialize, then we shall have lost money—some hundreds of millions of dollars. But, what is at stake, and what risks are involved if we fail to perfect this ABM system and begin its deployment? If we fail, we will simply be gambling with the needed protection and the continuing availability of our existing ICBM deterrent. This ICBM system, with its ability to deliver the bomb, is the backbone of our deterrent, both to the outbreak of nuclear war and to the use of the threat of nuclear war by Communist powers to bolster their aggressive ambitions. If we do not develop and deploy the ABM, we may well place in jeopardy much of our ICBM striking power.

The PRESIDING OFFICER. The time of the Senator has expired.

Mr. STENNIS. Mr. President, I yield the Senator 3 minutes more.

Mr. McCLELLAN. Mr. President, the contention made that our deployment of this strictly defensive weapons system will provoke Russia and thus cause her to escalate the arms race is a weak argument. It is of little persuasion, and it is unacceptable. The ABM system is a weapon of defense that will be used to prevent the destruction or immobilization of armaments already in place and ready for use. If we must make a choice between offending Russia and protecting and preserving the military armaments that we have already deployed, then I think we have no alterna-

tive except to choose the latter. That would be my choice. Russia has already installed an anti-ballistic-missile system which she thought necessary to strengthen her defense, and I am unwilling to sacrifice or compromise my country's right to deploy a like or even better system to protect our arsenal of striking power.

Safeguard is not a provocation, and the Soviet Union cannot legitimately read into Safeguard a turning point in our military strategy. This additional weapon of defense will simply continue to deny to Russia a nuclear first strike, knockout capability against our ICBM system. However, there is a very strong probability that the Soviet Union would interpret a rejection of Safeguard by the Senate, and other current developments in the United States, as a major turning point in American strategy from one of growing strength to one of wishful thinking and weakness.

Defeat of this proposal would encourage both Russia and China to be bolder in their foreign relations and to worry less about the consequences of a military confrontation with the United States. I, therefore, regard it dangerous both to the United States and to the world for us to thus attempt to appease and feed the expansionist dreams of the Communist world conspiracy.

Let us remember that Russia has as much reason to be concerned about attacks from China and other nuclear powers as we. The argument that Safeguard deployment will interfere with arms control talks is untenable. If anything, its proposed deployment will provide us with a better basis and with an instrument of strength upon which to proceed in the important arms limitation negotiations.

That is why, in balancing the risk, I believe it is wiser and safer to proceed now than it is to delay the deployment of the ABM system for another 2 years.

If my judgment is in error, if my decision to support the present development and deployment of the Safeguard system is wrong—and I do not believe it is—then I will be comforted to know that I have erred on the side of national security and in a good-faith desire to protect our country from dangers posed to it by Communist enemies that cannot be trusted.

Mr. JACKSON. Mr. President, will the Senator yield?

Mr. STENNIS. Mr. President, I yield the Senator from Arkansas 2 additional minutes.

Mr. McCLELLAN. I yield to the Senator from Washington.

Mr. JACKSON. I compliment the able and distinguished senior Senator from Arkansas for a well-reasoned speech. I must say it is loaded with commonsense. The able Senator from Arkansas has served a long time on the Defense Appropriations Subcommittee. His knowledge and background in that area have been extremely helpful to those of us who have served with him. Again, I compliment him most highly for his remarks.

Mr. McCLELLAN. I thank the Senator.

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Mr. ALLOTT. Mr. President, will the Senator yield?

Mr. McCLELLAN. I yield.

Mr. ALLOTT. I also wish to join in complimenting the Senator on his speech. All of us who know him know of his dedication to the defense of this country. I am happy to hear him speak in this vein, and with such strength, about the defense of this country rather than indulge in a lot of beliefs which merely consist of words and which have no reason behind them. He is entirely right in everything he said, and I am happy he said it in the way he said it today.

Mr. McCLELLAN. I thank the Senator.

Mr. STENNIS. Mr. President, I yield 1 additional minute.

I compliment the Senator on two points he made with such emphasis and clarity. The only issue here is our own national security for our own people. This is one weapon that is not going to help anyone else. It is not going to be shared with anyone else. We will pay for all of it, whatever its cost. It is solely for the defense of the American people.

Mr. McCLELLAN. It is strictly a defensive weapon.

Mr. STENNIS. And, of course, it is for our defense capacity through ICBM's.

Another point he makes is that, as a practical matter, the ABM system has just reached the place in its progressive life where putting it together for some deployment must be done now if we are going further.

I thank him very much for his contribution to the debate.

I yield 20 minutes to the Senator from North Carolina (Mr. ERVIN).

Mr. ERVIN. Mr. President, as we approach a vote on one proposal to deploy the ABM, let us face with forthrightness the perilous state of the world and the threat which it poses to America. Let us also ponder what America must do to surmount and overcome this threat and preserve her freedom.

Two powerful nations, Russia and Red China, whose people are numbered by the hundreds of millions and whose armies are the largest on earth, are ruled by communism, which is bent upon extinguishing the lights of liberty throughout the earth and enslaving mankind.

If there be those who doubt the validity of this statement, let them observe the liberty-loving peoples of Bulgaria, Czechoslovakia, East Germany, Hungary, Poland, and Rumania, who are held captive behind the Iron Curtain.

One of the countries ruled by communism, Russia, already possesses nuclear weapons of devastating power, and the other, Red China, is on the verge of acquiring them.

For these reasons, America will have to live in a world beset by perils as long as Russia and China harbor the communistic dream of world conquest. This being so, the crucial question of our generation is how can America meet and surmount the perils which confront her. I submit she must do three things.

First, America must keep her heart in courage.

Second, America must keep her heart in patience.

Third, America must lift up her hand in strength.

I shall not elaborate upon the proposition that America must keep her heart in courage. A wise commentator, the late Elmer Davis, said all that needs to be said on this subject when he declared that America "will remain the land of the free only so long as it is the home of the brave."

The perils which confront our country will exist as long as communism dreams of world conquest. Consequently, America must keep its heart in patience as well as in courage until communism relinquishes this dream.

It will not be easy for America to do this. We are an impatient people, who demand immediate solutions of our problems, no matter how difficult and enduring they may be. Besides, many of us are prone to ignore or rationalize unpleasant realities rather than to face them with forthrightness and fortitude. Moreover, the hunger for peace in our time, which sent Chamberlain to Munich and our world to its present unhappy state, still tempts multitudes to conjure up utopias and fantasies.

These weaknesses enhance the danger that our Nation may not heed the warning given it by Benjamin Franklin, the wisest of all Americans, when he said:

Let us beware of being lulled into a dangerous security.

If she is to avoid being lulled into a dangerous security and survive in freedom the perils which beset her, America must have the patient fortitude to face with forthrightness these unpleasant realities:

First, The day has not yet arrived when the nations of earth are willing to beat their swords into plowshares and their spears into pruning hooks.

Second, Even a peace-loving nation cannot live in peace unless it pleases its wicked neighbor.

Third, God grants freedom only to those who love it and have the hardihood to guard and defend it.

It is impossible to overmagnify the danger arising out of our proneness to rationalize rather than to face forthrightly unpleasant realities.

Nowadays some men in positions of authority rationalize in this fashion: War is irrational. Hence, it is not intelligent for us to think that the men in the Kremlin would precipitate a war in which Russia might be virtually destroyed.

It would be well for them to remember the rationalizations made by some Americans when Hitler was climbing to power in Germany. They rationalized then in this manner: It is not rational to think that the Germans would entrust an irrational man like Hitler with powers of leadership, or that an irrational man like Hitler would be so irrational as to provoke a world war even if the Germans were so irrational as to entrust him with powers of leadership.

Despite these rationalizations, history records in letters of blood that those irrationalities came to pass and that in consequence the corpses of untold millions

of men, women, and children were prematurely buried in untimely graves.

After all, it is not what Americans think, but what the men in the Kremlin and the men in Peking think which makes our world so insecure.

Despite the irrationality of war, mankind has expended a major part of his energy, his time, his treasure, and his blood in waging war. And although our country is a peace-loving nation, every generation of Americans has been compelled to go to war. Indeed, America has spent 33 years of its relatively short existence fighting eight wars and 619,553 Americans have died in wars during the past 52 years. It is worthy of note that thousands of those who have died in Korea and South Vietnam have been slain by bullets donated by Russia for that purpose to our enemies.

At the present moment, many persons in authority clamor against the proposal that we deploy an ABM system to protect our retaliatory missiles from destruction by Russian SS-9 missiles. They say, in substance, that unless we leave our retaliatory missiles unprotected, Russia will escalate its production of destructive weapons and refuse to negotiate an enforceable arms-limitation agreement with us.

Like other rationalizations, this rationalization refrains from recognizing unpleasant realities. It ignores the unpleasant reality that Russia has already accelerated its production of destructive weapons to such an extent that it has achieved virtual parity with us. It also ignores the unpleasant reality that since the end of the Second World War, American negotiators have met with Russian negotiators hundreds of times, and that Russia has refused to negotiate an enforceable arms-limitation agreement with us.

I became intrigued with this unpleasant reality, and addressed a communication to the Arms Control and Disarmament Agency, putting to it this question: How many times since the end of the Second World War have representatives of the United States and representatives of Russia met together for the avowed purpose of negotiating a reasonable and enforceable arms limitation agreement?

I received from the U.S. Arms Control and Disarmament Agency a letter to the effect that 1,534 meetings of this nature have taken place between American negotiators and Russian negotiators, since the end of the Second World War.

It takes a more optimistic man than I to believe that we are on the verge of reaching any agreement with Russia on these subjects after these 1,534 fruitless meetings.

Mr. President, I favor peace. Let us pray for peace, let us work for peace, let us negotiate for peace; but let us beware of being lulled into a dangerous security either by the stratagems of our potential enemies or our own rationalizations.

America must keep its heart in courage and patience. It must also be prepared at all times to lift up its hand in strength.

By this I mean that America must maintain sufficient military might to deter any aggression or to defeat any aggressor in case aggression comes.

It will not be easy to keep America militarily strong. This is true because our people may weary of the tremendous expense which an adequate national defense entails, and those in charge of our foreign policy may be beguiled into making an unrealistic and unenforceable arms agreement with those bent upon enslaving the world.

It is to be noted that already some persons in positions of authority insist on the curtailment of defense expenditures in order that our country may be able to finance welfare programs, some of which, I regret to say, are so designed or administered as to reward the indolent for their indolence.

Those who decry the high cost of an adequate national defense should remember that freedom is not free. It was purchased for us with a great price. If we wish to preserve its blessings for ourselves and our posterity, we must pay the cost of so doing, no matter how great it may be. When all is said, General MacArthur was right when he declared:

The inescapable price of liberty is an ability to preserve it from destruction.

The statement of General MacArthur is peculiarly applicable to the question of the deployment of an ABM system, because such system is designed to protect from destruction weapons on which our liberty may ultimately depend.

I claim no originality in asserting that if she is to survive our perilous age in freedom, America must keep her heart in courage and patience and lift up her hand in strength.

All history proclaims that this is the only way in which free men can keep their freedom in a perilous world.

When the German armies drove the valiant, but ill-trained, British force known as Kitchener's Mob back to the English Channel in the early days of the First World War and despair settled upon Britain, Rudyard Kipling enshrined this truth in one of the great poems of history—the poem entitled "For All We Have and Are"—which inspired the British people to forget their despair and carry on. Let me quote this poem:

For all we have and are,
For all our children's fate,
Stand up and take the war,
The Hun is at the gate!
Our world has passed away,
In wantonness o'erthrown,
There is nothing left to-day
But steel and fire and stone!

Though all we knew depart,
The old Commandments stand:—
"In courage keep your heart,
In strength lift up your hand."

Once more we hear the word
That sickened earth of old:—
"No law except the Sword
Unsheathed and uncontrolled."
Once more it knits mankind,
Once more the nations go
To meet and break and bind
A crazed and driven foe.

Comfort, content, delight,
The ages' slow-bought gain,
They shrivelled in a night,
Only ourselves remain
To face the naked days
In silent fortitude,
Through perils and dismays
Renewed and re-renewed.
Though all we knew depart,
The old Commandments stand:—
"In courage keep your heart,
In strength lift up your hand."
No easy hope or lies
Shall bring us to our goal,
But iron sacrifice
Of body, will, and soul.
There is but one task for all—
One life for each to give.
What stands if Freedom fall?
Who dies if England live?

America must keep her heart in courage and patience and lift up her hand in strength.

And the best testimony that the Senate can give concerning the willingness of America to keep her heart in courage and patience and to lift up her hand in strength is to vote in favor of the deployment of the ABM.

Mr. President, I yield the floor.

Mr. STENNIS. Mr. President, how much time do the opponents of the pending amendment have?

The PRESIDING OFFICER. The opponents of the amendment have 67 minutes.

Mr. JAVITS. Mr. President, how much time do the proponents of the amendment have?

The PRESIDING OFFICER. The proponents of the amendment have 20 minutes remaining.

Mr. STENNIS. Mr. President, I had asked the Senator from Kansas (Mr. DOLE) to defer his speech earlier in the afternoon.

Mr. DOLE. Mr. President, I will defer to the Senator from New Jersey.

Mr. JAVITS. Mr. President, I yield 10 minutes to the Senator from New Jersey.

Mr. STENNIS. Mr. President, I yield another 5 minutes to the Senator from New Jersey.

The PRESIDING OFFICER. The Senator from New Jersey is recognized for 15 minutes.

THE ABM AND THE CHANGED STRATEGIC MILITARY BALANCE

Mr. CASE. Mr. President, I have received a letter, dated July 15, from Malcolm E. Smith, Jr., of St. James, N.Y. Mr. Smith was shown as having paid for a full-page advertisement that recently appeared in newspapers all over the country. The ad was headlined "The Real Truth About How Many U.S. Senators Are Being Tricked by Russia."

Mr. Smith has attached to his letter of July 15 a brief digest of a recent American Security Council study entitled "The ABM and the Changed Strategic Military Balance."

I ask unanimous consent that the text of Mr. Smith's letter, of his digest of the American Security Council study, and of a list, also enclosed with his letter, of the 31 outstanding experts who prepared the study be printed in the Record.

There being no objection, the material was ordered to be printed in the Record, as follows:

St. James, N.Y.,
July 15, 1969.

DEAR SENATOR: I have made a short digest of the recent American Security Council study by 31 leading experts especially for your benefit. It gives you the essential facts of the 72 page study in a few minutes reading time. I urge you to read it before you vote on ABM. No responsible authority has disputed the facts this study presents.

Sincerely,

MALCOLM E. SMITH, JR.

THE ABM AND THE CHANGED STRATEGIC MILITARY BALANCE: A SHORT DIGEST OF THE AMERICAN SECURITY COUNCIL STUDY

(Prepared by Malcolm E. Smith, Jr.)

The most important facts and statistics of concern to Senators, Congressmen, News Writers and Citizens.

31 outstanding experts including Dr. Edward Teller, General Nathan F. Twining, Admiral Lewis L. Strauss, General Thomas Power and 27 more have jointly prepared a detailed study on exactly what the Soviet Union has done, is doing, and is continuing to do in the development of offensive missile capability. The study was completed in May, 1969. The facts in this study must be known because, as the American Security Council states, "Not a single political or military authority has been able to offer any reasonable explanation for the current Russian build-up of staggering destructive power except in terms of deliberate, coldly calculated aggressive intentions."

The Most Important Facts and Statistics From The 72 Page ASC Study:

1. The combined total of ICBMs, IR/MRBMs (Intermediate and Medium Range Ballistic Missiles) is now estimated at 2750 for the U.S.S.R. to 1,710 for the U.S.A. p. 10.
2. The U.S.S.R. now has whole families of military (and naval) weapons systems that the United States does not have in its inventory. p. 11.
3. The Soviets presently enjoy a clear lead in space orbital weapons . . . Properly deployed, a significant number, let us say 100, could be in a position to attack the United States in a matter of seconds after the button was pushed in the Kremlin. p. 11.
4. The Soviets have an estimated 1,000 Intermediate and Medium Range missiles which are primarily aimed at Europe and now completely pin Europe down. p. 11.
5. The Soviets have very large 50-100 megaton nuclear weapons which were tested in 1961-62 . . . adapted for missile delivery. p. 11.
6. The Soviets have the Bear Bomber. It is the world's longest range, highest endurance bomber . . . an effective anti-shipping and anti-submarine attack aircraft with air to surface attack missiles on board. p. 11.
7. Furthermore, the Soviet Union has been developing a sophisticated ABM defense system for ten years and now has anti-ballistic missiles deployed around Moscow and in a "Blue Belt" defense line described by Marshal Malinovsky as being "for the de-

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fense of the entire territory of the Soviet Union." p. 11.

8. In connection with their missile defense program, the Soviets are developing a comprehensive civil defense program . . . spending about ten times as much effort as the United States in providing the Soviet society an adequate civil defense. p. 11.

9. The U.S.S.R. may invest at least \$50 to \$100 billion more in strategic forces between now and 1975 than the United States, unless the relative trends change substantially. p. 24.

10. Whereas many voices in the U.S. call for cuts in the defense budgets and large new expenditures for social reconstruction programs, the Soviet Union is able to devote the lion's share of its economic resources to weapons systems while holding expenditures for the domestic sector to very low levels. p. 31.

11. The U.S. News and World Report (Feb. 6, 1967, p. 34) estimated as a result of their study, that almost 70 percent of the U.S.S.R. military budget was being devoted to strategic forces. p. 23.

12. Former Secretary of Defense Clark Clifford stated in his January 15, 1969 Posture Statement that the United States had 1,054 Intercontinental ballistic missiles (ICBMs) and the Soviets had 900 ICBMs on September 1, 1968. p. 36.

On March 19, Secretary of Defense Laird testified to the Senate Committee on Armed Services: "As of today, the Soviets have in being and under construction more ICBM launchers than the 1,048 possessed by the United States." p. 36.

On April 25, 1969, Secretary Laird reported the Soviet ICBM total as 1,140. This includes 1,000 ICBMs in hardened sites and 140 ICBMs on launching pads. (footnote: This was in New York Times, April 26, 1969, p. 1.) He also said that the Soviets could have 2,500 ICBMs by 1975. p. 36.

13. Of special concern is the Soviet development and deployment of a very heavy intercontinental ballistic missile, the SS-9, which was unknown to the U.S. public until it was disclosed by Secretary Laird in his initial appearance this Spring before the Senate Armed Services Committee. This missile carries a warhead in the range of 20-25 megatons, far larger than anything in the U.S. inventory. Because of its size and its accuracy the SS-9 regarded as a weapon designed to knock out American Minuteman ICBMs. p. 37.

14. The figures indicate that former Secretary of Defense McNamara's assessment in his defense posture statement in 1968 that "the Soviet ICBM force will continue to grow over the next years, but at a considerably smaller rate than in the recent past," was not correct. p. 37.

15. President Nixon emphasized our faulty intelligence estimates when he noted during his press conference on April 18, 1969 that production of SS-9 missiles and nuclear submarines has been 60 percent greater than was estimated in 1967 when the decision was first made to deploy the Sentinel ABM system. p. 40.

16. The present Soviet ICBM force now includes well over 200 SS-9s and this deployment is progressing at a fairly rapid rate—particularly since December, 1968. This is the missile which is projected by the Defense Department to reach possibly 500 by 1975. This missile booster can also be adapted to fire an orbital bombardment warhead. p. 40.

17. In addition to the SS-9, the Soviets are continuing to deploy the SS-11 and the newer SS-13 model ICBMs. These carry smaller warheads than the SS-9, but the SS-13 is the first solid-fueled Soviet ICBM and it can be developed in large numbers. p. 40.

18. The study notes the increasing confidence of Soviet leaders that they can build

up their offensive capabilities with less fear of detection by U.S. space reconnaissance vehicles. p. 40.

19. "Mobile complexes for launching intercontinental hard-fuel missiles are the most important latest features. The complexes have high maneuverability, can be well camouflaged, and therefore, cannot be spotted by the enemy's aerial or space reconnaissance. Some of the latest Soviet rockets are suitable for orbital launching." (quote from TASS quoting Deputy Defense Minister Moskalenko on February 19, 1969) p. 40.

20. The U.S.S.R. has built some eight types of ICBMs in the last 10 years (SS-6 through SS-13). p. 40.

21. "They are also working hard on FOBS . . . also designed to reduce warning time to our bombers so that they will not have sufficient time to become Airborne" (quoting Secretary Laird's testimony of March 20) p. 41.

22. "We know that the Soviets have been moving ahead with a rather active program in producing Polaris-type submarines. They are now in production. They are not yet deployed as far as we know." (quoting Deputy Defense Secretary Packard in his testimony before the Senate Armed Services Committee on March 19) p. 41.

The submarine referred to here (above) is the "Y" class, which went into production in 1968. Seven were commissioned in that year and the Soviets have a production capability now estimated at one per month. The sub carries 16 underwater-launched, 1500 mile range missiles. p. 41.

23. The Georgetown Center for Strategic Studies, in a forthcoming study, estimates total Soviet submarine-launched ballistic missiles at 350. p. 42.

24. In his Congressional testimony, Deputy Secretary Packard indicated that if the Soviets employ their maximum production rate for "Y" class submarines than their Polaris-type missiles alone could exceed the U.S. total of 656 by the end of Fiscal Year 1971. p. 42.

25. The Soviet Navy has more than a 2 to 1 numerical advantage over the U.S. Navy in this area of sea warfare (attack submarines) and this is a matter of concern since the attack submarine is considered to be the most effective weapon against nuclear submarines. p. 42.

26. The U.S. needs to be able to deliver six times as many warheads as would the Russians to achieve destruction "parity" with them (referring to Secretary Laird's testimony to the Senate Foreign Relations Committee). p. 46.

27. The Soviet Union has built a belt (often referred to as the "Blue Belt" defense system) defense ranging from the Baltic Coast and named for one of the anchors in the line—the city of Tallinn, capital of Estonia. Marshal Malinovsky reported the completion of this belt defense system to the 23rd Congress of the Communist Party of the Soviet Union. At that time he described it as being "for the defense of the entire territory of the Soviet Union. p. 49.

28. Recent news accounts indicate there are some 67 P-R-O missile sites around the Russian capital. The Soviet Union officially describes P-R-O's mission as the . . . interception and destruction of enemy missiles or rockets in space, preferably at distant approaches to their objectives and far from national territory." (This quote is from "Troops of National Air Defense (1968), book by Marshall P. F. Batitsky). p. 49.

29. The U.S.S.R. is spending more than twice as much as the United States to build its strategic military strength. The U.S.S.R. is spending about \$18 billion yearly or about 4 to 5 percent of its gross national product on strategic military forces. The U.S. strategic military budget is only \$7.6 billion yearly, or less than 1 percent of its gross national product. p. 62.

30. The Soviet Union is developing its defensive strategic forces at a steady pace which gives every indication that the Soviets are, or soon will be in a position to limit a retaliatory blow which the United States might deliver after absorbing the weight of a Soviet first strike, p. 62.

THE 31 OUTSTANDING EXPERTS WHO PREPARED THE ASC STUDY

Members of this committee are outstanding experts in their fields. They were selected as being the best qualified in different aspects of this complex subject. Their combined qualifications make them the most outstanding independent committee to consider this subject. These men are busy in their professions but took time out and donated their efforts to this study. They include two Nobel prize winning scientists; the developer of the H-bomb; the developer of the over-the-horizon radar; a former chairman of the Joint Chiefs of Staff; the general who headed the development of our own ICBMs; the present head of the A.E.C.'s weapons division at Los Alamos; a former commander of the Strategic Air Command; a former chairman of the Atomic Energy Commission; a former Commander of the Polaris Submarine Fleet; a world renowned diplomat; senior strategists; senior editors of leading American newspapers; leading American businessmen, and other such authorities whose combined knowledge and experience make this study required reading for every concerned citizen.

In two previous studies prepared at the request of the House Armed Services Committee this group accurately predicted the present adverse strategic balance.

COCHAIRMEN

Dr. Willard F. Libby, Director, Institute of Geophysics and Planetary Physics, UCLA.
Dr. William J. Thaler, Chairman, Physics Department, Georgetown University.
Gen. Nathan F. Twining, U.S.A.F. (Ret.), Former Chairman, Joint Chiefs of Staff.

OTHER MEMBERS

Gen. Paul D. Adams, U.S.A. (Ret.), Former Commander in Chief, U.S. Strike Command.
Dr. Harold M. Agnew, University of California, Los Alamos Scientific Laboratory.
Dr. James D. Atkinson, Professor of Government, Georgetown University.
G. Duncan Bauman, Publisher, St. Louis Globe Democrat.
Peter Bruce Clark, President, Publisher, The Detroit News.
Adm. Robert L. Dennison, U.S.N. (Ret.), Former Supreme Commander, Atlantic.
The Honorable Elbridge Durbrow, Retired Career Ambassador.
Adm. H. D. Feldt, U.S.N. (Ret.), Former Commander in Chief, Pacific.
Robert W. Galvin, Chairman of the Board, Motorola, Inc.
Vice Adm. Elton W. Grenfel, U.S.N. (Ret.), Former Commander, Atlantic Submarine Fleet.
Dr. Montgomery Johnson, Chief Scientist, Philco Ford Corp.
Vice Adm. R. E. Libby, U.S.N. (Ret.), Former Deputy Chief of Naval Operations.
Vice Adm. Fitzhugh Lee, U.S.N. (Ret.), Former Commandant, National War College.
Dr. Nicholas Nyaradi, Director, School of International Studies, Bradley University.
Dr. Stefan Possony, Director of International Studies, Hoover Institution, Stanford University.
Gen. Thomas S. Power, U.S.A.F. (Ret.), Former Commander, Strategic Air Command.
Brig. Gen. Robert C. Richardson, U.S.A.F. (Ret.), B. A. Schriever Associates, Inc.
Ira G. Ross, President, American Ordnance Association.
Vice Adm. W. A. Schoech, U.S.N. (Ret.), Former Chief of Naval Material.
Gen. Bernard A. Schriever, U.S.A.F. (Ret.), Former Commander General, Air Force Systems Command.

Adm. Lewis L. Strauss, U.S.N. (Ret.), Former Chairman, U.S. Atomic Energy Commission.

Dr. Kenneth Street, Jr., Professor of Chemistry, University of California (Berkeley).

Dr. A. D. Suttle, Research Scientist.

Dr. Edward Teller, Nuclear Scientist.

Rear Adm. Chester C. Ward, U.S.N. (Ret.), Former Judge Advocate General, U.S.N.

Dr. Kenneth Watson, Professor of Physics, University of California (Berkeley).

Gen. Albert C. Wedemeyer, U.S.A. (Ret.), Chief U.S. Strategist, World War II.

Dr. Eugene P. Wigner, Physicist, Princeton University.

Mr. CASE. Mr. President, I also ask unanimous consent that comments I had prepared on each paragraph in MR. Smith's letter be printed in the RECORD.

There being no objection, the material was ordered to be printed in the RECORD, as follows:

1. "The combined total of ICBM's, IR/MRBM's (Intermediate and Medium Range Ballistic Missiles) is now estimated as 2,750 for the U.S.S.R. to 1,710 for the U.S.A."

Comment: U.S. strategic forces defend against Soviet ICBM's and the small Soviet bomber force. Soviet strategic forces defend against NATO as a whole—that is, against U.S. ICBM's and intercontinental bombers as well as against U.S. medium-range bombers, including U.S. carrier-based bombers, and the tactical nuclear missiles we have in Europe. Yet Mr. Smith's digest reverses the situation. He combines Soviet ICBM's and IR/MRBM's and compares that combined total to U.S. ICBM's and Polaris missiles. He thus ignores our intercontinental bombers and our carrier-based aircraft, as well as the 7,000 or so tactical nuclear weapons in Europe, many of which can hit targets in Warsaw Pact countries. Furthermore, he ignores the program already under way to replace Polaris with Poseidon missiles, which will increase the number of our submarine-launched separately-targetable warheads by a factor of almost ten. Were Mr. Smith to use the more accurate measure of nuclear weapon force loadings he would have had to admit an almost four-to-one superiority on the part of the United States.

2. "The U.S.S.R. now has whole families of military (and naval) weapons systems that the United States does not have in its inventory."

Comment: While the U.S.S.R. has some military and naval weapons systems that the U.S. does not have, the U.S. has some military and naval weapons systems that the Soviet Union does not have. In real terms the United States defense budget has been higher than the Soviet defense budget for at least 20 years. Does Mr. Smith mean to suggest that we should have an even higher defense budget, beyond the present \$80 billion level, or that the United States has not used its defense funds efficiently?

3. "The Soviets presently enjoy a clear lead in space orbital weapons . . . Properly deployed, a significant number, let us say 100, could be in a position to attack the United States in a matter of seconds after the button was pushed in the Kremlin."

Comment: The implication of this paragraph is that the Soviets are on the verge of deploying space orbital weapons. This "fact" is simply not true.

4. "The Soviets have an estimated 1000 Intermediate and Medium Range missiles which are primarily aimed at Europe and now completely pin Europe down."

Comment: While the Soviets have an estimated 1,000 IR/MRBM's aimed at Western Europe, we have about 7,000 tactical nuclear weapons aimed at Eastern Europe, as mentioned above. If their 1,000 weapons "completely pin Europe down," what effect do our 7,000 weapons have? Furthermore, our

ICBM's are targeted on their IRBM's and MRBM's.

5. "The Soviets have very large 50-100 megaton nuclear weapons which were tested in 1961-62 . . . adapted for missile delivery."

Comment: There is no evidence that the Soviets have continued to develop, and certainly not to the point of deployment, the 50-100 megaton nuclear weapons that were tested in 1961-62. The view of U.S. defense authorities has been that it is preferable to have smaller and more accurate nuclear weapons than those of larger megatonnage. If a 50-100 megaton nuclear weapon made sense, it would be perfectly easy for the United States to have one.

6. "The Soviets have the Bear Bomber. It is the world's longest range, highest endurance bomber . . . an effective anti-shipping and anti-submarine attack aircraft with air to surface attack missiles on board."

Comment: The Soviets have a total of about 150 intercontinental bombers while we have 656. I do not believe that any informed expert would be willing to trade our bomber force for theirs.

7. "Furthermore, the Soviet Union has been developing a sophisticated ABM defense system for ten years and now has anti-ballistic missiles deployed around Moscow and in a 'Blue Belt' defense line described by Marshal Malinovsky as being 'for the defense of the entire territory of the Soviet Union.'"

Comment: The Soviet ABM defense system deployed around Moscow is not "sophisticated" by our standards. In the first place, its radar is far less advanced. In the second place, the Soviets are far behind the United States in computer development. And in the third place, the Soviets have deployed only 64 launchers and it would be possible for the United States to saturate this defense, even assuming 100% effectiveness of every interceptor, by targeting 65 warheads on Moscow. The Soviet system has been described as similar to our Nike-Zeus system which we did not deploy because it was decided that the system could not be effective against a Soviet attack. Apparently the Soviets have reached the same conclusion, for originally the Galosh system was to have many more defensive missile launchers.

8. "In connection with their missile defense program, the Soviets are developing a comprehensive civil defense program . . . spending about ten times as much effort as the United States in providing the Soviet society an adequate civil defense."

Comment: The Soviets are far ahead in developing a civil defense program, as are many other European countries who have lived through World War II. Perhaps if we spent less on offensive weapons, and on ineffective defensive weapons, we would be able to devote additional resources to civil defense.

9. "The U.S.S.R. may invest at least \$50 to \$100 billion more in strategic forces between now and 1975 than the United States, unless the relative trends change substantially."

Comment: The ratio of spending on strategic weapons has shifted in favor of the Soviets only recently. The deployment of the major part of the U.S. ballistic missile force occurred much earlier than Soviet deployment. Furthermore, our bomber force was substantially completed in the 1950's and our ballistic missile force by the mid-1960's. In this earlier period, our expenditures were substantially higher than the Soviets and only in the late 1960's, when the Soviets attempted to catch up, has their total spending on strategic weapons begun to exceed ours. We have continued to outspend the Soviets, however, on strategic bombers and ballistic missile submarines. Furthermore, a considerable part of total Soviet spending on strategic weapons has gone for IR/MRBM's, a weapon we have not emphasized since the early 1960's. As far as strategic defense is

concerned, the Soviets have customarily spent more than we have because of their traditional emphasis on defense and the fact that some of the potential threats to them are closer geographically than is true in our case. And with respect to spending on ABM's, if they continue to curtail work on the Galosh system and we increase our spending on Safeguard, the ratio will begin to swing in our favor.

10. "Whereas many voices in the U.S. call for cuts in the defense budgets and large new expenditures for social reconstruction programs, the Soviet Union is able to devote the lion's share of its economic resources to weapons systems while holding expenditures for the domestic sector to very low levels."

Comment: It is true that the Soviet Union holds expenditures for the domestic sector to very low levels and that many voices in the United States call for cuts in defense budgets and for greater expenditures in the domestic sector. This state of affairs argues for a limitation of weapons development and not for such a new development as the Safeguard system.

11. "The U.S. News and World Report (Feb. 6, 1967, p. 94) estimated as a result of their study, that almost 70 percent of the U.S.S.R. military budget was being devoted to strategic forces."

Comment: A large percentage of the Soviet military budget is being devoted to strategic forces because the Soviet inferiority and their wish to gain some sort of parity with the United States.

12. "Former Secretary of Defense Clark Clifford stated in his January 15, 1969 Posture Statement that the United States had 1054 intercontinental ballistic missiles (ICBM's) and the Soviets had 900 ICBM's on September 1, 1968."

"On March 19, Secretary of Defense Laird testified to the Senate Committee on Armed Services: 'As of today, the Soviets have in being and under construction more ICBM launchers than the 1048 possessed by the United States.'"

"On April 25, 1969, Secretary Laird reported the Soviet ICBM total as 1140. This includes 1000 ICBM's in hardened sites and 140 ICBM's on launching pads. (footnote: This was in New York Times, April 26, 1969, p. 1). He also said that the Soviets could have 2500 ICBM's by 1975."

Comment: The fact that the United States and the Soviet Union are presently about equal in the number of ICBM launchers simply means that either country can now destroy the other using only land-based ICBM's. As noted above, the United States is far ahead of the Soviet Union in submarine-launched ballistic missiles, in intercontinental bombers and thus in total nuclear force loadings. We are also far ahead in the development of MIRVs and are on the verge of deploying them while the Soviets have not even tested this weapon. As for Secretary Laird's statement that the Soviets "could have 2,500 ICBM's by 1975" if they continue to deploy ICBM's at the rate at which they were deployed in 1967-68, the intelligence community has estimated that they will not continue to deploy at the same rate and that the number of ICBM's the Soviets will have is far less than 2,500. Furthermore, we will soon be in a position to deploy MIRV's if the Soviet ICBM level increases beyond our estimates and could also deploy additional land-based ICBM's.

13. "Of special concern is the Soviet development and deployment of a very heavy intercontinental ballistic missile, the SS-9, which was unknown to the U.S. public until it was disclosed by Secretary Laird in his initial appearance this Spring before the Senate Armed Services Committee. This missile carries a warhead in the range of 20-25 megatons, far larger than anything in the U.S. inventory. Because of its size and its accuracy the SS-9 (is) regarded as a weapon

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designed to knock out American Minuteman ICBM's."

Comment: The SS-9 was unknown to the U.S. public until this spring but has been known to the intelligence community ever since it was first tested. We have also known about deployment since the beginning. It is true that the missile carries a larger warhead than any U.S. missile, but the United States made a conscious decision some years ago not to develop large megaton warhead missiles. Greater effectiveness even against hard targets can be achieved with smaller and more accurate weapons.

14. "The figures indicate that former Secretary of Defense McNamara's assessment in his defense posture statement in 1968 that 'the Soviet ICBM force will continue to grow over the next years, but at a considerably smaller rate than in the recent past,' was not correct."

Comment: Secretary McNamara's assessment in his defense posture statement in 1968 was correct. The peak rates of the Soviet ICBM deployment were several years ago and the Soviet ICBM force is growing at a smaller rate than in the recent past.

15. "President Nixon emphasized our faulty intelligence estimates when he noted during his press conference on April 18, 1969 that production of SS-9 missiles and nuclear submarines has been 60 percent greater than was estimated in 1967 when the decision was first made to deploy the Sentinel ABM system."

Comment: At the time of the President's press conference on April 18, the production and deployment of SS-9 missiles and nuclear submarines was within the range predicted by intelligence estimates in 1968.

16. "The present Soviet ICBM force now includes well over 200 SS-9s and this deployment is progressing at a fairly rapid rate—particularly since December, 1968. This is the missile which is projected by the Defense Department to reach possibly 500 by 1975. This missile booster can also be adapted to fire an orbital bombardment warhead."

Comment: As noted above, the peak years for deployment of the SS-9 have been in the past. The Defense Department keeps changing its estimate of the number of SS-9s which the Soviet Union will have by 1975 but the most recent estimate by the intelligence community, which Secretary Laird confirmed in a hearing before the Committee on June 23, was some 400 SS-9s by 1975, not 500. While it may be possible to adapt the SS-9 missile booster to fire an orbital bombardment warhead, the Soviets have not demonstrated this capability so far. As noted above, the United States is far ahead in the development of MIRVs which have the same effect as an orbital bombardment.

17. "In addition to the SS-9, the Soviets are continuing to deploy the SS-11 and the newer SS-13 model ICBMs. These carry smaller warheads than the SS-9, but the SS-13 is the first solid-fueled Soviet ICBM and it can be developed in large numbers."

Comment: It is true that the Soviets are continuing to deploy the smaller SS-11 and the SS-13 missiles which are similar to our Minuteman in size. The SS-13 is the first solid fuel Soviet ICBM. This fact simply shows that they are behind us in technology, for we gave up solid fueled missiles long ago in favor of the more efficient liquid fueled missiles.

18. "The study notes the increasing confidence of Soviet leaders that they can build up their offensive capabilities with less fear of detection by U.S. space reconnaissance vehicles."

Comment: There is no evidence that Soviet leaders are more confident that they are subject to less detection by U.S. space reconnaissance vehicles. And it is not true. We are ahead in space reconnaissance technology and getting better all the time. The CIA briefings given the Committee show

convincingly that surveillance is more rather than less efficient with every passing year.

19. "Mobile complexes for launching intercontinental hard-fuel missiles are the most important latest features. The complexes have high maneuverability, can be well camouflaged, and therefore, cannot be spotted by the enemy's aerial or space reconnaissance. Some of the latest Soviet rockets are suitable for orbital launching." (quote from TASS quoting Deputy Defense Minister Moskalenko on February 19, 1969)"

Comment: While the Soviets may be developing mobile complexes for launching ICBMs, there is no reason why the United States could not do likewise were we to decide that mobile missile launchers were desirable.

20. "The U.S.S.R. has built some eight types of ICBMs in the last 10 years (SS-6 through SS-13)."

Comment: That the Soviets have built eight types of ICBM's in the last ten years proves nothing except that they are still looking for a satisfactory model. No one would trade our missile force for theirs because ours is superior for any desired purpose.

21. "They are also working hard on FOBS . . . also designed to reduce warning time to our bombers so that they will not have sufficient time to become Airborne." (quoting Secretary Laird's testimony of March 20)."

Comment: There is no evidence that the Soviets have deployed FOBS. A FOBS capability against aircraft would have to be synchronized with the destruction of our ICBM's and submarine-launched ballistic missiles to be effective. Otherwise, an attack on the bombers would provide warning to permit the launching of ICBM's and Polaris/Poseidon missiles.

22. "We know that the Soviets have been moving ahead with a rather active program in producing Polaris-type submarines. They are now in production. They are not yet deployed as far as we know." (quoting Deputy Defense Secretary Packard in his testimony before the Senate Armed Services Committee on March 19)."

"The submarine referred to here (above) is the "Y" class, which went into production in 1968. Seven were commissioned in that year and the Soviets have a production capability now estimated at one per month. The sub carries 16 underwater-launched, 1500 mile range missiles."

Comment: We have 41 Polaris submarines, most of which are deployed on station at all times. The Soviets are producing such submarines but have not yet even deployed them. U.S. superiority is unquestioned. While the Secretary of Defense originally estimated Soviet production capability of "Y" class submarines at one per month he changed that estimate, in his statement on May 22, to eight per year.

23. "The Georgetown Center for Strategic Studies, in a forthcoming study, estimates total Soviet submarine-launched ballistic missiles at 350."

Comment: The Soviets have commissioned only seven to ten submarines to date and each carries 16 missiles. The estimate cited includes many submarine-launched missiles carried on nonnuclear submarines of lesser range. Our sea-based force of missiles is much superior to theirs.

24. "In his Congressional testimony, Deputy Secretary Packard indicated that if the Soviets employ their maximum production rate for "Y" class submarines then their Polaris-type missiles alone could exceed the U.S. total of 656 by the end of Fiscal Year 1971."

Comment: The statement that the Soviets could exceed the U.S. total of Polaris-type missiles by the end of Fiscal Year 1971 completely ignores the fact that we are already converting Polaris submarines to Poseidon missiles so that by the end of Fiscal Year 1971, if the Soviets employ their maximum

production rate but do not improve their missile system on these submarines, we will have almost ten times as many submarine-launched ballistic missiles as they.

25. "The Soviet Navy has more than a 2 to 1 numerical advantage over the U.S. Navy in this area of sea warfare (attack submarines) and this is a matter of concern since the attack submarine is considered to be the most effective weapon against nuclear submarines."

Comment: Attack submarines would have to be able to seek out, find and destroy all U.S. Polaris submarines on station simultaneously and, at the same time, the Soviets would have to be able to destroy our ICBM force and our strategic bombers were they to avoid an annihilating retaliatory strike. The Secretary of the Navy and Mr. Packard have expressed confidence that the Polaris submarines will remain "highly survivable until at least the late 1970's". The Secretary of the Navy has also stated that the Soviets have not been able to detect or track "any" of our Polaris submarines while on station.

26. "The U.S. needs to be able to deliver six times as many warheads as would the Russians to achieve destruction 'parity' with them (referring to Secretary Laird's testimony to the Senate Foreign Relations Committee)."

Comment: The Secretary of Defense's statement regarding the need to deliver six times as many U.S. warheads against the Soviet Union to achieve destruction "parity" has been challenged by many authorities. The fact is that we have more than enough ICBM's to destroy the 50 largest Soviet cities fifty times over. All talk of destruction "parity" is rather inconsequential in the light of such a fact.

27. "The Soviet Union has built a belt (often referred to as the 'Blue Belt' defense system) defense ranging from the Baltic Coast and named for one of the anchors in the line—the city of Tallinn, capital of Estonia. Marshal Malinovsky reported the completion of this belt defense system to the 23rd Congress of the Communist Party of the Soviet Union. At that time he described it as being 'for the defense of the entire territory of the Soviet Union.'"

Comment: The judgment of most intelligence authorities is that the "Blue Belt" defense system, or Tallinn line, is not an ABM system but a defense system against bombers.

28. "Recent news accounts indicate there are some 67 P-R-O missile sites around the Russian capital. The Soviet Union officially describes P-R-O's mission as the . . . interception and destruction of enemy missiles or rockets in space, preferably at distant approaches to their objectives and far from national territory." (This quote is from 'Troops of National Air Defense' (1968), book by Marshall P. F. Batitsky)"

Comment: No matter what news accounts indicate, there are 64, and not 67, Galosh missile sites around Moscow, according to the Secretary of Defense. As noted above, the Galosh is relatively primitive, its deployment has been stopped in mid-stream and it could easily be saturated by American offensive missiles, just as Safeguard could be saturated by Soviet missiles because of the limited number of Sprints and Spartans involved.

29. "The U.S.S.R. is spending more than twice as much as the United States to build its strategic military strength. The U.S.S.R. is spending about \$18 billion yearly or about 4 to 5 percent of its gross national product on strategic military forces. The U.S. strategic military budget is only \$7.6 billion yearly, or less than 1 percent of its gross national product."

Comment: As noted above, Soviet spending on strategic offensive-defensive weapons has recently been higher than that of the United States, but in previous years U.S.

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spending has been higher. And with new weapons systems presently being planned, U.S. spending could exceed Soviet spending in the next year.

30. "The Soviet Union is developing its defensive strategic forces at a steady pace which gives every indication that the Soviets are, or soon will be in a position to limit a retaliatory blow which the United States might deliver after absorbing the weight of a Soviet first strike."

Comment: There is no indication that the Soviet Galosh system, which is the only Soviet defensive strategic force, could limit a military blow which the United States might deliver. The system does not protect Soviet missiles or even the Soviet population but is designed to protect only Moscow. Furthermore, as noted above, it can easily be saturated.

THE WRONG SYSTEM IN THE WRONG PLACE
AT THE WRONG TIME

Mr. CASE, Mr. President, the Senate debate that is now drawing to a close reflects a profound—and, in my judgment, irreversible—change in our approach to the problem of assuring our survival as a nation.

The American people, I believe, are no longer willing to accept as inevitable the upward spiral of the arms race.

And the Senate clearly is no longer willing to accept as infallible the Pentagon's or even the President's judgment that a particular weapons system is essential to national survival.

This I believe to be true, whether or not a clear majority of the Senate votes to deny the President's request for authority to deploy the Safeguard antiballistic-missile system.

What has already happened, in short, may have much more to do with the shape of the future than the precise outcome of the vote we are approaching.

And because I am concerned about the shape of the future, as are all of my colleagues and as is the President, I think it most important that we understand what has happened and why.

Three years ago the Congress authorized and appropriated more than \$150 million for advance procurement of the Nike X ABM system. The Joint Chiefs of Staff asked for the funds as a first step to deployment, although President Johnson opposed deployment and did not release the money.

Nevertheless, when the matter came before us on August 18, 1966, the Senate, by an overwhelming vote of 73 to 14, rejected an amendment to delete the funds offered by our recent colleague, Senator Clark of Pennsylvania.

I voted against the Clark amendment because I was not so certain that the Nike-X should not be deployed that I was prepared to withhold funds which the President might later decide to release.

A good many other Senators who are here today voted, as I did, for substantially the same reason, I suspect.

The next year, President Johnson took a different approach to the issue. In his budget message of January 24, 1967, he proposed that—

We continue intensive development of Nike-X but take no action now to deploy an antiballistic missile defense; initiate discussions with the Soviet Union on the limitation of ABM deployments; and in the event these discussions prove unsuccessful . . . reconsider our deployment decision.

"To provide for actions that may be required at that time," he asked for an additional \$377 million. And because those of us who shared his view that we must seek to limit the arms race through negotiations found this to be a reasonable approach, no effort was made to withhold the requested funds in 1967.

But only 5 days after these funds cleared Congress, a most remarkable decision was announced by Secretary of Defense McNamara. Speaking in San Francisco on September 18, he concluded a brilliant analysis of the dynamics of the nuclear arms race by finding "marginal grounds" for deploying a thin ABM system against a potential Chinese threat.

So incongruous was this conclusion in the light of all his preceding discussion of ABM systems that many of us recognized a compelling need to study much more thoroughly the underlying technology and assumptions that were involved.

In my own case, that study began in a long discussion with Dr. George Kistiakowsky, who had been science adviser to President Eisenhower and was generally acknowledged to be an eminent authority in the field of nuclear weaponry. Others went about the problem in similar fashion, I am sure.

As we continued into 1968 our study of the proposed Sentinel deployment, some of the major questions came into sharper focus.

The Sentinel system, it will be recalled, was purported to give assurance of protection for most of the country against the kind of attack we were told China might be capable of delivering in the mid-1970's—a "light" and "unsophisticated" attack of from 50 to 100 intercontinental ballistic missiles.

Since the Chinese had just tested their first hydrogen weapon and had yet to deploy any ICBM's, what reason had we to count on them to build an offensive force so patently vulnerable to the claimed defensive capabilities of the Sentinel ABM system?

There was no reason, so far as I could determine, other than the need to make that assumption in order to justify the deployment of an allegedly Chinese-oriented ABM system.

The very thinness of the anti-Chinese rationale underscored the importance of another question.

What reason had we to suppose that the Soviets, from whom we were actively seeking agreement to begin negotiations on strategic arms limitations, would view Sentinel as directed against China and not against the Soviet Union, as the Administration continued to assert?

Again, there was none, so far as I could determine. On the contrary, there was much to suggest that the Soviets would be driven to the worst assumptions about our purposes, since Sentinel was clearly an area-defense system and, once deployed, could be thickened rapidly.

Their reaction to our deployment of Sentinel, I concluded, would most likely duplicate our reaction to the discovery some years ago that the Soviets were deploying a primitive ABM system. The United States immediately gave highest

priority to the development of multiple warheads for our offensive missiles, in order to insure penetration to their targets.

Thus, deployment of Sentinel seemed most likely to hasten Soviet development of larger and more sophisticated offensive missile forces, and further complicate thereby the task of bringing the nuclear arms race to a halt through negotiations.

It was largely for these reasons that I joined with others in opposing deployment of Sentinel in 1968. Our efforts in the Senate centered on an amendment by Senator COOPER and Senator HART to delay deployment for one year. And because some funds for Sentinel deployment were to be authorized or appropriated in four different bills, four votes were taken on the issue.

The first vote came on April 18 when, with more than one-third of the Senate absent, the Cooper-Hart amendment failed, 28 to 31. I then proposed to Senator GORE, as chairman of the Disarmament Subcommittee of the Committee on Foreign Relations, that he hold public hearings on the foreign policy implications of ABM deployment, so that we all might be better informed on the issue prior to further consideration on the floor.

Unfortunately, it was not possible to have those hearings at that time. Our further efforts to forestall Sentinel deployment were all rebuffed: on June 24, by a vote of 34 to 52; on August 1, by a vote of 27 to 46; and, finally, on October 2, by a vote of 25 to 45. At one time or another, 41 Senators had been recorded in opposition to deployment. But our case had yet to prevail.

The pertinent developments of the last 10 months can be summarized quickly.

On the diplomatic front, the Soviet invasion of Czechoslovakia, and the election of a new President properly determined to review national policy, contributed to continued delay in initiating arms talks. That a date has yet to be set is deeply disappointing to me and many others.

On the domestic front, localities selected to play host to Sentinel installations became arenas of great disputation. Upon taking office, the Nixon administration stopped deployment; and 8 weeks after taking office, the President set out a new rationale for deploying ABM around missile sites instead of cities, and a new label—Safeguard—for the same set of components.

On the legislative front, Senators who had questioned the need for Sentinel found themselves impelled to make a still more rigorous examination of Safeguard and, indeed, of the entire cycle of action and reaction that has perpetuated the nuclear arms race.

And this time the Senate went at the job in its most educational and responsible fashion—through open, public hearings before the Disarmament Subcommittee, the Committee on Foreign Relations and—most significantly—the Armed Services Committee.

Those hearings, in their collective impact upon the Senate and the Nation, epitomize the profound change of which I have spoken: We do not accept the inevitability of the arms race and we can-

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not abdicate to the Pentagon or even the President our responsibility to make our own decisions on the basic questions of national survival.

Thanks to the help of some of the finest scientific minds in the Nation, too many of us have been exposed to too much about Safeguard that is self-serving, contradictory, or irrational to ever again permit the security of this Nation to turn on a mere appeal for loyalty to serve, to party, or to country. And the sooner that fact is absorbed, the sooner we can get on with the business of taking sensible steps to solve real problems at home and abroad.

It is against this background that, tomorrow, I shall vote for the Cooper-Hart amendment to prohibit deployment of the Safeguard system. The Senate is familiar with the many arguments that have been made for and against deployment. I wish only to make clear my own understanding of the central issue.

It is not, in my judgment, the question of whether deployment will or will not strengthen the President's hand in negotiations or make more or less likely a viable arms control agreement with the Soviets. Those questions are imponderable, I believe.

Nor is the central issue a question as to whether there is something inherently right or wrong about seeking an active defense against ballistic missiles. We have spent \$3 billion on that search in this decade, and I fully expect that we will spend as much or more over the next decade on ABM research and development, for the need is as intractable as the problem is infinitely complex.

Nor is the central issue the question of "national priorities." That concept has served and will continue to serve a useful purpose in focusing attention on the fact that we do not possess unlimited resources and must, therefore, give greater heed to how we use them. And if Safeguard offered any real assurance of adding to the Nation's security, I would give it as much support as I must now deny it.

The central issue is whether Safeguard would do the job the administration says it must and can do.

That job, as we all know, is to provide by the mid-1970's sufficient assurance that a significant portion of our Minuteman force would survive a Soviet attack so that no such attack would be tempting. Such assurance, we have been told, would serve the imperative of deterrence, and without such assurance the credibility of our capacity to respond in kind to a devastating attack would be seriously eroded some years hence.

The question before us is simply this: will Safeguard do the job of deterring an attack on those 350 Minuteman missiles in Montana and North Dakota?

The evidence is overwhelming that the answer must be "No."

It is undisputed that all of the components to be used—the radars to detect and track incoming warheads, the Spartan and Sprint missiles to be fired at them, and the computers to make all this possible within seconds—all were designed for the quite different purpose of meeting a missile attack on our cities.

This is understandable, for since the Army was first given responsibility for ballistic missile defense back in the 1950's, it has concentrated its research efforts on area defense of cities or "soft targets," not on point defense of such "hard targets" as underground Minuteman silos.

And it was to the protection of cities that Sentinel deployment was pointed. But when that was found to be undesirable by the new administration—and I agree with their decision—the very same components of Sentinel were repackaged as Safeguard and assigned the job of hard-point defense.

The trouble with this is that a system which may be well-designed to intercept a few warheads directed at a city turns out to be very poorly designed to intercept many warheads directed against a hardened Minuteman field.

The critically important missile site radar turns out to be far more vulnerable to destruction than the Minuteman the system is asked to defend, and for that reason the most likely target of a first strike.

So the radar itself must be defended by Safeguard's own Spartan and Sprint missiles. But these could easily be exhausted in defending the radar against the Soviet version of our Minuteman—the SS-11.

The radar would then almost certainly be destroyed, leaving the Minuteman themselves defenseless against attack by that much larger Soviet SS-9 missiles.

Safeguard would be, quite simply, the wrong system in the wrong place at the wrong time.

Rather than engage in such needless waste, we should heed the advice of Dr. Wolfgang Panofsky, the eminent physicist who now heads the Stanford Linear Accelerator Center. Here is the way he summarized the problem when he testified before the Armed Services Committee on April 22:

On reviewing the stated purposes of the modified Sentinel system I conclude that the mission of defending the Minuteman force is the only one which may become a valid and important motive in the future. However, the modified Sentinel system which is a simple reconfiguration of components designed for city defense is not a reasonable engineering solution for this problem. A good technical solution for this purpose should involve smaller and less expensive missiles and larger numbers of simpler hardened radars.

The PRESIDING OFFICER. The time of the Senator has expired.

Mr. CASE. Mr. President, I ask unanimous consent that I may proceed for 5 additional minutes, and that the time not be charged to either side.

The PRESIDING OFFICER. Who yields time?

Mr. HART. Mr. President, the Senator asked unanimous consent that the time not be charged to either side.

The PRESIDING OFFICER. Is there objection? The Chair hears no objection, and it is so ordered.

Mr. CASE. Mr. President, Dr. Panofsky also testified:

Considering the enormous combined second-strike power of the Polaris and Poseidon fleets, the SAC bombers, Minuteman and

Titan, and the tactical nuclear armed aircraft in Europe, it appears impossible that the Soviet Union can attain a first-strike power by the mid-1970's. For this reason we would well afford the time to develop a properly designed active defense for Minuteman, should it be required.

This strikes me to be so eminently sensible a course that I can only continue to hope the Nixon administration will come around to the same view.

The Cooper-Hart amendment points the way. The bill before us would authorize ample funds for continuing research and development on ballistic missile defense, and the amendment would in no way detract from that effort. And if additional funds were clearly needed to move in the direction proposed by Dr. Panofsky—and by many others—there is no question in my mind that the Senate would agree to supply them.

Tomorrow we shall have another opportunity to affirm our determination as a nation and as an institution to be the masters of our fate. As one who believes deeply in the rationality of man, I look forward to that opportunity with high confidence in the Senate's ability to lead our Nation.

I have one brief additional comment which I would like to make on a point which has been raised over and over again, and that is that the Senate and the Congress must not tie the hands of the President in dealing with this serious matter. I agree that the Senate should not tie the President's hands to any ineffective system of defense whatever and that nothing else should tie his hands. The hands of the President should not be tied specifically to an ineffective ABM which would not do the job he expects it to do.

If deployment of this proposed Safeguard system is once begun, the simple fact is that research and development on a new and effective design will stop and that by deployment of this ineffective system we will have destroyed the President's chance to get a system of ballistic missile defense that will do the job.

Mr. President, those of us who propose that the Cooper-Hart amendment be adopted are, in fact and in real substance, proposing to free the President's hand to do the job in the best way calculated to accomplish this purpose.

Mr. MURPHY. Mr. President, will the Senator yield?

Mr. CASE. I yield.

Mr. MURPHY. Mr. President, I would like to ask if it has been the experience in the past, in fact the entire history of space advance, that once a program has started that all research and development has stopped.

Mr. CASE. The point is we have not deployed anything.

Mr. MURPHY. That is not the question. My question was: Is it not true that we started on the first missile? Let us go back to the little Vanguard. All research and development did not stop with that. It continued and we went on to the Titan. Does not research and development continue in any event?

Mr. CASE. If it were merely a matter of wasting the billions of dollars that

Safeguard would cost, that would be bad enough.

But the point is that once we put it into the ground this enormously soft and vulnerable system of radars and computers, we will have stopped attempting to design the kind of multiple and hardened radars which Dr. Panofsky and others have suggested to do the job that should be done.

If I were not convinced of this I would regard the matter before us as wasting billions of dollars. It is more than that. It is endangering the possibility of getting the kind of defense against ballistic missiles which this country may need.

Mr. STENNIS. I yield 15 minutes to the Senator from Kansas.

IN SUPPORT OF THE PRESIDENT ON THE ABM

Mr. DOLE. Mr. President, almost 50 years ago that great editor from my State, William Allen White, wrote:

This nation will survive, this state will prosper, the orderly business of life will go forward if only men can speak in whatever way given them to utter what their hearts hold . . .

The last few weeks I have heard in this Chamber such heartfelt convictions of men trying to do what they think is right to achieve world order and maintain the security of the United States. We have heard from both sides of the aisle. We have heard from men labeled liberals and those conservatives. We have heard from those who might be labeled "hawks" and those who might be labeled "doves." Throughout the Nation we have also heard opposing views on the subject of our defense system. Equally reputable statesmen, equally distinguished scientists and equally moral and patriotic men have presented differing views.

Spirited debate is inevitable when we are confronted with a problem of such technical magnitude and scientific complexity as our deterrent defense system. The issue does not lend itself to simplistic opinions and easy answers. But whatever position each Senator forms after much consideration and study, he must be guided first and foremost by the desire to bring peace, order, and security to the world. We know that although absolute viewpoints are impossible, absolute values are essential. As a Senator who believes that commitment to such values is his first responsibility I now utter what is in my heart.

PEACE OBJECTIVES

I believe we are on the threshold of achieving some meaningful peace settlements. I believe that we are ready to move from the "era of confrontation to the era of negotiation."

But peace is not going to be won by general statements of intentions; it is going to be won by limited accommodations and treaties. It is not going to be gained suddenly in one settlement, but rather in fragments, treaty by treaty. The nonproliferation treaty or an arms control pact may be the initial steps toward peace. Only by strenuous and often frustrating negotiations can we reach agreements on these sensitive subjects. But such negotiations, however, requires diplomatic and military credibility.

We will have no such credibility unless we maintain strategic force equilibrium. We will have no such credibility unless we can protect our nuclear deterrent power. We will have no such credibility unless we sustain a comparative sufficiency in defense deployment. And without such credibility an America—stripped of necessary bargaining power—would be bargaining uphill when negotiating with the Soviet Union.

NEED FOR DETERRENCE

Today there is no question of our ability to deter an attack from Soviet Russia. Even after an enemy first-strike—our surviving missiles and bombers would be able to inflict unacceptable damage.

Our Polaris missiles at sea would survive. Most of our Minuteman force would survive. Most of our alert bomber force would survive.

Then, if we have such nuclear sufficiency today, why is it necessary to begin developing the Safeguard defense system?

As former President Eisenhower said: Our real problem is not our strength today; it is the vital necessity of our action today to insure our strength tomorrow.

So it is that we should make the Safeguard deployment not because of any present threat to our national security but because of the possibility of a future threat. In 1969 and 1970, we can protect our nuclear striking power. But if we are to continue such protection in 1973, 1974, and 1975, we must make the necessary decisions now. If there can be projected an insufficiency of nuclear defenses at that time, we weaken our bargaining power at the conference table today.

Now why is there concern and doubt about the protection of deterrent strike force in the next 5 or 6 years? Our most authoritative evidence indicates that the Soviet Union is substantially increasing the potential thrust of its missile attack.

SS-9 MISSILE

First, the U.S.S.R. is increasing deployment of the SS-9 missile—a missile larger than Titan II—with tremendous nuclear capacity and impressive accuracy. The more ICBM's Russia can put in the air, the smaller chance our Minuteman missiles and alert bombers will survive and be able to strike back.

Thus, the SS-9 becomes a counter force weapon as it is deployed in large numbers. If the Soviets installed about 50 SS-9's—a force equivalent to our Titan II force—we would simply assume that the Soviets need that number of large missiles to take out that number of large American cities.

Even an SS-9 force of 100 missiles could be viewed by us as an added insurance force with the same objective of destroying our big cities.

But a force of 200, however, requires us to consider the possibility that the SS-9 is not intended for cities but for the hardened Minuteman sites of our nuclear deterrent power.

Second, the Soviet Union is developing midair proliferation of nuclear warheads. By multiple reentry vehicles, Soviets possibly could increase the warheads from 300 to 900, any one of which would be capable of destroying the Minuteman.

Third, our intelligence tells us that the Soviet Union is building Polaris-type submarines at a rapid rate. If missile-bearing submarines came to within a few hundred miles of our shores, the quick flight time of their missiles can substantially shorten the time available for the takeoff of our alert bombers. Since few of our alert bombers could survive such an atomic submarine attack, all the more vital is the protection of our Minuteman striking power.

U.S. ACTION

In the light of these developments, what protective actions should the United States take?

First, we could install more Minuteman missiles. We rejected this because it would escalate the arms race and could push the Soviets to deploy even more weapons than they now plan.

Or we could design a new deterrent missile that could travel about the countryside, always hiding from enemy attack. We are reluctant to have mobile missiles. We believe this would be unacceptable to the American public. It, too, would be stimulation of the arms race.

Or we could build bigger missiles with larger warheads. But this also would accelerate the arms race.

Or we could increase the hardening of Minuteman. We do plan to add further hardening for some Minuteman missiles, but this approach has its limitations. Further hardening can be matched by further increases in Soviet accuracy and warhead size.

Finally, we could provide the protection of our nuclear deterrent striking power against ballistic missiles. Such a defensive deployment would not stimulate the arms race. In fact, since the Russians have already begun developing their own ABM defense system, our defensive parity would help us reach a solid arms control agreement with the Soviet Union.

Safeguard by its selective defense of our Minuteman missile sites both strengthens our deterrent to nuclear aggression and increases our leverage for disarmament negotiations. Its protection of our retaliatory forces against direct attack stops any enemy from launching a first strike war. Yet its unprovocative defensive nature would not stimulate the arms race.

THE ISSUE

There are those who argue against Safeguard or any ABM system with allusions to the sinister influence of the military-industrial complex, are escalation and ultimately nuclear devastation. I am convinced that much of the intense emotion presently directed against the ABM is a result of the widespread disillusionment with the Vietnam war.

However, we all agree that the military should not set our Nation's priorities and goals. Congress must begin to more closely scrutinize both military policies and expenditures.

At the same time, there has been an awakening to the pressing domestic needs of our Nation. The problems of our disadvantaged citizens, our urban growth, and environmental decay require immediate attention. However, these problems must be solved within the context of a safe and secure society.

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But these are not the issues presently before the Senate. All Americans dread a nuclear war and the risks of an escalating arms race. The real issue today is the strategic reality of our defense posture.

We may differ about the implications on the recent Soviet moves in missile deployment. We may differ on the effects of those moves on the future defense of our nuclear deterrent force.

But all of us can agree that if America should lack an effective nuclear deterrent defense, the stability of world order would be shaken, and the chances for a peace settlement broken.

The President has said:

The imperative that our nuclear deterrent remain secure beyond any possible doubt requires that the U.S. must take steps now to insure that our strategic retaliatory forces will not become vulnerable to a Soviet attack.

The time has come when the Senate of the United States either gives the President the tools to bring peace and security, or denies them. This is the issue after all the testimony, after all the debate, after all the speeches, after all the argument.

CONCLUSION

Sixteen years ago another Kansan, Dwight David Eisenhower, came to Washington and uttered what was in his heart:

In pleading our just cause before the bar of history and in pressing our labor for world peace . . . we hold it to be the first task of statesmanship to develop the strength that will deter the forces of aggression and promote the conditions of peace.

Let us in this spirit strengthen the shield of our defenses that deter war and strengthen the hands of those that can negotiate a peace.

Mr. DOMINICK. Mr. President, will the Senator from Kansas yield?

Mr. DOLE. I am happy to yield to the Senator from Colorado.

Mr. DOMINICK. I congratulate the Senator from Kansas on what I think is an excellently reasoned speech. He does not try to go into details of science. He lays it out in cold logic.

It seems to me that this is a productive effort, so far as we are concerned, in trying to preserve our security.

I was intrigued, because he refers to the problems that are being outlined here on the floor as to the rural areas of our cities, where the Senator from Kansas points out that we must have a secure country before we can fix those problems irrevocably. I noticed that the Senator from New York (Mr. JAVRS) talked about the necessity for reallocating resources. The Senator from Louisiana (Mr. ELLENDER) on yesterday said something to the same effect.

It is an interesting fact that as we go through phase 2 of the program on the estimate we now have, it would cost \$10.2 billion. This \$10.2 billion is approximately three and a half months of the Vietnamese war at present expenditures. The \$10.2 billion would be spent from now all the way through 1974. So when we are talking about reallocating resources, we are going to do far better once we get out of our involvement in that war than we

would do by saying we are not going to go ahead with this proposal.

Another feature that I think is important with respect to the amendment that is before us is that it involves only \$345 million. When we look at it in terms of the over \$2 billion a month we are expending in Vietnam, we have another example of the fact that we are not dealing with much money. We are dealing here with a symbolism issue which has arisen, for some unknown reason, in the Senate.

I also listened to the Senator from Arkansas (Mr. FULBRIGHT) today, and I read the speech of the Senator from Louisiana (Mr. ELLENDER). They talk about mirror reaction. The Senator will know that the Soviet Union started deploying its system in 1963, and it is still building it, despite the fact that it is stated the Soviet Union has stopped. That is not a fact. So it seems to me there is no mirror reaction now, in view of the fact that the Soviet started its system in 1963, 6 years ago.

Would the Senator agree with that?

Mr. DOLE. Yes. As I have tried to say many times on the floor, as a junior Member of the Senate I do not question any Member's motives for being for or against anything. I think everyone has a reason for his belief. I think sometimes the public has a certain feeling about the Senate. Members of the public feel that 50 percent are for doing nothing and another 50 percent are for blowing up the world. That is not the issue. I think 95 Senators think we should do something about it, yes, perhaps have research and development, but some of us believe we cannot waste 1 year's or 2 years' time.

I think what the question boils down to is whether or not we want to give the President the tools he needs with which to negotiate. I had faith in President Johnson's request for the Sentinel system and supported it in the House, and I have confidence in the Safeguard system and will support it in the Senate.

Mr. DOMINICK. Mr. President, I ask unanimous consent that a letter to the editor, which was published in the New York Times for today, Tuesday, August 5, 1969, signed by Sanford Aranoff, assistant professor of physics, Rutgers University, dealing with the need of an ABM for defense, be printed in the RECORD at this point.

There being no objection, the letter was ordered to be printed in the RECORD, as follows:

ABM FOR DEFENSE

To the Editor:

A July 17 editorial criticizing Senator Winston L. Prouty's endorsement of the Safeguard antiballistic missile system, began by stating that the system is untested, and so should not be deployed. This is not an objection. Many of the components have been thoroughly tested, and further testing will continue after deployment.

Much time and money have already been invested in the testing. Let us not belittle American technology by saying the ABM will not work because it is complex. We can build successful complex systems—the Apollo program for example. Of course, it has not been tested under wartime conditions, but the same is true for the enemy's system.

In actual wartime, neither offense nor defense works as well as anticipated. It may be

that our defense will work, while the enemy's offense will not. Even if our defense does not work, the fear that it may, while the offense will not, will deter the enemy.

As to cost, we have been spending far greater sums on air defenses up till now. The Soviets have been spending several times the amount of money that we have for their defenses. Until now, no one has suggested that we dismantle our defenses to save money for our cities. To stop spending for defense is to leave our country open for attack. Why, then, is the issue raised about missile defense? Either we must ignore the question of cost when discussing the ABM, or save money by dismantling our expensive air defenses.

FIRST STRIKE DESTRUCTION

The editorial comments that we can destroy every center in the Communist bloc. This is true if we strike first, or if they strike first, but leave our missiles intact. If you believe that our missile will remain after an attack, you should give your reasons.

You state that the Administration should not press for a vote that can bring marginal victory at best. What is wrong with a "marginal" victory? The Administration feels that it is in the best interests of this country to have a defense against nuclear attack. That many people disagree does not change the objective situation.

We are speaking about defense, not offense. It is sad that the concept of ABM has been distorted by its opponents to mean an offensive system. The missiles of the ABM have a range of less than one thousand miles, and cannot be construed as an offensive weapon against Russia. It is these cities about which we are so concerned that require proper defense.

SANFORD ARANOFF.

NEWARK, July 18, 1969.

Mr. STENNIS. Mr. President, may I commend the Senator from Kansas. I have noted the quality of the speech. As a Member of this body he has always impressed me with the forceful way in which he expresses his logical reasoning. I think in this he has a very sound, commonsense view.

I yield now to the Senator from Nevada.

Mr. BIBLE. Mr. President, I understood the Senator from California wanted to direct an inquiry to the Senator from Kansas.

Mr. MURPHY. Mr. President, does the Senator from Kansas have the floor?

The PRESIDING OFFICER. The time of the Senator from Kansas has expired.

Mr. STENNIS. Mr. President, I yield 3 additional minutes to the Senator from Kansas.

Mr. MURPHY. Mr. President, will the Senator from Kansas yield?

Mr. DOLE. I yield.

Mr. MURPHY. I congratulate the Senator for his realistic approach and the use of figures that are actual figures, and not hypothetical figures.

I also wish to congratulate the Senator from Colorado for pointing out that the amount of money involved is less than \$400 million, which is less than the amount of cost as between deployment and no deployment.

Another feature is involved. I am sure my distinguished colleague knows that embodied in this proposal is the element of constant review, as suggested by the President. So this is no program that, once started, will never be stopped, as is true of so many programs. The President has asked for constant review. The

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minute it is not needed, it will be stopped. As long as it is needed, it will continue to be tested.

I congratulate my distinguished colleague for making this very realistic appraisal of an important question, on which may turn the entire future of this Nation.

Mr. DOLE. I thank the Senator from California. I also agree with his statement that this program will be reviewed on an annual basis by the Senate. I think that is one of the real strengths of the program.

Mr. TOWER. Mr. President, will the Senator yield?

Mr. DOLE. I yield.

Mr. TOWER. I also would like to commend the distinguished Senator from Kansas. I think he has performed a fine service in underscoring that what we are doing is projecting ourselves toward the mid-1970's. There has been much talk about the relative postures of the Soviet Union and the United States today, but we must project it into the future and think in terms of what might happen.

I have heard a great deal about the fact that those of us arguing for the system are basing our argument on the fear that the Soviet Union might develop a first-strike capability. That indeed is the reason why we want an ABM system. It is very possible that the Soviet Union will develop a first-strike capability. Certainly, we have no intelligence to the effect that they are not developing a first-strike capability. As a matter of fact, there is indication that they have been building toward it. That being so, I do not see how we can afford not to prepare to put ourselves in a position to defend this country.

It has been said that the Soviets are not going to attack us because they know it would invite certain retaliation. We want that risk to stay there. What we are trying to do is maintain a risk for the Soviet Union so that they will find, in the mid-1970's or in the 1980's, that the odds are too great against their being able to launch a successful first strike with impunity.

Mr. DOLE. I agree with the Senator. I feel very strongly that this system is needed to stabilize the world position. I feel just as strongly about that as do those who take a different view.

The PRESIDING OFFICER. The Senator's additional time has expired.

Mr. STENNIS. Mr. President, I now yield to the Senator from Nevada (Mr. BIBLE). How much time does he want?

Mr. BIBLE. I would think 5 or 10 minutes.

Mr. STENNIS. I yield 10 minutes to the Senator from Nevada.

Mr. BIBLE. I thank the Senator from Mississippi, our distinguished able chairman of the Armed Services Committee.

Mr. President, it occurs to me that practically everything pro and con has been said about this question in the 5 or 6 long weeks of vigorous discussion on the ABM. I do not believe there is anything new that I can contribute at this point. I have attempted, to the best of my ability, to follow the debate closely and to follow what was developed dur-

ing the so-called closed and secret sessions.

After much study, I am convinced that the wisest course is to support the request by the administration, and the majority recommendation of the Armed Services Committee, for phase 1 of the Safeguard ballistic missile defense system.

It seems to me that deployment of the ABM is a prudent and reasonable response to the activity of the Soviet Union in the development of offensive and defensive weapons systems and the advance of Communist China toward a nuclear arsenal. The addition of new offensive Minutemen, without protection, is likely to be more destabilizing, in my view, than the start of an active defense of the Minutemen silos, since adding new offensive vehicles increases the capacity to strike first.

I am not particularly impressed by the divergent views of the scientific community on the practicality of the Safeguard system. Such differences have occurred with every complex weapons system ever considered by the Nation. They have occurred in our space program. They have occurred in our medical research and in other areas of our research and development activities.

Able scientists are found on both sides of the issue. Therefore, it is difficult to accept at face value some scientific claims that this defense system may not work. There were eminent scientists who said the hydrogen bomb would not work; that the ICBM would not work, that the Polaris would not work.

We have heard this issue discussed at length over the past weeks and months.

I have reviewed the record carefully. I am not persuaded that the ABM is unreasonable. I feel the performance of carefully designed and well-engineered defense systems such as Safeguard will be every bit as effective as the performance of our offensive missile systems.

One other argument is constantly made—we have heard it day after day, and it has been met and counter-met and re-met again, on rebuttals and sur-rebuttals—I refer to the argument that approval of the Safeguard will make it harder for this Nation to reach reliable agreements with the Soviets on limitations of nuclear offensive and defensive weapons. It seems to me that in this regard, a telegram received July 17 by the Senator from Mississippi (Mr. STENNIS) and the Senator from Washington (Mr. JACKSON) from a group of distinguished Americans with long experience in negotiating with Moscow was a very useful contribution to our discussion. It read:

In our varied experiences of negotiating with the Soviet Union, nothing suggests that a Congressional decision to authorize President Nixon's Safeguard ABM proposal will in any way hinder the start of strategic arms limitation talks with Moscow or impede the negotiations once they are under way.

It was signed by a number of very distinguished Americans—One could say they comprise a Who's Who in the field of American-Soviet diplomacy. Among them were Dean Acheson, Charles Bohlen, Arthur Dean, Frederick Eaton, Foy Kohler, Robert Murphy, and Herman Phleger.

If my memory serves me well, in the discussion of the Sentinel program last year when it was before the Senate, the argument was made that we should not move forward because to do so would jeopardize our talks with the Soviet Union. I believe it was within a week after the Senate had acted—and had acted adversely to that particular argument—that new talks were started.

I was somewhat impressed with the argument made today by the distinguished Senator from North Carolina (Mr. ERVIN). If I recall correctly, I think he said that since 1946 we have had 1,542 meetings with the Soviets in the field of disarmament.

Taken in its entirety, I believe that record provides a meaningful answer to the constant argument that deployment will show us and probably jeopardize us in our negotiations with the Soviet Union.

Mr. President, it has been our experience in negotiations with Russia that the Soviets bargain vigorously for relative advantage. With this in mind, let us observe that Moscow has deployed an ABM and we have not. Moreover, the Russians are working on an advanced version of the ABM. It is commonsense to me that if we hope to get an agreement with the Soviets on arms limitation, we must be able to deal with them from positions of strength—defensive strength as well as offensive strength. We are certainly not maintaining our overall strength if we unilaterally abandon ABM deployment at a time when the Russians are working to strengthen not only their offensive missile systems, but their already deployed antimissile defenses as well.

Reciprocal, mutually acceptable agreement on both offensive and defensive nuclear systems will be, at best, difficult to achieve. It could take a long time. Meanwhile, I think we must put America in the strongest possible position for the conduct of these crucial negotiations.

It is for that reason that I shall vote against the Cooper-Hart amendment, and I shall support the request for authorization of phase I of the Safeguard ABM system.

Mr. STENNIS. Mr. President, will the Senator yield to me?

Mr. BIBLE. I yield.

Mr. STENNIS. I certainly appreciate the Senator's going to the trouble here, to put his thoughts in writing in so concise a form.

I believe the entire argument can be boiled down to the point the Senator has made. That is the real issue before the Senate.

Mr. BIBLE. Mr. President, I appreciate the statement of the Senator from Mississippi. I have long considered the Senator from Mississippi, the chairman of the Committee on Armed Services, and his able colleague, the Senator from Washington (Mr. JACKSON), as two of the best informed men in America on this particular problem.

Mr. STENNIS. I thank the Senator. He has made great contributions in connection with the appropriations, but, more than that, I like his practical logic.

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Mr. CHURCH. Mr. President, will the Senator from Michigan yield to me?

Mr. HART. Mr. President, may I inquire as to the time remaining to the proponents?

The PRESIDING OFFICER. The proponents have 10 minutes remaining.

Mr. STENNIS. Mr. President, I shall be happy to yield some time to the Senator.

Mr. CHURCH. I appreciate that. I shall not require more than 15 minutes.

Mr. STENNIS. May I inquire, Mr. President, how much time I have remaining?

The PRESIDING OFFICER. The Senator has 32 minutes.

Mr. STENNIS. I am happy to yield 5 additional minutes to the Senator from Idaho.

Mr. CHURCH. I thank the Senator.

Mr. President, at this late stage in the debate, there is little I can say that would add to the arguments already given, or to the voluminous data already gathered, or to the lengthy testimony already taken on the question soon to be decided, whether or not the Senate should give its consent to the immediate deployment of the Safeguard antiballistic missile system. Accordingly, my statement will be relatively brief.

It is undisputed that the price of an ABM system comes high. The initial phase, limited to the mission of defending two of our Minuteman bases, bears a price tag of at least \$9 billion. Allowing for the anticipated cost overrun for research, development, and procurement, however, the total is much more likely to exceed \$12 billion; and the future enlargement of the system, almost certain to follow once the deployment begins, could easily push the ultimate figure above \$100 billion.

Despite this mammoth cost, I was nonetheless prepared to vote for the immediate construction and deployment of an ABM system if it could be shown by the evidence that the Safeguard proposal could meet three tests: First, the test of reliability in the event of a nuclear attack upon the United States; second, the test of shielding our people if such an attack should occur; and third, the test of lessening the chances of a nuclear exchange between the United States and the Soviet Union.

With these tests in mind, I have closely examined the evidence, weighed the testimony, and followed the debate. And I have been obliged to conclude that the Safeguard proposal appears to be deficient in all three categories.

As to whether the system would work in a showdown, the experts are sharply divided. Those components that give the ABM sight and direction—the radar and computer elements—are themselves the focal point of the doubt. The computer system would be the most complex ever attempted, and, given the present state of the art, there are serious reservations that it can be made operational. At the very least, further research and prior testing would seem to be required.

If the ABM is to successfully intercept incoming enemy missiles, its radar eyes must be at least as good as its computer brain. Few such eyes are contemplated for the Safeguard system, and these few

could be readily blinded. Even the Pentagon's own planners concede that enemy nuclear warheads might be deliberately detonated above the atmosphere to create vast regions of ionized gas to black out the radar. Moreover, it must be expected that any attacker, mindful of the existence of our ABM system, would sow the skies with decoys and chaff, complicating beyond description the problem of swiftly identifying the real targets to be intercepted. Finally, the radar installations themselves, as presently planned, would be highly vulnerable to a concentrated missile attack, leaving our ABM's helpless without sight.

Questions like these concerning the reliability of the ABM under fire have simply not been satisfactorily answered. The experts cannot agree among themselves, with as many maintaining that the system will not work as contending that it will. Again, the prudent course would seem to call for further research and testing.

However, if one were to lean over in favor of the Safeguard proposal and dismiss all doubts about its being a sieve rather than a shield, the next question to be answered is this: Assuming it would work as planned, how many lives would Safeguard save in the event of a nuclear attack upon the United States? The answer to this question is none—or next to none—since the weapon is not to be deployed around population centers, but rather in the empty places which surround our Minuteman sites. Therefore, it just does not figure that the Safeguard ABM will save American lives, unless the very existence of the system itself will somehow lessen the chances of a nuclear war, to the consideration of which I now turn.

Proponents of the ABM argue that its installation will help keep our nuclear deterrent credible by increasing the number of Minuteman missiles which would survive an enemy first strike, thus augmenting our retaliatory capability to inflict unacceptable damage on the attacker. The argument, however, overlooks the fact that, in order for the Soviet Union to achieve a first strike capability, she would have to launch enough accurate attack warheads to knock out all of our offensive forces at the same time. In considering such an improbable undertaking, it should be recalled that each of our separate offensive forces—Minuteman ICBM's, strategic bombers and Polaris submarines—has by itself the capacity to utterly destroy Russia. Even if, by some miracle, all these forces were to be suddenly destroyed—which is far beyond any known or imagined Soviet capability—we would still possess enough medium range missiles in Europe to inflict unacceptable damage on the Soviet Union.

Under these circumstances, I find it impossible to believe that an ABM weapon system needs now to be installed at two of our Minuteman bases, in order to enhance the credibility of our overall deterrent. When it comes to strategic intercontinental nuclear capability, we already have a preponderant lead. Figures supplied by the Department of De-

fense show the United States with a 2-to-1 advantage in delivery vehicles, that is, missiles and bombers—2,356 to 1,227—and a 3½-to-1 advantage in the number of warheads—4,200 to 1,200. Yet the astounding fact is that in an all-out nuclear war the delivery of only 400 one-megaton warheads by the Soviet Union and 500 by the United States would result in 150 million fatalities and the destruction of 75 percent of the industrial capacity of both nations. Considering the number of warheads now available, the United States maintains an overkill ratio of 8½ to 1, while the Russians have an overkill ratio of 2½ to 1.

Obviously, the critical need facing both great nuclear powers is to call a halt to this mad arms race, which merely increases the threshold of danger to each side. As I observed here in the Senate more than a year ago, long before the ABM became a major issue:

After 20 years of the nuclear arms race, the Russian and American people are not the most secure, but the most imperiled people in the world. If the funeral pyre each government has set for the other is ever ignited, both peoples will be laid out upon it.

How, then, will adding a new nuclear weapons system, the ABM, as another tier on the funeral pyre, possibly reduce the chances of its ignition? Since there is presently no need, as we have seen, to bolster the credibility of our overall deterrent, what effect can we expect from the deployment of the ABM at this time? First of all, we must expect such an action on our part to produce a predictable reaction on the part of the Russians. In strategic planning, the "greater than expected risk" is a principle used on both sides, and it leads planners constantly to anticipate action by the other side to compensate for an area of vulnerability or to seek temporary superiority.

As an example of the action-reaction cycle, we need only recall that several years ago the Soviets built the Tallinn defense system near Leningrad in response to our decision to develop a B-70 supersonic long-range bomber. When we discovered Tallinn through our reconnaissance satellites, we assumed it was an anti-ballistic-missile system and proceeded to develop MIRV—multiple warheads with separate targets—as a counterweapon. We later dropped the B-70 program after huge expenditures, but by that time both sides had entered a new stage of strategic arms competition as a result of their mutual misjudgments.

In the same manner, our decision to deploy the ABM will inevitably touch off a Soviet response that can only mean another costly round in the nuclear arms race—on both sides—thus increasing the burden and danger to each country without giving us, in the end, one whit of added advantage over the Russians.

Still, the proponents of the ABM seek to reassure us that our deployment of this new weapon system would not provoke a counter-response from the Russians. They argue that since the ABM is purely defensive, and since the Russians themselves once commenced, though apparently now have halted, the construction of an ABM defense around Moscow,

the Soviet Union would not regard as provocative our decision to go forward with the installation of an ABM system. Yet the very man, Defense Secretary Laird, who makes this argument in one breath, contradicts it in the next. For he cites the possibility that the Soviets may decide in the future to deploy an extensive ABM system as one basis for his conjecture that they might acquire a first strike capability by the mid-seventies. Why would not our ABM arouse the same fears on their part that theirs would arouse on ours?

To compound the error, administration spokesmen also rely on another assertion, which rests upon the very opposite assumption, namely, that the Russians will be so concerned about our ABM that we will be able to use it as a bargaining lever in our upcoming arms control negotiations with the Soviet Union. Now a person looking for a reason to support the ABM could accept the first argument or the second, but it simply is not logically possible to accept both.

However, it is not only possible but eminently reasonable to reject both. All previous experience shows that, far from facilitating agreement, the introduction of a new weapons system by one side invariably provokes the other side into matching or exceeding it.

This can be best perceived by putting the shoe on the other foot. How would we regard the actions of the Kremlin if the situation were reversed? Suppose that we, rather than the Soviet Union, had taken the most recent initiative in proposing arms-control talks. Suppose the Russians had reacted as, in effect, we did, with a "wait-up-a-bit" response. Then, as the talks were about to commence, suppose the Russians began to add a new nuclear weapons system to their already immense arsenal.

Can there be any doubt as to what our reaction would be? Why, we would at once conclude that Russian deeds betrayed their words, that the real Russian purpose was to gain the upper hand in the arms race, rather than to join hands in ending it.

No, though our deployment of an ABM might hamper, it could not enhance our chances for securing agreement on arms control; and, though it might enlarge, it could not diminish the risk of a nuclear war.

So I am forced to conclude that the construction of an ABM system at this time would be a grave mistake. While we still possess a commanding lead in nuclear weapons, let us explore the possibilities for ending this pointless, perilous arms race, thus ushering in a new era of hope for mankind. If this proves impossible, there will be time enough to add an ABM to our vast nuclear arsenal, after further research has perfected the weapon and made it more reliable.

For these reasons, Mr. President, I shall vote in favor of authorizing the money requested to continue the research and development work on the ABM, but I shall vote against the deployment of the weapon this year.

Mr. DOMINICK. Mr. President, will the Senator yield?

Mr. FULBRIGHT. Mr. President, will the Senator yield?

The PRESIDING OFFICER. All time for today of the proponents of the amendment has expired.

Mr. CHURCH. Mr. President, the distinguished Senator from Mississippi extended 5 minutes of his time to accommodate me, and if that time has not expired, I would like to recognize the Senator from Arkansas and then the Senator from Colorado.

The PRESIDING OFFICER. That time also has expired.

Mr. TOWER. I yield 5 minutes to the Senator from Idaho.

Mr. CHURCH. I thank the Senator.

I yield to the Senator from Arkansas.

Mr. FULBRIGHT. I just wanted to say that I think the Senator has made the case extremely well. He has been very attentive in the hearings and has made a great contribution to the debate on this issue.

A moment ago, in the comments of one of the previous speakers, it was stated that, in the past, many people had said that the ABM would not work or that the Apollo would not work or that the hydrogen bomb would not work, and they have all proved that they could work.

I would ask the Senator if it is not a fact that in most of those cases it was not said that they would not work but it was said that they were of such low priority that they ought not be developed.

As to the allegation, for example, that certain great scientists had opposed the hydrogen bomb, I do not remember that they had opposed it—I do not believe they did—on the ground that it could not be made to work. They opposed it on the ground that we had no need for it and it ought not be developed because it would not contribute to the security of the country.

Is that the Senator's recollection?

Mr. CHURCH. I think the Senator states the case correctly, yes.

Mr. FULBRIGHT. In my opposition to the space program, at the level we have been spending funds for it, it was never because I believed that Apollo could not be made to work. It was because, first, I thought it was a crash program that was unjustified, that it was not so important that we should defer fundamental domestic programs in order to give that money to the space program. I believe the total space program now amounts to approximately \$25 billion. It was simply that I thought it had a lower priority than a number of things such as our cities and education and others.

I think that is true with the ABM. We are not opposing it because we do not think it would not work. I think it is very dubious that it would work under wartime conditions. I think it is very likely the system can be made to work in the sense that it will shoot down a missile that we know is coming from Vandenberg Air Force Base to Kwajalein and we are all set for it. I think they can make a gadget that will shoot it down.

Mr. CHURCH. I agree that in a laboratory test it probably can be made to work, but the experts are in sharp disagreement that it would work under fire.

Mr. FULBRIGHT. Under fire—that is the grave question.

So when we say it will not work, we have to be precise about what is meant. I mean in that sense, even if it worked, I think it would not be worth the money, compared with other needs and alternatives we have.

Mr. CHURCH. I agree with the Senator.

I tried to emphasize in my address this afternoon that even if it were to work, even if one were to dismiss all doubts as to its reliability under fire, still, the best interests of the United States call for a postponement of its deployment until we can ascertain whether progress can be made in arms control talks; for it is in the success of these talks that the real security of the country lies, that the real safety of the American people rests.

For these reasons, I think it would be a grave mistake for us to proceed at this time with the deployment of an ABM system.

Mr. FULBRIGHT. I think the Senator is absolutely correct.

Mr. DOMINICK. Mr. President, will the Senator yield?

Mr. CHURCH. I yield.

Mr. DOMINICK. I was interested in listening to the speech, and, obviously, I do not draw the same conclusions that the Senator from Idaho does. But one thing really interested me, and that was the hypothetical question of what we would do if we had tried to get arms limitations, and so forth, and then all of a sudden they developed an ABM.

Actually, the Soviets developed their ABM system and started deploying it in 1963. As the Senator knows, we have not deployed anything on this side. We have authorized some funds. We have procured some leadtime parts. But we have not done any more than that over a period of 6 years. So we have not considered this as any kind of a massive threat, except in conjunction with the progressive growth of offensive weapons.

The PRESIDING OFFICER. The additional time allotted to the Senator from Idaho has expired.

Mr. DOMINICK. I yield 2 additional minutes to the Senator.

It seems to me that we should make this clear: An ABM, insofar as being any kind of threat to us, is not, unless it is combined with the capability to develop a first strike. We do not have that and have not made such an option available to ourselves. They have not yet done it, but they have the capability of doing it and are succeeding and are progressing in that direction. This is the only kind of situation I can see in which either side should be concerned about an ABM, which is purely defensive.

Mr. CHURCH. According to the best information I have, the Russians did commence the construction of an ABM system around Moscow, but it now appears that the construction has been stopped.

Mr. DOMINICK. No, it is still going on.

Mr. CHURCH. Perhaps the Senator has better information on that point than I possess.

However, my argument relates to the history of this nuclear arms race, which has been characterized by action and counteraction over the years. I think it

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is very difficult to argue persuasively that the decision on our part to deploy a very expensive new ABM system would not produce a counter-reaction on the part of the Russians that would carry us into another round of this pointless, perilous arms race; and, in the end, we will find that we have not achieved one whit of added advantage over the Russians.

This history has already proved so discouraging that I think we should now try to see if we can bring a halt to it, on both sides; before we introduce another round.

The PRESIDING OFFICER. The time of the Senator has expired.

Mr. STENNIS. If the Senator desires, I can yield time.

Mr. DOMINICK. Will the Senator yield me 3 minutes?

Mr. STENNIS. I yield 3 minutes.

Mr. DOMINICK. I do not want to prolong this discussion unnecessarily, but we had four scientists before us, all of them knowledgeable in Soviet weaponry. Two were against the ABM and two were for it. In the process of doing that, we had a discussion with them on whether the Soviet Union's missile development had been a cyclical reaction; and even the ones who were against the ABM said that they did not see that any of the Russian weaponry had been a cyclical or mirror reaction to what the United States had done.

I could cite example after example. For example, we have not developed an FOBS, and they have. We have not developed an SS-9, and they have. We have not developed an ABM system, and they have. I could go on and on in this way.

The point I am making is that they do what they think is important from their own country's interests and not just in reaction to what we do.

Mr. CHURCH. With that interpretation I wholly disagree, because nobody has suggested that the action-reaction cycle consists of both sides duplicating the exact weapons of the other. The argument is that when one side introduces a new weapons system, the other side finds a counter to that system which may not involve its exact duplication at all.

Mr. DOMINICK. A mirror reaction.

Mr. CHURCH. An action-reaction cycle. I believe it would be very difficult to demonstrate that there has not been this action-reaction cycle during the past 20 years, as both the United States and the Soviet Union have amassed these immense nuclear arsenals which, I might add, are now so large that, if they are ever detonated in anger, the destructive force released would be the equivalent of a thousand pounds of TNT against the temples of every living inhabitant on earth. Is this not enough?

The PRESIDING OFFICER (Mr. ALLEN in the chair). The time of the proponents of the amendment has expired. The opponents of the amendment have 17 minutes remaining.

Mr. STENNIS. I thank the Presiding Officer. Is there anyone who desires to speak?

Mr. HART. The Senator from Indiana has been extremely patient. I wonder if the Senator would yield to him.

Mr. STENNIS. Does anyone wish to speak in opposition to the amendment at this time?

The PRESIDING OFFICER. The opponents have 16 minutes remaining.

Mr. STENNIS. Mr. President, I yield 10 minutes to the Senator from Indiana.

The PRESIDING OFFICER. The Chair recognizes the Senator from Indiana for not to exceed 10 minutes.

Mr. STENNIS. Mr. President, a parliamentary inquiry.

The PRESIDING OFFICER. The Senator will state it.

Mr. STENNIS. Mr. President, after the time which each side has is exhausted, if the Senate is still in session, the time will not be controlled. Is that correct?

The PRESIDING OFFICER. After the time under the unanimous-consent agreement has expired, the pending question will be before the Senate with no limitation.

Mr. HART. Mr. President, would it be in order at this point to propound a unanimous-consent request to permit the Senator from Indiana to conclude his speech even though the time yielded to him may have been exhausted prior thereto?

Mr. DOMINICK. Mr. President, reserving the right to object, it is my understanding that when we finish with controlled time, all remaining time is uncontrolled.

Mr. HART. That would be true unless the Chair permitted the Senator from Indiana to proceed.

Mr. BAYH. Mr. President, the distinguished Senator from Mississippi has been most gracious to me. I do not wish to intrude on the time of those who oppose the amendment. If it is more convenient, I will wait.

The PRESIDING OFFICER. If all time is yielded back by the opponents, the matter would be before the Senate.

Mr. STENNIS. Mr. President, I would like to yield back the time. I am trying to protect someone who might come in late and desire time. I am glad to yield 10 minutes to the Senator from Indiana. At the end of that time, we can weigh the situation and perhaps permit the Senator to proceed.

The PRESIDING OFFICER. The Chair recognizes the Senator from Indiana for not to exceed 10 minutes.

DERAILING THE DANGEROUS ARMS RACE

Mr. BAYH. Mr. President, I thank the Senator. It is very considerate of the Senator from Mississippi to delve into his limited reservoir of time so that I can express myself on this critical matter.

Mr. President, the matter presently before the Senate has consumed almost a month of debate. I have listened very carefully to the statements on both sides. The debate has raged back and forth on the question of whether we should authorize funds for the deployment of the Safeguard anti-ballistic-missile system. I think the high quality of the Senate debate reflects on the very critical nature of the decision we are about to make. I have reached a decision only after long and careful study of every bit and piece of information available to me, as I am certain all of my colleagues have done.

As a result, it is my opinion that to authorize the deployment of the Safeguard anti-ballistic-missile system at this time would not be in the best interest of the United States.

It seems to me there are three critical areas of discussion that form the crux of any decision with regard to Safeguard.

First. Is there, in fact, a Soviet first-strike threat to our retaliatory ability?

Second. Is the Safeguard, as designed, technically competent to meet such a threat?

Third. What are the implications of Safeguard deployment for a meaningful arms limitation?

Are the Russians developing first-strike capability that threatens our missile arsenal? Mr. President, in order to fully appreciate Secretary Laird's assumptions about the Soviets, one must examine this concept of first-strike capability. According to the testimony of Dr. Foster, a first-strike capability would involve a decision to launch an all-out nuclear attack against another country with the assurance that 95 percent of the retaliatory power of the attacked nation would be destroyed simultaneously. In other words, the nation attacked would not have the ability to retaliate. Therefore, in any realistic assessment of first-strike capability one must consider not only the Soviet's missile arsenal, but we must weigh it against our own nuclear force.

Secretary Laird's categorical statement that the Soviet Union was, and I quote, "going for a first-strike capability—there is no question about that" has been challenged. In fact, Mr. Laird has since revised his estimate of the Soviet threat.

Mr. President, I ask unanimous consent to have printed in the RECORD at this point an article entitled "Laird Narrows Scope of Warning on Soviet Threat," written by John W. Finney, and published in the New York Times.

There being no objection, the article was ordered to be printed in the RECORD, as follows:

LAIRD NARROWS SCOPE OF WARNING ON SOVIET THREAT

(By John W. Finney)

WASHINGTON, June 23—Under critical cross-examination by the Senate Foreign Relations Committee, Defense Secretary Melvin R. Laird retreated today from his statement that the Soviet Union was seeking a missile first-strike capability against the United States.

Testifying three months ago before the committee, Mr. Laird stated that the Soviet Union was "going for a first-strike capability—there is no question about that."

Recalled before the committee at a closed hearing today, he offered a new definition of Soviet intentions that was much narrower than his earlier suggestion that the Soviet Union was seeking to knock out the retaliatory capability of the United States.

In a prolonged argument with committee members that often involved semantics Secretary Laird finally took the position that all he was suggesting was that the Soviet Union was developing a "first strike weapon" with its SS-9 intercontinental missile. This weapon, in turn, he acknowledged, was aimed at only one portion of the United States retaliatory force, the Minuteman Missile.

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SEE SEMANTIC VICTORY

Senator J. W. Fulbright, the committee chairman, and Senator Albert Gore, chairman of the disarmament subcommittee, immediately seized upon the Laird modification as at least a semantic victory in their battle to block deployment of the Administration's Safeguard missile defense system.

From the start of the anti-ballistic missile debate, Senator Gore observed, a key issue has been whether the Safeguard system was necessary to preserve the integrity of the American nuclear deterrent.

If the Soviet Union was intent on knocking out the American deterrent, as suggested in the earlier Laird "first strike" statement, the Tennessee Democrat said, then a justification could be made for the Safeguard system. But if the Soviet Union is developing only a capability to strike at just one part of the deterrent force, he said, "then the whole justification is pulled out—like Samson pulled out the pillars of the temple."

MOST DIFFICULT SESSION

Mr. Laird testified for nearly five hours before the committee in what Senator Fulbright, an Arkansas Democrat, was to describe as the "most difficult session" in his 25 years in Congress. The purpose of the closed door confrontation was to resolve whether there were differences between the intelligence community and the Pentagon over the Soviet missile threat.

In an unusual move, Secretary Laird insisted that he be accompanied by Richard Helms, the Director of Central Intelligence, a condition reluctantly accepted by the committee.

It was the first time in the memory of Central Intelligence Agency officials that the director had been drawn directly into a policy dispute between a Cabinet official and a Congressional committee. The effect was to silence Mr. Helms, who is known to have reservations about the Laird assessments of the Soviet missile threat.

HAD LITTLE TO SAY

Mr. Helms, according to members, had little to say before the committee and not a word afterward to reporters as he emerged from the committee room with Mr. Laird.

But Secretary Laird was not so reticent. After a brief appearance before television cameras outside the committee room, he hastened back to the Pentagon to hold an impromptu news conference at which he emphasized a new Soviet missile threat.

Following up a point first made by President Nixon at his news conference last week, Mr. Laird said the Soviet Union was testing a multiple warhead for its SS-9 missile that was capable of knocking out three Minuteman missiles simultaneously.

He thus opened a new intelligence dispute with the safeguard opponents. During the hearing, according to both Senators Fulbright and Gore, no evidence was presented indicating that the Soviet Union was testing independently targetable multiple warheads known as MIRV's, for multiple independently targetable re-entry vehicles.

LESS SOPHISTICATED

The presumption, therefore, was that the intelligence community believed the Soviet Union was testing less sophisticated multiple re-entry vehicles, known as MRV's, which fall in a cluster and are not independently targeted.

At his Pentagon news conference, Mr. Laird declined to be drawn into a dispute over the multiple warheads being tested by the Soviet Union were independently guided. The important point, he said, is that the three-part multiple warhead is falling into a variable triangular pattern that coincides with the way Minuteman silos are deployed.

Another semantic difference developed between Mr. Laird and the committee over whether the Pentagon and the intelligence

community disagreed over the Soviet missile threat.

Senator Gore emerged before the hearing was completed to assert before the television cameras that the United States Intelligence Board—the top-level, interagency body that coordinates intelligence estimates—had made no finding supporting Mr. Laird's statement that the Soviet Union was seeking a first-strike capability.

DISAGREEMENT DENIED

An hour later before the cameras, Mr. Laird asserted that there was "no disagreement" within the intelligence community on intelligence "facts" about the Soviet Union and that "there is no question about interpretation" of these facts.

While the Intelligence Board may have not made any findings supporting the Laird conclusions, committee members, when pressed by reporters, acknowledged that the board had not made any findings contradicting the Laird first-strike assessment.

The point was emphasized at the Pentagon by Mr. Laird, who said the board had "never even considered" whether the SS-9 missile was a first-strike weapon or whether the Soviet Union was striving for a first-strike capability.

"They don't get into evaluations such as that," he explained.

Probably the biggest haggles that developed between the committee and Mr. Laird—one that consumed nearly two hours—was over the definition of "first strike," particularly as it was used by the Secretary when he told the committee on March 21 that the Soviet Union was "going for a first-strike capability."

FINDS IT NARROWER

Senators Gore and Fulbright observed that the term "first strike" used to mean the ability to knock out or destroy the retaliatory capability of an opponent. But now, Senator Fulbright said, Mr. Laird is offering an interpretation of first strike that is "much narrower and more restricted than it was originally."

Mr. Laird's new definition, the Senator said, was somewhat confusing because the Secretary offered "variations from minute to minute that were incredible." But as now used by Mr. Laird, he said, the term "first strike" seems to have the relatively restricted meaning that the SS-9 is a weapon that has a capacity to destroy a missile in its silo.

This interpretation seemed to be supported by Mr. Laird after the meeting. Asked by reporters for his definition of first strike, he said it was the difference between a first-strike weapon that can be used against "hardened" targets, such as missile silos, and second-strike weapons that can be used against "soft" targets, such as cities. He then noted that "first-strike weapons can also be used as second strike weapons."

Mr. BAYH. Mr. President, one must wonder whether the first-strike threat originally postulated by the Secretary was not manufactured simply to justify a political decision to deploy Safeguard; witness the periodic leaks of "new, secret information" about Russian missile developments which have, on investigation, turned out to be old information in a new suit of clothes.

First, there was the old bugaboo about Galosh. That bubble was pricked when it was discovered that the Russians had experienced enough difficulties to discontinue deployment with only about 70 missile launchers in place. Next came the "startling revelations" about the SS-9 and the Secretary's projections about Soviet production. Well, the SS-9, as we were later to learn, was known to our

Pentagon planners for some time. Former Assistant Secretary of Defense Enthoven testified that it was always regarded as a second-strike weapon by our defense planners. In fact, the SS-9 was also known to New York Times reporter Andrew Hamilton. In an appropriately entitled article "The Arms Race: Too Much of a Bad Thing" in the New York Times Magazine of October 6, 1968, Mr. Hamilton described the SS-9 as a very large missile with a payload comparable to that of the U.S. Titan II—it is appropriate to note that the United States is planning to phase out its 54 Titan II's—and it is believed to have good accuracy. But, nobody would have ever expected it to have the nearly perfect accuracy attributed to it by Secretary Laird in order to justify his "first strike" assertion; an accuracy, I might point out, that has steadily been improving as the administration is required to answer new questions about the unlikely prospect that the SS-9 force could serve as a "first strike" weapons system. From an original estimate of accuracy for SS-9 of a CEP—circular error probability—of one-half mile, the Secretary has, upon reflection, now attributed to the SS-9 the amazingly accurate CEP of one-quarter mile. This assessment, as far as I can determine, and given the likely state of guidance technology, is extremely unrealistic.

At the recent closed session we debated back and forth the important question of the SS-9's accuracy. Legitimate doubts were raised about the Secretary's assessment, and I want the record to show that. The intelligence community, having studied the SS-9, has offered us a less dangerous assessment of this weapon than the Defense Department.

So much for Russia's own offensive capabilities. Now let us analyze the Secretary's most inflated estimates of that capability in its relationship to the entire U.S. nuclear arsenal.

The PRESIDING OFFICER. The time of the Senator from Indiana has expired.

Mr. STENNIS. Mr. President, may I inquire of the Senator from California (Mr. MURPHY), does he wish time?

Mr. MURPHY. Mr. President, I have been waiting here for some time now, waiting for the controlled time to expire.

The PRESIDING OFFICER. The Chair would advise he Senator from California that the time has not yet expired.

Mr. STENNIS. The Senator from California wishes to speak on another matter.

The PRESIDING OFFICER. The Chair would inform the Senator from Mississippi that he has 6 minutes remaining.

Mr. STENNIS. Mr. President, with the understanding, then, that the Senator from California will be recognized at the end of the remarks of the Senator from Indiana, I yield the remainder of my time to the Senator from Indiana.

Mr. MURPHY. I am perfectly happy to let the Senator from Indiana continue. May I inquire of the Senator from In-

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diana how much longer he expects to speak?

Mr. BAYH. Not longer than 10 or 15 minutes at the most.

Mr. MURPHY. Mr. President, I am glad to wait. I promise not to elongate the time by any questions.

Mr. BAYH. I will be glad to answer any questions the Senator from California may have.

Mr. President, if we assume that the Soviet first-strike capability is there, then I think we need to look at the targets towards which it would be directed. As I noted earlier, to be successful a Soviet first strike would involve the ability to mount, with the utmost assurance of success, a coordinated attack that would effectively cripple, first, 1,054 land-based ICBM's; second, 645 SAC long-range bombers; third, 41 Polaris/Poseidon submarines carrying a total arsenal of 656 missiles; and fourth, the more than 7,000 tactical nuclear weapons deployed in Europe and with the 7th Fleet. Numerically, such individual components of our nuclear arsenal as the Minuteman force, the Polaris fleet, and our SAC bombers alone are adequate second-strike systems.

If the Soviets are able to destroy all of our Minutemen, we would still have at least two other forces capable of a significant secondary response.

Considered in this light, Mr. President, the statement that Safeguard is needed as protection for our ICBM's against a Soviet first strike appears to be greatly inflated. On a numerical basis alone, as Dr. Ponofsky noted, it is "implausible" that the Russians could launch a successful preemptive attack on our land-based ICBM's and strategic bombers. In addition, I think it is instructive to recall statements of Rear Adm. Levering Smith, director of Navy strategic projects. Admiral Smith was recently quoted as saying, in regard to the assured destructive capability of our sea-based missile force:

I am quite positive that Russian submarines cannot and are not following any of our Polaris submarines underwater. I am also quite positive that the new generation of Russian submarines that are getting close to operational status, that are now being tested, will also not be able to follow our Polaris submarines.

Mr. President, I simply do not believe that the Soviet threat is so precise or realistic that we must react by deploying Safeguard.

But, let us assume though, for the sake of argument, that Secretary Laird's dire predictions are accurate and as we move into the 1970's the Soviet threat to our ICBM's does grow at the projected rate. By January 1975, therefore, we may find that our Minuteman force is vulnerable. If, at the same time, the Safeguard system was operational and could be expected to function perfectly, it is my contention that our Minuteman would be as vulnerable with Safeguard as without it—but only a few months later.

What I mean is, if we build Safeguard, the Soviets would simply increase their offensive capability so as to overwhelm that system.

The precise estimate for overcoming phase I of Safeguard is 3 additional

months of offensive missile production; and 1 year of such production for saturation of a fully completed phase II Safeguard system. That the Soviets would follow such a reasonable and inexpensive course to negate Safeguard is made more plausible by the fact that our own Department of Defense planners have programed a like response to the limited Soviet ABM system known as Galosh. Sheer exhaustion of a maginot line-like defense, therefore, would be the likely reaction to all ill-advised and premature decisions to deploy Safeguard.

Mr. President, having said all this, one must now turn to the question of whether this hybrid ABM system, whose rationale and mission has undergone frequent modifications, would be an appropriate response—appropriate in the sense that it offers us both greater security and at the same time does not escalate the arms race. From all of the scientific evidence available, the only conclusion that one can reach is that Safeguard is not really safe at all.

As the debate draws to a close, both the opponents and the supporters of Safeguard have relied increasingly on the expert testimony of scientists and engineers. For the past 2 weeks or so, we have been deluged by vast amounts of technical information on the workability of Safeguard. It appears to me, Mr. President, that the scientific community opposing Safeguard, including in its ranks, Dr. James Killan, Dr. George Kistiakowsky, Dr. Jerome Welsner, and Dr. Donald Hornig—former science advisers to Presidents Eisenhower, Kennedy, and Johnson—have presented convincing evidence that Safeguard is not defense but delusion. The vulnerability of the missile site radar, the inadequate number of Sprint interceptor missiles, and the difficulties likely to be encountered in the operation of the still-to-be-built world's largest computer have been dismissed with a simple "we will work it out."

Let us look at these important questions that remain unanswered:

First. The vulnerability of missile site radar. The multidirectional faces added to the missile site radar does not alter the fact that the radar system incorporated into Safeguard is identical to the system designed for the Sentinel ABM—despite the fact that the two systems have radically different purposes. The vulnerability of MSR, as the distinguished senior Senator from Missouri has pointed out, results not simply from the softness of the site—it is much softer than an ICBM silo—but from the inadequate number of Sprint interceptors planned as MSR protection. In fact, it is not unlikely that the Soviets would target their SS-11's, not their SS-9's, at the radar sites and thus free the more effective and larger SS-9 for attack on our Minuteman silos. This does not even take into account the likelihood of radar blackout in the event of a nuclear explosion in the atmosphere and the use of penetration aids and decoys to render the radar useless.

Second. The number of Sprint interceptor missiles is inadequate for both MSR cover and interception of the large numbers of offensive weapons that would

be involved in a first strike. This is a critical point because, as Secretary Laird himself has admitted, the long-range Spartan is not considered as a very reliable component of Safeguard. The Secretary has said that Safeguard is primarily based on the Sprint missile backup. Yet, the plan for phase I deployment calls for only 75 Sprints at each of the two Minuteman bases—bases that house approximately 350 ICBM's. It is not unlikely, therefore, that the small number of interceptors could be negated by sheer exhaustion. After all, that is what Dr. Foster has indicated is our own policy in regard to the Galosh.

Third. The functioning of the computer. The Safeguard system relies on a computer whose exact task would remain undefined until an actual attack occurred. The danger in relying on a software system that could never be tested under realistic conditions, and for which we would have no prior programming experience, is that the margin of time is so short that, in reality, the decisionmaking process would rest with the untested computer.

Yet, we have been assured by the administration that the Safeguard's antiballistic missiles would never be activated without the specific approval of very high authorities. At the same time, the administration has continually claimed for the Safeguard an ability to respond to any surprise attack. With total reliance on an untested computer, one must surely wonder how these two requirements can be met simultaneously with any reasonable degree of assurance.

Mr. President, to sum up, it seems to me that the reliability of Safeguard is questionable under the best of circumstances. In the event of a Soviet first strike, as the Senator from Arkansas and the Senator from Idaho have indicated, its effectiveness is more than just suspect.

If the protection of our deterrent is a valid objective, as both sides have claimed, then it is too important a task to be left to blind fate—and that is the promise of Safeguard.

Mr. President, I must confess that whether these technical problems can be solved or not is, to my mind, only one of the central points to be considered. The Safeguard, after all, is not an end in itself. At issue here is a much, much larger question, the question of how to derail the dangerous and spiraling nuclear arms race that threatens to destroy mankind.

I do not think it is an exaggeration to say, Mr. President, that today we stand at a critical juncture in the brief but turbulent history of our nuclear rivalry with the Soviet Union. We are, in fact, on the eve of a new round in the seemingly uncontrollable arms race. Within the past year or so, both superpowers have begun to experiment with a new generation of nuclear weapons. If deployed, these weapons systems—and I count Safeguard among them—will only upset the already precarious strategic balance. Any action involving the deployment of an ABM system surely will produce a Russian reaction. Most likely, the Soviet Union will react by speeding up its MIRV program.

The immediate result will be the collapse of the planned SALT negotiations and continued buildups on both sides. Hopefully, a new strategic balance will be reestablished—but that will only come at a much higher level on the nuclear terror scale and, as Prof. George Rathjens pointed out, this “would simply make a nuclear exchange more probable, more damaging or both.” The end result, therefore, is less security for everyone, and that is the delusion of defense in the nuclear age. Less nuclear weapons, not more, is the key to the survival of mankind.

Mr. President, I ask unanimous consent that at this point in my remarks there be printed in the RECORD an article by the highly respected columnist of the Washington Post, Mr. Marquis Childs, describing the classic action-reaction cycle that deployment of Safeguard will produce.

There being no objection, the article was ordered to be printed in the RECORD, as follows:

CHANCE OF NUCLEAR RACE PAUSE NOW DIM
IF IT HASN'T VANISHED

(By Marquis Childs)

The seventeenth multiple-warhead test shot will shortly be fired down the Pacific range. For a year now the MIRV (Multiple Independently Targeted Re-entry Vehicle) tests have averaged something more than one a month. The expectation in the Pentagon is that they will continue for at least another year. The average cost of each shot is \$5 million.

What this means is difficult to convey if only because of the extraordinary complexity of these weapons. The questioner comes away with one overpowering impression: The momentum of the technology itself is irresistible. Once put in motion it cannot be stopped.

Therefore, any effort to agree with the Soviets on a moratorium to arrest multiple-warhead development is almost certain to fail. This is the view of the Pentagon technicians directing the MIRV tests.

They may be wrong, these dedicated technicians. They may eventually be overruled. But if they are correct, then the arms limitation talks with the Soviet Union supposedly due to begin in mid-August will have relatively little meaning. They will be a charade which, for differing political reasons, the negotiators on each side of the table will be willing to act out.

The reason, of course, is that once you have locked from three to 10 separate, independently targeted warheads on the top of a Minuteman or a Poseidon missile instead of one warhead, the hope of mutual inspection is gone. A crew of inspectors would have to take off the top of the missile to see how many nuclear shots it contained. The surveillance satellites that now can spot every Minuteman silo and every Russian ICBM would be of no avail.

That kind of on-site inspection the Soviets would never agree to, having in the past rejected any encroachment inside their borders. Nor would this country agree to a violation of secrecy that surrounds the nuclear arsenal from all but those with the highest security clearance.

How did it happen? How did this technology gain such momentum that, if the technicians are correct, there is no stopping it? They trace the start of MIRV and MRV (Multiple Re-entry Vehicles not independently targeted), the latter already deployed on Polaris missiles, back to 1963. It was then that the first substantial evidence of Soviet deployment of the antiballistic missile system around Moscow known as Galosh was

verifiable. The multiple warhead was a move to counter ABM defenses.

Progress was rapid in the early stages, since targeting 10 warheads, each aimed at targets several hundred miles apart, was not essentially different from targeting one warhead. A year of actual testing on Pacific and Atlantic ranges has proved out MIRV. The word in the Pentagon is feasible. It works. The problems remaining in the year or more ahead are largely engineering problems.

This is a classic example of the escalation of the arms race. Galosh, which according to Central Intelligence Agency estimates has never been completed because of doubts that the Soviet ABM is workable, touched off MIRV. And there is reason to believe that rapid American advances on MIRV stimulated the Soviets to step up deployment of the SS-9, the blockbuster missile of up to 25 megatons.

Regardless, however, of what immediately touched off what, MIRV was inherent at the outset in the technology of missilery. This is the inevitability of the weapons revolution, the flow of technological change that seems to the men who work with it to be as unfeeling and relentless as the tides.

They talk in the same way of how impossible it would be to police an agreed moratorium on the development of MIRVs. You would have to, they say, ban all missile shots of whatever kind. For any shot could be a form of cheating. The Joint Chiefs of Staff, it is hardly necessary to add, oppose any effort to get an agreed moratorium on MIRV. And President Nixon has said that the United States will not stop testing unilaterally.

A year ago the broad principles of a negotiating agreement had been initialed by both sides. Secretary of Defense Clark Clifford and the others who worked out those principles expected in the first round of arms limitation talks to call for mutual disclosure of the progress made on multiple warheads. The invasion of Czechoslovakia put an end to that hope. In the year that has passed the United States has made rapid strides in nuclear armaments and so, one must assume, has the Soviet Union. The prospect of mid-August for at least a pause in the race is dim, if not vanishing.

MR. BAYH. Mr. President, what troubles me in looking back over this scenario is the unlikely prospect of ever establishing a new strategic balance once a multiple independently targeted reentry vehicle is perfected. One must even doubt whether mutual deployment of MIRV equipped ICBM's would produce a stable strategic balance. In fact, with relatively equal MIRV deployments, neither nation would have an assured second strike capability and the arms race would soon be on as the two nuclear powers rushed to develop a more mobile missile force. With this emphasis on mobility will come uncertainty, and that is the one factor a stable strategic plan cannot cope with. At present, the relatively stable nature of the arms balance is due, in part, to the relative ease with which missile arsenals can be accurately identified. In the event of MIRV and mobile missile deployments, however, accurate estimates would be extremely difficult and this mutual uncertainty is bound to lead to a continual offensive build-up.

The supporters of Safeguard have argued that, since it is a “defensive system,” it would not provoke the Russians; at least not to the extent that their reaction would destabilize the present strategic arms balance. I might add on this point, Mr. President, that the present strategic arms balance is favorable to

the United States. It would be in our own best interest, therefore, and in the interest of all, to avoid escalating the arms race at this point. As former Secretary of Defense Clark Clifford recently explained:

The hard fact is that we may never again expect to be in as favorable a position as we now enjoy for entry into talks about a freeze in strategic nuclear armaments. Technological developments may well make any arms limitation agreement more difficult to develop and enforce a year from now, or six months from now, than it is today.

The action-reaction cycle likely to be inspired by the deployment of Safeguard, as I noted earlier, will have grave consequences for arms control. The dynamics of the arms race and the history of the action-reaction cycle both point to the inescapable conclusion that the Soviets will feel compelled to increase their offensive capabilities to the full extent of offsetting a Safeguard system that they must judge to work perfectly—whether it will or not. As history shows, it was precisely this type of action-reaction cycle that led the Soviets to proceed with the Tallinn air defense system after it appeared that the U.S. would launch a full-scale B-70 bomber program. And as our own experience shows, the development of penetration aids, the decision to proceed with Minuteman III and Poseidon and, most importantly, the development of a MIRV capability were all responses to the Soviet's partial deployment of an ABM system, the Galosh, around Moscow.

This brings me to the most questionable argument of all being advanced to support the Safeguard; namely, that we must have an ABM system because the Russians have one. The so-called Galosh ABM system that partially rings Moscow, according to all accounts, and that includes the testimony of Secretary Laird and Dr. Foster, is inadequate as a damage limiting defense. In fact, the evidence we have is rather compelling that the Russians have discontinued deployment of this obsolete Nike-Zeus-like ABM system. A similar Nike ABM system for the United States, it will be recalled, had been vetoed by President Eisenhower and President Kennedy.

This misguided notion that what they have, we must have has now been carried one step further, to the point that the pro-Safeguard forces have claimed that the President must have an ABM system to strengthen his hand during the SALT negotiations. But, as I pointed out, at present arms levels we already will be entering these talks from a position of strength. And, in view of the complications surrounding Safeguard, it seems apparent that we would be buying, at a great cost, a false card that would have significantly limited value and would severely complicate the negotiations.

CONCLUSION

Mr. President, those of us who are supporting the Cooper-Hart amendment to defer deployment repeatedly have said that protection of our Minutemen is a necessary objective of our second-strike policy. We believe that the present state of the art is such that deployment of Safeguard, as designed, is premature. We

close proximity to Indian reservations necessary for the education of Indians residing on any such reservation. Any such contract entered into by the Secretary pursuant to this joint resolution shall contain provisions requiring such contracting agency to—

(1) provide Indian students attending such facilities in any school district the same standard of education as provided non-Indian students in such district;

(2) operate such facilities as a part of the public school system and to provide a program of instruction meeting the standards required by such State or local educational agency for other public schools under the jurisdiction or control of such agency; and

(3) meet, with respect to such facilities acquired or constructed pursuant to such contract, the requirements of the State and local building codes, and other building standards set by any such State or local educational agency for other public school facilities under its jurisdiction or control.

Sec. 2. For the purpose of carrying out the provisions of this joint resolution, there is authorized to be appropriated, for the fiscal year commencing July 1, 1970, the sum of \$7,500,000, and for each of the two next succeeding fiscal years, the sum of \$7,500,000, such funds to remain available until expended.

ADDITIONAL COSPONSORS OF BILLS AND JOINT RESOLUTION

S. 410

Mr. MOSS. Mr. President, I ask unanimous consent that at the next printing, the name of the senior Senator from Idaho (Mr. CHURCH) be added as a cosponsor of S. 410, to amend the Tariff Schedules of the United States with respect to the rate of duty on whole skins of mink.

The PRESIDING OFFICER. Without objection, it is so ordered.

S. 2371

Mr. MOSS. Mr. President, I ask unanimous consent that, at the next printing, the name of the junior Senator from South Carolina (Mr. HOLLINGS) be added as a cosponsor of S. 2371, to provide an equitable system for fixing and adjusting the rates of compensation of wage board employees.

The PRESIDING OFFICER. Without objection, it is so ordered.

S. 2422

Mr. BAYH. Mr. President, I ask unanimous consent that, at the next printing, the names of the senior Senator from Nevada (Mr. BIBLE), the junior Senator from Nevada (Mr. CANNON), the Senator from Alaska (Mr. GRAVEL), the Senator from Oregon (Mr. PACKWOOD), the Senator from South Carolina (Mr. THURMOND), and the Senator from Ohio (Mr. YOUNG), be added as cosponsors of S. 2422, to amend the Higher Education Act of 1965 to provide that the Secretary of Health, Education, and Welfare shall prescribe the maximum rate of interest for the students insured loan program.

The PRESIDING OFFICER. Without objection, it is so ordered.

S. 2470

Mr. SCOTT. Mr. President, I ask unanimous consent that, at the next printing, the name of the Senator from Indiana (Mr. BAYH) be added as a cosponsor of S. 2470 to amend the Food Stamp Act of 1964 to authorize elderly persons to exchange food stamps under certain cir-

cumstances for meals prepared and served by private nonprofit organizations, and for other purposes.

The PRESIDING OFFICER. Without objection, it is so ordered.

S. 2518

Mr. HARTKE. Mr. President, I ask unanimous consent that, at the next printing, the names of the Senator from Hawaii (Mr. FONG) and the Senator from Tennessee (Mr. BAKER) be added as cosponsors of the S. 2518, to amend title II of the Social Security Act so as to liberalize the conditions governing eligibility of blind persons to receive disability insurance benefits thereunder.

The PRESIDING OFFICER. Without objection, it is so ordered.

S. 2721

Mr. JAVITS. Mr. President, I ask unanimous consent that, at the next printing, the name of the Senator from Iowa (Mr. MILLER) be added as a cosponsor of S. 2721, the Insured Student Loan Emergency Amendments of 1969.

The PRESIDING OFFICER. Without objection, it is so ordered.

S.J. RES. 120

Mr. MOSS. Mr. President, I ask unanimous consent that, at the next printing, the names of the Senator from North Dakota (Mr. BURDICK) and the Senator from Montana (Mr. METCALF) be added as cosponsors of Senate Joint Resolution 120, providing for the preparation and submission to the Congress of a master ground transportation plan for the United States.

The PRESIDING OFFICER. Without objection, it is so ordered.

SENATE RESOLUTIONS 230, 231, 232, 233, 234, 235, 236, 237, AND 238—RESOLUTIONS REPORTED BY THE COMMITTEE ON THE JUDICIARY

Mr. EASTLAND, from the Committee on the Judiciary, reported the following original resolutions, which were referred to the Committee on Rules and Administration:

S. RES. 230

Resolved, That Senate Joint Resolution 40, 91st Congress, agreed to February 18, 1969 (authorizing an investigation of antitrust and antimonopoly laws and their administration), is hereby amended on line 5, page 3 by striking out "\$577,500" and inserting in lieu thereof "\$806,300".

S. RES. 231

Resolved, That Senate Resolution 42, Ninety-first Congress, as agreed to February 17, 1969 (authorizing a complete study of any and all matters pertaining to constitutional amendments), is hereby amended by striking out "\$120,000" and inserting in lieu thereof "\$124,000".

S. RES. 232

Resolved, That Senate Resolution 43, Ninety-first Congress, agreed to February 17, 1969 (authorizing a complete study of any and all matters pertaining to constitutional rights), is hereby amended by striking out "\$200,000" and inserting in lieu thereof "\$215,000".

S. RES. 233

Resolved, That Senate Resolution 44, 91st Congress, agreed to February 17, 1969 (authorizing a continuing of the study of criminal laws and procedures), is hereby amended on line 15, page 2, by striking out

\$120,000 and inserting in lieu thereof \$145,000.

S. RES. 234

Resolved, That the limitation of expenditures under Senate Resolution 46, 91st Congress, 1st Session, relating to the internal security of the United States, agreed to February 17, 1969, is hereby increased by \$65,000, and such sum, together with any unexpended balance of sums previously authorized to be expended under such resolution, shall be paid from the contingent fund of the Senate upon vouchers approved by the chairman of the committee and covering obligations incurred under such resolution on or before January 31, 1970.

S. RES. 235

Resolved, That Senate Resolution 47, Ninety-first Congress, agreed to February 17, 1967 (authorizing study and examination of the Federal judicial system), is hereby amended on page 2, line 23, by striking out "200,000" and inserting in lieu thereof "\$209,000".

S. RES. 236

Resolved, That section 4 of Senate Resolution 48, Ninety-first Congress, first session, authorizing an investigation of juvenile delinquency in the United States, agreed to February 17, 1969, is amended by striking out "\$225,000" and inserting in lieu thereof "\$250,000".

S. RES. 237

Resolved, That Senate Resolution 51, Ninety-first Congress, as agreed to February 17, 1969 (authorizing a complete study of any and all matters pertaining to revision and codification of the statutes of the United States), is hereby amended by striking out "\$48,900" and inserting in lieu thereof "\$52,900".

S. RES. 238

Resolved, That Senate Resolution 52, Ninety-first Congress, agreed to February 17, 1969 (authorizing a complete study of the separation of powers between the executive, judicial, and legislative branches of Government provided by the Constitution) is hereby amended by striking out "\$95,000" and inserting in lieu thereof "\$105,000".

ADDITIONAL COSPONSOR OF CONCURRENT RESOLUTION

S. CON. RES. 34

Mr. BYRD of West Virginia. Mr. President, on behalf of the Senator from South Dakota (Mr. MCGOVERN) I ask unanimous consent that, at the next printing, the name of the Senator from Texas (Mr. YARBOROUGH) be added as a cosponsor of Senate Concurrent Resolution 34, to establish a national policy on Indian affairs.

The PRESIDING OFFICER. Without objection, it is so ordered.

AUTHORIZATION OF APPROPRIATIONS FOR FISCAL YEAR 1970 FOR MILITARY PROCUREMENT, RESEARCH AND DEVELOPMENT, AND FOR THE CONSTRUCTION OF MISSILE TEST FACILITIES AT KWAJALEIN MISSILE RANGE, AND RESERVE COMPONENT STRENGTH—AMENDMENTS

AMENDMENTS NOS. 114 THROUGH 116

Mr. NELSON (for himself, Mr. GOOD-ELL, Mr. HUGHES, and Mr. PROXMIER) submitted three amendments, intended to be proposed by them, jointly, to the bill (S. 2546) to authorize appropriations during the fiscal year 1970 for procurement of aircraft, missiles, naval vessels,

and tracked combat vehicles, and research, development, test, and evaluation for the Armed Forces, and to authorize the construction of test facilities at Kwajalein Missile Range, and to prescribe the authorized personnel strength of the Selected Reserve for each Reserve component of the Armed Forces, and for other purposes, which were ordered to lie on the table and to be printed.

(The remarks of Mr. NELSON when he submitted the amendments appear earlier in the RECORD under the appropriate heading.)

AMENDMENT NO. 117

Mr. YARBOROUGH (for himself, Mr. PELL, Mr. HUGHES, and Mr. PROXMIRE) submitted an amendment, intended to be proposed by them, jointly, to Senate bill 2546, supra, which was ordered to lie on the table and to be printed.

(The remarks of Mr. YARBOROUGH when he submitted the amendment appear earlier in the RECORD under the appropriate heading.)

AMENDMENTS NOS. 118 AND 119

Mr. HARTKE (for himself, Mr. PROXMIRE, Mr. HUGHES, and Mr. PELL) submitted two amendments, intended to be proposed by them, jointly, to Senate bill 2546, supra, which were ordered to lie on the table and to be printed.

(The remarks of Mr. HARTKE when he submitted the amendments appear earlier in the RECORD under the appropriate heading.)

AMENDMENT NO. 120

Mr. HARTKE (for himself, Mr. PROXMIRE, and Mr. HUGHES) submitted an amendment, intended to be proposed by them, jointly, to Senate bill 2546, supra, which was ordered to lie on the table and to be printed.

(The remarks of Mr. HARTKE when he submitted the amendment appear earlier in the RECORD under the appropriate heading.)

AMENDMENT NO. 121

Mr. PELL (for himself, Mr. HUGHES, and Mr. PROXMIRE) submitted an amendment, intended to be proposed by them, jointly, to Senate bill 2546, supra, which was ordered to lie on the table and to be printed.

(The remarks of Mr. PELL when he submitted the amendment appear earlier in the RECORD under the appropriate heading.)

AMENDMENT NO. 122

Mrs. SMITH submitted an amendment, in the nature of a substitute, intended to be proposed by her to the amendment proposed by Mr. HART (for himself, Mr. COOPER, and others), No. 101, to Senate bill 2546, supra, which was ordered to lie on the table and to be printed.

(The remarks of Mrs. SMITH when she submitted the amendment appear later in the RECORD under the appropriate heading.)

AMENDMENT NO. 123

Mr. PROXMIRE. Mr. President, I submit an amendment to the military procurement authorization bill, pending in the Senate, which would have substantial sums of money and would curtail the Department of Defense trend toward pursuing a policy of disengaging

itself from controlling costs incurred by contractors and being charged under Government contracts. I refer to those efforts involved in what is known as independent research and development, or I.R. & D., bid and proposal, and other technical engineering activities. The costs of these efforts are included in the contractors' overhead and are allocated to the contracts they have with the Government.

The Department of Defense pays to contractors each year over one-half billion dollars for such engineering efforts over which DOD has very little, if any, control. Furthermore, these costs have been steadily increasing at an alarming rate each year. For example, in 1963 DOD paid \$459 million while NASA paid \$57 million; in 1968 DOD paid \$685 million and NASA paid \$131 million. In both years these sums of money were paid to less than 100 major defense contractors. While NASA is not involved in this bill, Mr. President, that agency follows the same policy as DOD, and the combined figures for the two more accurately portray the total picture.

Contractors have a great incentive to incur these costs. The efforts involved provide a basis for developing new and improved products, for selling these products, and otherwise improving the firm's capability to acquire new business. Those contractors that do a large share of their business with DOD are in an exceptionally good position in that they know that DOD will pay a large portion of these costs without controlling the efforts or demanding any share of the benefits obtained by the contractors. Because the contractors know the Government will bear a major portion of the costs, they have little reason to economize in these efforts.

DOD officials do very little reviewing contractors' I.R. & D. programs and, therefore, are in no position to determine their worthiness. In fact, these same officials find it necessary to ask the contractors each year to submit a list of benefits that have resulted from their I.R. & D. programs to provide support for justifying continuance of the program.

DOD's philosophy in not attempting to control I.R. & D. costs is that such costs are a necessary element of doing business, and that the Government should bear its share. DOD has recognized, however, that there is some need to better scrutinize these expenditures by contractors whose work is predominantly or substantially with the Government. Consequently, a system of negotiating advance agreements to define the maximum extent of the Government's liability was developed. However, once an advance agreement has been reached the contractors are free to change the content of their I.R. & D. programs without even making such changes known to DOD.

DOD has recognized that its system needs improvement, but the solution DOD is currently advocating is to completely eliminate any semblance of control by instituting a formula basis for determining the reasonableness of contractors' I.R. & D. and bid and proposal costs. Under this system no contractor, regardless of the degree of business he

does with DOD, would be required to have his proposed programs scrutinized in any way prior to incurring costs that will be reimbursed by the Government.

Mr. President, this amendment is necessary if the taxpayers are to be saved from financing contractors' programs that may be commercially oriented. In these times of economic stress it is necessary that we get the best possible return on every dollar of Government expenditures. In my opinion, this cannot be done by letting contractors decide on their own how they should spend the Government's money.

My amendment would require DOD to review contractors' proposed I.R. & D. programs and select those projects which would appear to benefit the contract work and which, therefore, the Government would be willing to finance. This amendment would eliminate any Government payments for work that would only further the contractors' own private interests.

I ask unanimous consent that the amendment be printed in the RECORD.

The PRESIDING OFFICER. The amendment will be received and printed, and will lie on the table; and, without objection, the amendment will be printed in the RECORD.

The amendment (No. 123) is as follows:

At the end of the bill add a new section as follows:

"Sec. 402. No part of the funds authorized by this Act shall be available for payment, directly or indirectly, to any contractor under a negotiated contract for any research and development work, bid and proposal expense, or other technical effort unless such work, expense, or other effort is specifically authorized under the terms of the contract or unless such work, expense, or effort is determined by the contracting agency to be of direct or indirect benefit to the work being performed under the contract."

AMENDMENT NO. 124

Mr. PROXMIRE. Mr. President, I am submitting today an amendment to the Military Procurement Authorization Bill which would authorize the Comptroller General of the United States to conduct a continuing study and review of the profits made by contractors and subcontractors on contracts entered into by the Department of the Army, the Department of the Navy, the Department of the Air Force, and the National Aeronautics and Space Administration, and on contracts entered into by the Atomic Energy Commission to meet requirements of the Department of Defense.

There has been much discussion of defense profits in recent years. Charges and countercharges have been made on this controversial subject. Critics maintain that defense profits are too high. The Defense Department denies these charges. Last November the Subcommittee on Economy in Government conducted hearings on military procurement problems including defense profits. We found that the Department of Defense cannot accurately ascertain what profits are in defense procurement. The fact is that there is little up-to-date knowledge about this subject. Elmer Staats, Comptroller General, testified that no complete

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and comprehensive study on this subject has been made.

In view of the enormous sums of money spent on defense contracts there can be no excuse for not knowing whether defense profits are in fact excessive. The public deserves a better account of what is being done with its money than the Government is now able to provide.

For this reason a comprehensive investigation of defense profits is essential. My bill authorizes the General Accounting Office to conduct such an investigation and to provide this legislative agency with the additional statutory authority to do so.

I ask unanimous consent that the amendment be printed in the RECORD.

The PRESIDING OFFICER. The amendment will be received and printed, and will lie on the table; and, without objection, the amendment will be printed in the RECORD.

The amendment (No. 124) is as follows:

AMENDMENT NO. 124

At the end of the bill add a new section as follows:

"Sec. 402. (a) The Comptroller General of the United States (hereinafter in this section referred to as the 'Comptroller General') is authorized to conduct a continuing study and review of the profits made by contractors and subcontractors on contracts entered into by the Department of the Army, the Department of the Navy, the Department of the Air Force, the Coast Guard, and the National Aeronautics and Space Administration under the authority of chapter 137 of title 10, United States Code, and on contracts entered into by the Atomic Energy Commission to meet requirements of the Department of Defense.

"(b) Any contractor or subcontractor referred to in subsection (a) of this section shall, upon the request of the Comptroller General, prepare and submit to the General Accounting Office such information as the Comptroller General determines necessary or appropriate in conducting the study and review authorized by subsection (a) of this section. Information required under this subsection shall be submitted by a contractor or subcontractor in response to a written request made by the Comptroller General and shall be submitted in such form and detail as the Comptroller General may prescribe and shall be submitted within a reasonable period of time.

"(c) In order to determine the costs, including all types of direct and indirect costs, of performing any contract referred to in subsection (a) of this section, and to determine the profit, if any, realized under any such contract or subcontract, either on a percentage of cost basis or a return on private capital employed basis, the Comptroller General and authorized representatives of the General Accounting Office are authorized to audit and inspect and to make copies of any books, accounts, or other records of any such contractor or subcontractor and to take the sworn statement of any such contractor or subcontractor or of any officer or employee of any such contractor or subcontractor.

"(d) The Comptroller General, or any officer or employee designated by him for such purpose, may hold such hearings, sign and issue subpoenas, administer oaths, examine witnesses, receive evidence, and require by subpoena the attendance and testimony of witnesses and the production of such books, accounts, or other records as may be material to the study and review carried out by the Comptroller General under this section.

"(e) In case of disobedience to a subpoena, the Comptroller General or his designee may invoke the aid of any court of the United States in requiring the attendance and testimony of witnesses and the production of books, accounts, or other records. Any district court of the United States within the jurisdiction in which the contractor or subcontractor or an officer or employee of the contractor or subcontractor is found or resides or in which the contractor or subcontractor transacts business may, in case of contumacy or refusal to obey a subpoena issued to any person, issue an order requiring the person to appear before the Comptroller General, or his designee, or to produce books, accounts, and other records if so ordered, or to give evidence touching any matter pertinent to the study and review; and any failure to obey such order of the court shall be punished by the court as a contempt thereof."

ADDITIONAL COSPONSORS OF AMENDMENTS

AMENDMENT NO. 107

Mr. BYRD of West Virginia. Mr. President, on behalf of the Senator from Wisconsin (Mr. PROXMIRE), I ask unanimous consent that, at the next printing, the name of the Senator from Texas (Mr. YARBOROUGH) be added as a cosponsor of Amendment No. 107 to S. 2546, the military procurement bill. The amendment requires annual disclosure by former high-ranking civilians and military Pentagon employees who leave the Government and go to work for major defense contractors.

The PRESIDING OFFICER. Without objection, it is so ordered.

AMENDMENT NO. 110

Mr. FULBRIGHT. I ask unanimous consent that, at the next printing of my Amendment No. 110 to S. 2546, authorizing appropriations for fiscal year 1970 for military procurement, research and development, and for the construction of missile test facilities at Kwajalein missile range, and reserve component strength.

The PRESIDING OFFICER. Without objection, it is so ordered.

NOTICE CONCERNING NOMINATION BEFORE THE COMMITTEE ON THE JUDICIARY

Mr. EASTLAND. Mr. President, the following nomination has been referred to and is now pending before the Committee on the Judiciary:

Douglas B. Baily, of Alaska, to be U.S. attorney for the district of Alaska for the term of 4 years, vice Richard L. McVeigh, resigned.

On behalf of the Committee on the Judiciary, notice is hereby given to all persons interested in this nomination to file with the committee, in writing, on or before Tuesday, August 12, 1969, any representations or objections they may wish to present concerning the above nomination, with a further statement whether it is their intention to appear at any hearing which may be scheduled.

NOTICE OF HEARINGS ON S. 2624

Mr. TYDINGS. Mr. President, as chairman of the Judiciary Committee's Subcommittee on Improvements in Judicial

Machinery, I announce hearings on S. 2624, a bill to improve the judicial machinery in customs courts by amending the statutory provisions relating to judicial actions and administrative proceedings in customs matters, and for other purposes. The hearings will be held at 10 a.m. on September 8 and 9, 1969, in Room 6226, New Senate Office Building.

Any person who wishes to testify or submit a statement for inclusion in the record should communicate as soon as possible with the Subcommittee on Improvements in Judicial Machinery, Room 6306, New Senate Office Building.

PRIME MINISTER PIERRE ELLIOTT TRUDEAU—A PROFILE

Mr. MANSFIELD. Mr. President, recently the New Yorker magazine published a profile of an interesting and distinguished contemporary political figure. The issue of July 5, 1969, contains a study of Pierre Elliott Trudeau, the 15th Prime Minister of Canada.

The portrait which emerges from this account by Edith Iglauer is that of a very human man of intellectual brilliance with a consummate interest in the public affairs of Canada and the world, and an intense integrity in approaching the problems which beset these affairs. Mr. Trudeau's personal characteristics have been woven—or perhaps to state it more accurately, have blended—into an unorthodox leadership which, according to the profile, is of great effectiveness in Canada's current political life.

It seems to me most important that there should be in the United States a depth of understanding about the operations of the Canadian system of government. I speak now not so much in the textbook sense of comprehending the machinery of that government. Rather, what needs to concern us intensely are the forces now moving within the Canadian political system. These forces are of interest to the United States not only because the Canadians are neighbors closely linked but also because of the comparative value of any new experiences which others may have in dealing with free institutions under a Federal constitutional structure.

It is clear from the profile that Pierre Elliott Trudeau and his political associates are, so to speak, very alive and kicking in current Canadian political processes. It is also clear that they are very much attuned to new social rhythms which have been set in motion largely by the younger generations and which are more often than not worldwide in scope. Edith Iglauer's article makes a distinct contribution to our understanding of recent political phenomena of Canada. I ask unanimous consent that her profile of Pierre Elliott Trudeau be printed in the RECORD.

There being no objection, the article was ordered to be printed in the RECORD, as follows:

PROFILES: PRIME MINISTER
(By Edith Iglauer)

Pierre Trudeau, the improbably fifteenth Prime Minister of Canada, whose dream is to mold a more nearly perfect government

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and save his country from dissolving into two separate nations, is a man who likes to have the last word. He has been talking back to people since boyhood. When he is reminded of this, he throws back his head and laughs. "Yes!" he says. "I was impertinent to my father, to my teachers—to everybody. It got me into trouble, but when I was intimidated I had to have the last word. As I became more mature, I would state my case and sit back, which is a form of answering." He has been stating his case since 1950, when, in the first issue of *Cité Libre*, a small, free-spirited French-Canadian magazine he helped to found, he presented his own theory of balanced action between central-government authority and provincial autonomy, in an article entitled "Politique Fonctionnelle." Last year, with characteristic consistency, he stated his case again, in a collection of speeches and essays called "Federalism and the French Canadians." He wants Canada, whose constitution provides for a form of government that unites the qualities of American federalism and British parliamentarianism, to become what he calls "a brilliant prototype" for tomorrow's world, and, as Prime Minister, he is in a position to try to make this particular dream come true.

Trudeau had few listeners until two years ago, when he was appointed Minister of Justice and Attorney General in the Cabinet of Lester B. Pearson, his predecessor as Prime Minister and as leader of the Liberal Party. Until 1965, when Trudeau joined the Liberals—the first time he had joined any party—ran for public office, also for the first time, and was elected a Member of Parliament from a well-to-do suburb of his birthplace, Montreal, he was almost unknown outside the Province of Quebec. Until he became Prime Minister, in 1968, he was not considered sufficiently important to have a listing in the Canadian *Who's Who*. Just a little more than a year ago, when Marc Lalonde, a Montreal lawyer who is now Trudeau's Principal Secretary and administrative Chief of Staff, suggested to Jacques Hébert, a French-Canadian writer and publisher who is one of Trudeau's closest friends, the possibility of Trudeau's becoming Prime Minister, Hébert pronounced the idea "wonderful but crazy." Hébert has said since, "I could see ten years ago that he was perfect for the job, but I thought it not at all possible that in a democracy a man so well prepared as Pierre, so unlike the traditional politician, could be Prime Minister."

The aspect of Trudeau's complex personality that has caught the public imagination is his ability to "swing"—to close the gap between his own age, which is forty-nine, and the long-haired, miniskirted generation. When he was a bachelor Cabinet minister, his personal eccentricities fascinated a country that puts considerable stress on the proprieties. He would go to his office in Ottawa's austere Parliament Buildings in sports jacket, ascot, and sandals; he might stand on his head, walk on his hands, dive into a swimming pool fully clothed, or slide down bannisters in public places; he would drive a motorcycle or the latest-model sports car while wearing a leather coat, perhaps in the company of a ravishing beauty of less than half his age. In his term as Minister of Justice, during which he introduced legislation that has broadened the grounds for divorce, liberalized the laws on abortion, and abolished penalties for homosexual acts between consenting adults, he remarked, "The state has no business in the bedrooms of the nation," and the remark was repeated with delight around the world. After he won the leadership of the Liberal Party, in April, 1968, and succeeded Pearson as Prime Minister, Trudeau called a general election for June, in the hope of obtaining a clear working majority in the House of Commons. In the ensuing campaign, his every quip made the headlines, and he was photographed dancing in the

streets and kissing his way across the country. Kissing is as common a greeting in French Canada as handshaking is elsewhere, yet Trudeau's charm produced a nationwide reaction so powerful that it was given a name of its own—"Trudeaumania." For many Canadians, stirred by the grand-scale celebration the previous year of a century of nationhood, Pierre Trudeau personified the centennial spirit and promised a fresh start for the second century of Canadian history.

The countless facets of Trudeau's personality inspire a wonderful variety of reactions. The view of a political enemy: "Pierre is conservative, but in the campaign he was passed off as having flowers in his mouth. He is one of the best-equipped men intellectually, but this is not enough until the ancient dream of a republic of philosophers is realized. His greatest weakness is aristocratic arrogance tied to no experience. He's a dabbler, a dilettante, an easy-going bachelorette who likes travelling around the world and will soon get fed up with the job."

An official at Liberal Party headquarters: "Mr. Trudeau is a contemporary man, who looks, acts, and thinks the way we all believe a man of the twentieth century should. He is an I.B.M. computer. He is hip. He is thoughtful, worldly, exciting, candid. Somebody's going to say someday, 'Will the real Mr. Trudeau please stand up,' and about fifty-eight people will rise."

A left-wing Member of Parliament: "He is cautious and conservative, with nothing new or exciting to offer but his manner, which some people find exciting. He is a suspended brain, not fed much by the spirit, detached and cold. I think he's warm in personal relationships, but he is not sensitive to the needs and stirrings in the lower strata of society."

A prominent civil servant: "The Prime Minister has the most precise and logical mind I have ever worked with, a brilliant and versatile mind. He's a bundle of contradictions, different from what you would expect. He is mentally fresh and young, a superb companion. You might think he's frivolous, but he is intensely serious—a very hardworking person, who seldom takes time off for recreation."

An old friend: "The playboy image of Pierre reflects one-tenth of one per cent of his activity. Pierre is always challenging, provoking, shocking, so that no one can see what he's really like. He keeps us guessing all the time, which is what he wants. He is arrogant with people who don't know anything, and he himself has a passionate eagerness to know, to see and learn. He respects competence. He is an individualist who is always challenging himself, and who will always be lonely. He has one consistent personality trait, and this may be what some people don't like: to go through with anything he starts, and through to the end."

"My life is one long curve, full of turning points. Like Einstein, I feel that space is curved," Pierre Trudeau said recently to a visitor, in one of his rare moments of relaxation on a working day. The two were sitting at lunch in the three-story rectangular gray stone house at 24 Sussex Drive, Ottawa, that is the official residence of Canada's Prime Ministers. It is a modest house in a lovely setting of lawns and rosebushes and petunia beds, with a crab-apple tree in the garden, and there is a view from the enclosed sun porch in the back across the Ottawa River to the Gatineau Hills, in Quebec Province, and a narrow white church spire in the Quebec town of Hull. The furnishings of the residence are those of a middle-class home: black leather and brown overstuffed chairs in a small, panelled library; chintz couches around a fireplace in a gray-carpeted, gray-walled living room; and, beside a window looking out on the river, a piano, which former Prime Minister Pearson played when he thought nobody could hear him. Mrs. Pearson's taste in interior decorating dom-

inates the rooms; Prime Minister Trudeau has changed nothing but the paintings, on loan from the National Gallery. He shows a marked preference for Abstract Expressionist works by Canadians, and especially for artists who have been his personal friends, among them the late Paul-Emile Borduas, Jean-Paul Lemieux, Alfred Fellan, and Micheline Beauchemin, creator of a handsome tapestry rug that hangs above a curving staircase in the hall.

The Prime Minister had arrived for lunch at one-thirty, half an hour behind schedule, bounding into the room with a broad smile of welcome, looking extremely natty in a well-tailored conservative brown suit, a striped tie, and a blue shirt that exactly matched his eyes. He is a slim, athletic man of medium height. His receding brown hair is just beginning to gray, and there is a small bald patch at the back. His features are pleasantly irregular—high cheekbones, which give his face a faintly Oriental cast; a slightly aquiline nose; and a large mouth with very white, even teeth. His eyes are luminous, and of a blue so brilliant that the effect of his gaze is startling to some people, even a bit frightening. He looks at one with such intensity, seeming to listen with his eyes, that the object of his attention is apt to feel that every word spoken must be significant.

The Prime Minister apologized for his tardiness, and offered his visitor a cocktail. He was delighted when it was refused. "Good!" he said. "Then we can go right in and eat." He sat down at the lunch table and poured chilled dry white wine into small cut-crystal glasses, remarking that he drank very little and didn't smoke at all. "I'm not willing to sacrifice the control of physical and mental ability that drinking and smoking take away for what they give in return," he said. "I used to tell myself that smoking impaired the memory, and in time I believed that it did. I have always thought, Why should I lose even a little bit of my memory, since it is not all that good? Also, in my early boyhood I was frailer than most boys and I thought I had to be more careful. I still have to average eight hours' sleep. I think I just have to have that. I can go for weeks or months on five hours or so of sleep, as I did during the election campaign, but afterward I have to make up for it by sleeping twelve or thirteen hours."

There are many Trudeaus in Canada (more than six hundred are listed in the Montreal phone book), and, according to the Prime Minister, the first Trudeau arrived in Canada from France in either 1628 or 1632. The Prime Minister's father, Charles-Émile, who died in 1935, was a farmer's son who was trained as a lawyer and became a very successful businessman. Pierre Trudeau's mother, who is ill and lives in retirement in Montreal, was Grace Elliot, the daughter of a Scottish father and a French-Canadian mother. Pierre Trudeau grew up speaking both English and French at home, and is totally bilingual, but he believes that he writes with greater precision in French. In conversation, he is soft-spoken in either language, but he is also a superb orator. He speaks vibrantly in French, but in English, when he is tired, his voice can drop to a lifeless monotone.

Trudeau, whose distaste for growing older runs to a vagueness about his birth date, although he is otherwise precise about detail, was born on October 18, 1919. He has an older sister, Suzette—a shy but composed and friendly woman, who is married to a dentist in Montreal and has three children—and a brother, Charles, two and a half years his junior. Charles is quiet and sensitive, and shares with his brother a deep love of the Canadian wilderness. An architect by profession, married but childless, Charles Trudeau is an expert skier and swimmer, and has become absorbed in art, music, and out-

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Notwithstanding this progress toward reducing expenditures, however, in June of 1949, Congress, supported by the administration, repealed all controls over Federal employment, and within 30 days after its repeal Federal employment was back to its second highest level.

During the testimony before the congressional committees in support of the repeal of the mandatory ceiling on Federal employment the Secretary of the Treasury told Congress that his Department, as the result of personnel cuts, was losing around \$500 million annually in uncollected revenues. Both the Secretary of the Treasury and the Director of the Budget, while asking for the repeal of this ceiling on Federal employment, failed to point out that under the law enacted in 1968 the Budget Director had unlimited authority to increase employment in any agencies requiring additional personnel. It was the intention of Congress that the offsetting reductions be made in those agencies which would least disrupt essential public service.

But now the law has been repealed, and there is no control over the number of personnel that can be added to the public payroll. What happened?

There were 83,999 extra employees added to the public payroll in June 1969.

Of these, 16,687 were added in the Agriculture Department, 13,556 were added to the Post Office Department, 4,144 employees were added to the Department of Health, Education, and Welfare, 3,964 were added in the Interior Department, 3,568 were added in the Veterans' Administration, and 3,145 in the Transportation Department. The Justice Department added 1,591, Housing and Urban Development added 809, and the Commerce Department added 575 while the Bureau of the Budget and the Treasury, the two Departments making the biggest howl about the lack of personnel, added 40 and 561 respectively.

It can be argued that the June increases reflected not only the regular employment by the major agencies but also the temporary summer employment under the President's youth opportunity program; however, the same explanation was applicable in June of last year, and that still leaves Federal civilian employment now at the second highest level since 1945.

Mr. President, earlier this year when the administration was asking for the repeal of the law which placed a mandatory ceiling on Federal civilian employment I objected and expressed the fear that with its repeal we would see a resumption of the trend toward a padding of the Government payroll. My fears were justified.

I ask unanimous consent that an excerpt from table I appearing in the joint committee's report, giving an itemized breakdown of these increases during the month of June, be printed at this point in the RECORD.

There being no objection, the excerpt was ordered to be printed in the RECORD, as follows:

	Personnel		
	June	May	Increase
Executive departments (except Defense):			
Agriculture.....	125,034	108,347	16,687
Commerce.....	36,471	35,896	575
Health, Education, and Welfare.....	112,524	108,380	4,144
Housing and Urban Development.....	14,964	14,155	809
Interior.....	74,663	70,699	3,964
Justice.....	36,416	34,825	1,591
Labor.....	10,813	10,209	604
Post Office.....	739,002	725,446	13,556
State.....	43,644	42,930	714
Transportation.....	64,118	60,973	3,145
Treasury.....	88,598	88,037	561

ABM: A CASE FOR DELAY

Mr. GRAVEL. Mr. President, no issue, save perhaps that of Vietnam, has so preoccupied this Congress as the deployment of an anti-ballistic-missile system. The debate over this question has no precedent. No debate over arms spending in the entire postwar period has been so intense, so closely contested, and so well informed. The questioning of the administration's proposal to deploy the Safeguard has been the most serious review of defense spending in the entire so-called "cold war."

This debate, dealing as it does with the most sensitive questions of U.S. defense policy, has become larger than the sum of its parts.

It raises the question of spending about \$1 billion in fiscal 1970. But it forces us to examine the record of effectiveness of almost \$1 trillion of defense spending over two decades.

It raises the question of defending our Minuteman missiles. But it forces us to examine the security of our entire deterrent force.

It raises the question of strengthening this administration in the arms talks. But it forces us to examine whether strength really contributes to a climate for limiting the arms race.

Twenty-four years ago tomorrow, our minds were numbed by the incredible explosiveness of the atom bomb dropped at Hiroshima from a piston-engine bomber. Today, we are confronted with the reality of the Poseidon weapons system; a submarine capable of launching 16 missiles, each of which can deliver a dozen warheads to separate targets. And each of these warheads is deadlier than the Hiroshima bomb.

The debate over Safeguard has been a historic opportunity to take stock of how this Nation has managed, and how it should continue to manage the grim problems of defense and security.

Before giving my analysis of the issues, I feel impelled to express my satisfaction with the Senate debate thus far. Despite the great sensitivity of the question, the discussion in the Senate has been candid, thorough, and handled with respect for differing views. The Armed Services Committee, under the able leadership of the distinguished junior Senator from Mississippi, Senator STENNIS, heard testimony on both sides of this

issue. The Foreign Relations Committee, led by the distinguished junior Senator from Arkansas, Senator FULLBRIGHT, sought to develop related foreign policy issues. Its Subcommittee on International Organization and Disarmament Affairs, under the distinguished senior Senator from Tennessee, Senator GORE, heard exceedingly useful testimony by leading scientists for and against the ABM. Later, the able junior Senator from Washington State, Senator JACKSON, and the experienced senior Senator from Missouri, Senator SYMINGTON, led a most informative debate in which classified material was presented.

The press has spoken of considerable pressure being brought to bear on Members to sway votes. Certainly, in this instance, I have received as much pressure as any Member. But it has been pressure I consider entirely proper, sincere, and motivated by the highest intentions.

I take this opportunity to assure Americans that the dedication and integrity of the Senate has not been compromised by this debate.

The involvement of citizens groups and other organizations has been a healthy contribution. America needs this kind of informed, direct interaction between broad segments of the public and elected representatives.

Of course, the greatest pressure upon me has been the weight of the testimony presented. This I have studied carefully. This wealth of material is quite sufficient to make a reasoned judgment. But weighing it takes time. That is the principal reason I have waited until the final hour to express my views on this matter.

Also, if debate is to go on, someone should be listening. I have felt that every view should be given an opportunity for expression unburdened by comprehensive polls that seek to prejudge the decision. Finally, I have wanted to give my constituents in Alaska the longest possible period to express themselves to me on this issue.

Waiting has been valuable for me. I am much better prepared and far more confident that my vote will be based upon informed judgment.

In presenting my analysis, I will begin with a few basic comments on our deterrent force. It is composed of about 500 strategic bombers, 1,000 land-based Minuteman missiles, and 41 Polaris submarines.

It is important to observe that the Minuteman force is not the primary element of our deterrent. That role is played by our Polaris submarines.

Our Polaris force of 656 missiles—about half of which are on station at all times—is far less vulnerable than our Minuteman missiles.

Our Polaris force is far more difficult to destroy simultaneously. This force is capable of destroying all the major Soviet cities several times over.

This force is much better designed for delayed and controlled response—an absolutely necessary requirement for a

proper deterrent. Our submarines could wait for some time before responding. They could wait until there is no question of the necessity of launching retaliatory attacks upon cities. Regardless of the size of our Minuteman force, it cannot substitute for Polaris because the exposed Minuteman missiles would be too vulnerable to hold in reserve.

Our Polaris strike force has no fixed geographic coordinates. Enemy missiles cannot be targeted on it as they can in the case of fixed Minuteman silos.

We have 41 nuclear submarines, many of which are armed with Polaris A-3 multiple warheads. Under present planning, 31 of these submarines will be converted to accommodate Poseidon missiles equipped with individually guided warheads.

The nuclear destruction carried by a single Poseidon submarine could devastate the major cities of the Soviet Union. Thus, the firepower of even a single Poseidon submarine remaining after a first strike would be catastrophic to the Soviet Union.

Our Polaris force appears to be in no danger. Our Chief of Naval Operations, Admiral Moorer, testified last year that he had "very high confidence that the invulnerability of Polaris would be maintained."

The Armed Services Committee evidently agrees. If Polaris were becoming vulnerable, we would want to increase the range of its missiles, permitting it a larger area in which to hide. However, after hearing testimony, the Armed Services Committee eliminated from its authorization \$20 million for additional research on ULMS—undersea launched missile system.

Finally, the number of submarines could also be increased before the mid-seventies without taking action this year.

In summary, this element of our deterrent force shows every sign of maintaining, and even improving, its extraordinary effectiveness.

Let me reemphasize—Polaris is our primary retaliatory force. If we had to rely on a single defense no one would choose our bombers and no one would choose our Minuteman. All would choose Polaris. Indeed, if there were no Polaris submarines, I doubt that anyone would now be proposing a missile defense of Minuteman. There would be a search for an entirely new force.

Unfortunately, in the debate over Minuteman, the primary importance of Polaris has been obscured, ironically enough, because it is so secure.

Having placed the problem in what I believe to be the proper perspective, I now want to deal with five questions that go to the core of this debate: First, is Minuteman worth preserving? Second, if so, does the threat to Minuteman require immediate action? Third, is an ABM defense of a small number of our Minuteman silos the most dependable and efficient way of maintaining a secondary strategic force? Fourth, what about missile defense to protect people against accidents or Chinese attacks? Fifth, would approval of Safeguard strengthen the administration position in the stra-

tegic arms limitation talks—SALT? I shall discuss these questions in order.

(1) IS MINUTEMAN WORTH PRESERVING?

The very fact that Minuteman is threatened is not sufficient justification for defending it. Minuteman must have some continuing, vital role in our long-range defense posture to justify any effort to protect it.

At present we have bombers, land-based missiles, and Polaris submarines. How much should we spend to maintain these deterrents? Do we need all three?

Every time a strategic force begins to become vulnerable, we tend to try to maintain it as a secondary force. But just as the bomber age gave way to the missile age, land-based missiles are giving way to sea-based forces. We must recognize that land-based missiles are becoming obsolete as an invulnerable deterrent.

We must face this question squarely. Should we maintain three separate deterrent forces? And should a land-based force be one of them? If it is essential to preserve our land-based missiles then we must ask a second question:

(2) DOES THE THREAT TO MINUTEMAN REQUIRE IMMEDIATE ACTION?

Specifically, is it either urgent or prudent to begin to deploy at this time the proposed missile defense? This defense is designed to protect a few Minutemen in the midseventies. Therefore, the urgency of beginning now depends on two considerations.

First, how great will the threat to Minuteman be by the midseventies? In other words, how far advanced will the Soviet missile buildup be at that time?

Second, how long would it take to protect this force or substitute for it? In other words, how much lead time do alternative solutions require?

The mid-1970 deadline is based on extrapolating the Soviet SS-9 buildup for 6 or 7 years. No missile buildup in the last 20 years of the arms race has gone on at as steady a pace for such a long period as is suggested in this extrapolation.

The acknowledged fact that the Soviet Union built a few more SS-9's in 1968 is not a strong case for such a long extrapolation. Undoubtedly the Soviet Union has not itself decided how long it will build SS-9's; indeed, intelligence reports indicate that overall the SS-9 buildup has slowed rather than increased.

And in the context of the SALT talks, we can expect to have ample opportunity to dissuade the Soviet Union from continuing such a buildup. We can warn them that such decisions on their part would evoke a response from us that would certainly go far beyond defensive weapons.

Therefore, I conclude that the desirability of taking action now is partly generated by alarmist extrapolations.

What about the second factor, that of leadtime? Any urgency of beginning now to meet a deadline in the midseventies stems largely from the long leadtime required to build missile defenses. If we decided upon some other alternative for protecting Minuteman, or substituting

for it, and if that method required fewer years to build, it would not be necessary to begin now.

Some alternatives for maintaining a secondary force are: superhardening the Minuteman sites, that is, protecting them with more concrete; building more Minutemen; building mobile Minutemen; or building a new kind of sea-based force.

Of course, there is also the option of strengthening the primary force, our Polaris submarines, or, for that matter, strengthening our other secondary force, the strategic bombers.

Unfortunately, the administration has not presented the Congress with a serious analysis of all the possible alternatives. Most, if not all of them, would require shorter leadtimes than the ABM.

I can only conclude that the need to take action now is partly self-generated by our choice of this option.

In summary, we seem to have exaggerated the threat by predicting a steady buildup over many years and then announced that we must answer that threat immediately because we have chosen an answer that takes many years to build.

The alternative solutions to the threat also must be considered more particularly with regard to their cost and dependability. Even if we require three strategic forces, and if the threat is urgent, this raises a third question:

(3) IS AN ABM DEFENSE OF A FEW MINUTEMEN OUR MOST DEPENDABLE AND EFFICIENT OPTION?

I am impressed by the fact that all of the alternatives just mentioned are more reliable than the use of the ABM. President Eisenhower's Science Adviser and his Director of Defense Research and Engineering have testified that the missile defense might fail catastrophically at the critical moment.

Of all the possible alternatives, the ABM is the most complicated and the least dependable. Let me restate it—none of the other possible options have been presented to the Senate in any serious study.

In terms of overall reliability, missile defenses are the most controversial weapon we have yet to consider. Many different kinds of penetration aids and tactics—devices such as precursor warheads, decoys, chaff, fireballs, blackout effects, maneuvering warheads, and simultaneously arriving warheads—make a really reliable missile defense almost inconceivable.

Enemy efforts would be focused on destroying our radars. Even if we have interceptors, the Soviet Union can acquire a sufficient number of warheads to exhaust those interceptors—and one additional warhead to knock out our radars. If the radars are destroyed, the system becomes blinded and worthless. We have had much testimony underlining the Rube Goldberg quality of defending many hardened missiles with a few soft radars.

Furthermore, I am impressed with the difficulties that will arise in designing and relying upon Safeguard's computer programs. Safeguard must cope with adversary tactics and tricks, many not yet invented, and with sequences of attacks

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no one can predict. We launch Apollo at a predetermined time of our choosing and without enemy efforts to defeat it. But Safeguard must fire at a moment picked by the other side. Safeguard must cope, not only with nature, but with an ingenious human adversary exploiting vulnerabilities.

Mr. FULBRIGHT. Mr. President, will the Senator yield for a question?

Mr. GRAVEL. I yield.

Mr. FULBRIGHT. I think the Senator is making an extremely able and perceptive argument. On the last few points that he has made, particularly with regard to the computer program, very little evidence has been taken with regard to the capability of existing computers to deal with this matter. In fact, I have seen no evidence that is persuasive that the computer technique is at present sufficiently advanced to deal with the problems that would be confronted by ABM.

I saw one article in this field by Prof. John Anderson of the University of Minnesota, I think, in which he said it was estimated that a computer, to deal with the ABM problem, would require about 10 million instructions into the program; and even to program the computer would take, I think it was estimated, 80 years. In other words, he was writing that it was practically impossible at the present time to create a computer to deal with this matter. I think the Senator is quite correct.

I ask unanimous consent to have Professor Anderson's article inserted at this point in the RECORD.

There being no objection, the article was ordered to be printed in the RECORD, as follows:

THE CASE AGAINST SAFEGUARD

(By John Edward Anderson, Ph. D.,*
University of Minnesota)

I. INTRODUCTION

The case against the Safeguard ABM system is devastating. The need for such a system cannot be justified upon the grounds given by President Nixon. Even if it could be so justified, it can be shown on technical grounds that it would be ineffective and dangerous. It is a mistake to believe that scientists in the United States are equally divided on this issue. Never in any of the extensive literature, both pro and con, on this question have I seen the overwhelming technical arguments against the system even rudimentarily answered. The pro argument usually deals with the Communist Threat, as if a strong enough threat will make the system necessary and/or effective.

It is a mistake to believe that the technical success of the Apollo mission means that no task is beyond our technological capability. The differences between Apollo and Safeguard are enormous. The Apollo mission was clearly defined and required observation of only one or two vehicles. Launches could be carried out one at a time, by a single highly trained crew, could be planned far in advance, and delayed as needed with no effect on the basic mission. The Safeguard task, which must be programmed into its computer, will never be clearly defined, as it must deal with an unknown future offensive attack strategy. It requires simultaneous observation of thousands of vehicles moving at speeds up to 7 miles a second, and a sky filled with objects designed to distract the radars. Thousands of crews at remote locations must be on instant alert over a

period of years, ready to fire at a moment's notice, and then the whole attack and defense sequence could be completed in seconds. Complete testing could be accomplished only when and if the moment of truth arrives so that there could be no rational basis for developing confidence in the system.

The second and third of President Nixon's three reasons for Safeguard, i.e., the China argument and the accidental-launch argument have been so effectively answered that they were not even mentioned in the recent majority report on Safeguard by the Senate Armed Services Committee. The first reason, i.e., that Safeguard is needed to protect our deterrent is discussed in Section 2 below, in which we also present a new and more compelling argument against first-strike capability. It is believed that a careful attempt to understand this argument will reassure those who genuinely believe our deterrent is in danger, notwithstanding C.I.A. testimony to the contrary. The author believes this argument is so strong that the Safeguard system is not needed even if it were to work. But the technical arguments against the system per se are so overwhelming that it is a particular irony that such a system should be pushed so hard at a time when the Nation's resources need so badly to be used to solve social problems. These technical arguments are summarized in Section 3.

II. PROTECTION OF OUR LAND-BASED DETERRENT FORCE

The main reason given by President Nixon for Safeguard, and emphasized again in the Senate Armed Services Majority Report, is that our land-based deterrent force may be in danger of attack by the Soviet Union in the mid 70's. As is well known, the implication of this is that the Soviets would be capable of launching so overwhelming a force simultaneously against our 1000 Minuteman missiles, our 41 Polaris submarines, our 650 B52 bombers, our Naval task forces, and our tactical nuclear forces in Europe, that any second strike by us would be weak enough so they would be willing to absorb it.

To carry out such a coordinated attack would require both an overwhelmingly superior attack force, and almost perfect confidence that the attack could be carried out with predetermined high accuracy and split-second timing. If the attacker errs in either his accuracy or in his timing, his society could be destroyed.

Consider the portion of his attack aimed at the U.S. Minuteman force alone. This problem is considered in detail in the Appendix. There it is shown how the number of missiles which must be targeted at each Minuteman depends upon the destruct radius of the bomb, the average accuracy of the attack missiles and their reliability. With 5 megaton warheads and 50% reliable missiles, 14 missiles must be targeted on each of our 1000 Minutemen if the accuracy is $\frac{1}{2}$ mile, or 4 if the accuracy is $\frac{1}{4}$ mile. These figures, which can be readily checked, are much in excess of those given by Dr. John S. Foster of DOD. Since the calculation is so simple and has been checked independently by many scientists, it is apparent that the DOD intended to make the first strike look much more plausible than it actually is. That this should be so is a most sobering conclusion.

The above calculation shows that only if one side attains a numerical superiority in attack missiles many times in excess of the other, would a first strike be possible.

The most important argument, however, is yet to be made. It is given in Section 3 of the Appendix and relates to the disastrous consequences of an incorrect estimate of the missile accuracy. Suppose the attacker calculates the number of missiles he requires based upon the premise that only 50 of the

1000 Minutemen will remain undamaged after the attack. If he is low by a factor of two in his estimate of the accuracy of his own missiles, the number of Minutemen which would remain would not be 50, but 472!

A full appreciation of an error in his accuracy estimate requires understanding of the fact that there is in reality no way to determine the average accuracy of say 5 to 10,000 operational missiles maintained and fired by regular field forces. This is discussed in Section 2 of the appendix. In face of these facts, could any nation ever take the risk of a first strike attempt?

III. THE TECHNICAL ARGUMENTS AGAINST SAFEGUARD

The technical arguments against Safeguard, or against any ABM system consisting of missiles, radars and computers, have been detailed by many eminent scientists in many journals, statements, books, etc. The most comprehensive treatment is given in ABM, An Evaluation of the Decision to Deploy an Antibalistic Missile System, edited by Abram Chayes and Jerome Wiesner. Here, as a quick overview, these arguments are summarized.

Decoys

The Spartan long-range ABM missile attacks above the atmosphere and hence can be rendered completely ineffective by cheap decoys of many kinds. Why it is still even included is a mystery.

Nuclear blast effect

Explosion of a multimegaton bomb over the area of the missile farm would black out the radar for periods of approximately 15 minutes, completely destroying the effectiveness of the system.

Soft radar

Minuteman silos which can withstand overpressures up to 300 psi are to be protected by radars good for 20 psi. This is worse than protecting tanks with squads of infantrymen.

Computer program

It has been estimated that the program will require about 10 million instructions. Based on extensive experience with large programs, about 10,000 instructions per month appears to be the maximum that can be written on a single problem, no matter how many men are assigned. This would imply that about 80 years would be required to program the computer. This essentially means that it could never be programmed because it would always have to be changed as new offensive strategies are discovered.

Reliability

Past experience with large field-deployed systems gives little hope that Safeguard would come close to meeting required operational reliability. Apollo is a totally different type of system and its success bears no implications for Safeguard. Safeguard requires 10's of thousands of missiles and hence 100's of thousands of regular Army men trained as missile crews. Cape Kennedy standards will not be maintained under such circumstances.

Testing

Notwithstanding DOD assertions to the contrary, there is no effective way to test Safeguard under field conditions. Component and simulation testing simply will never give confidence that the system will perform when the moment of truth arrives.

Safety

The requirement for quick firing precludes use of as many safety checks as one would like to prevent accidental firing. The situation here is much worse than with the Minuteman. Since maintenance and check out crews will be continually working near 10's of thousands of missiles, the probability of an accident is high. Fall out from a ground

*Biography on p. S9105.

burst in North Dakota or Montana could kill thousands of people.

Control

The only effective attack on our strategic forces would be a surprise attack. Only 10-15 minutes would be available for a decision to fire in which case the concept of Presidential approval is a farce. Man could only rubber-stamp a decision made by the computer.

Effectiveness

With all this deployment and effort, a few months more production of SS-9's would wipe out the effectiveness of Safeguard even if it would work. If our deterrent were in danger, which it is not, superhardening of the missile silos would be a much cheaper, more effective solution.

Accidental launch

It has been argued that Safeguard is needed to protect against accidental launch of an enemy missile. The Minuteman missiles can be used for this purpose. All that is required is a change in parameters inserted into the Minuteman guidance system. At most, the details would require a small engineering program.

Negotiations

In view of the above arguments, the importance attached to the need for Safeguard as a bargaining tool seems ludicrous indeed. It would be a mistake to believe the Soviets will be unaware of the arguments against the system. My own nine months of experience in the Soviet Union impressed upon me inter alia the closeness with which they follow our discussions on such matters. Not being able to profit in any way from Safeguard, their planners would be in a position to view Safeguard much more objectively than ours.

Why Safeguard?

The Soviet Union is not capable of a first strike nor can it be in the foreseeable future. The Safeguard system is far from being ready for deployment, and it is quite possible that such systems consisting of missiles, radars and computers may never be. We are continually frightened with the possibility that the Soviets may want to attempt a first strike against us. Suppose only ten of our total armament of missiles were left after an attack, that these were targeted on Moscow, and that only one would get through. That one bomb would destroy most of Moscow, its leadership, its main scientific, governmental and cultural centers. Would same men risk such a possibility? Particularly after having lived in Moscow for a month, I think not.

But yet the pressure for Safeguard continues. Why? Can it be out of genuine fear of a Communist Menace, wishful thinking so clouds the minds of intelligent men that they refuse to listen to arguments against the system? Or can it be that the opportunity for monetary profit, the possibility of promotion, or the hope of working on technically exciting systems has a similar effect? My own experience indicates that all of these influences play a role. These tendencies must be controlled or it will be soon too late. This task is now in the hands of the Congress of the United States.

APPENDIX

REQUIREMENT FOR A FIRST STRIKE AGAINST MINUTEMAN SILOS

An attacker seriously planning a first strike against the United States Minuteman missile force must understand very clearly all factors which enter into the computation of his chances of success. As will be shown below, if he is in error by even a moderate amount, the consequences for him would be disastrous.

In this Appendix, we first compute the probability of success of a first strike in terms of the number of missiles that will remain functional after the attack. *Second*,

this calculation depends very critically on the accuracy of the attacking missiles, we discuss the problem of estimating missile accuracy. *Finally*, we estimate the consequences to the attacker if he is wrong in his estimates.

1. REQUIRED NUMBER OF ATTACKING MISSILES

If all systematic errors in the attack missile system have been eliminated, then the probability that a given missile will miss the target by more than a distance of R is

$$P(R) = \frac{1}{2\pi R^2} \quad (1)$$

in which

$$\beta = R/O.E.P. \quad (2)$$

Here, C.E.P. stands for the *Circle of Error Probability*. Its meaning is seen by letting $R = C.E.P.$ Then $B=1$ and $P(C.E.P.) = 1/2$. In other words, if a large number of missiles is fired at a target, half of them will fall outside a circle of radius C.E.P.; $P(R) \times (\text{No. of missiles})$ will fall outside a circle of radius R. Henceforth, we will take R to be the destruct radius, i.e., the largest distance from the Minuteman the attack missile can fall and still destroy the target.

The probability that neither of two missiles fired at the same target will destroy it is simply $P^2(R)$. If n missiles are launched successfully at the same target, the probability that none of them will destroy the target is

$$I^n(R) = \frac{1}{2^n \pi^n R^{2n}} \quad (3)$$

Another way of stating this formula is that if the attacker successfully launches missiles at each of 1000 targets, the number that will remain after the attack is

$$N_R = \frac{1000}{2^n \pi^n R^{2n}} \quad (4)$$

The Department of Defense has suggested that the Soviet Union may contemplate a first strike if it could reduce N_R below 50.

If β is known, we can use Equation (4) to determine the number n of missiles which must be launched successfully at each Minuteman. Solving Equation (4) for n, and substituting for β from Equation (2), we get

$$n = \left(\frac{C.E.P.}{R} \right)^2 \frac{\ln(1000/N_R)}{\ln 2} \quad (5)$$

or if $N_R = 50$,

$$n = 4.3 \left(\frac{C.E.P.}{R} \right)^2 \quad (6)$$

According to Pentagon figures, the present Minuteman silos will be destroyed if subject to overpressures of 300 psi or more. The destruct radius R is the largest distance from the center of the megaton explosion at which this overpressure occurs and varies as the one-third power of the yield of the bomb.* In tabular form

Yield, megatons	Destruct radius R, miles
1	0.2 to 0.3
5	.4 to .5
20	.6 to .8

The range in R in this table indicates uncertainty, and these figures are estimated to give 80% chance of destruction of the silo. In Equation (6), this additional uncertainty was left out, which means that the estimate of n which we will make will be somewhat low.

$$n = 4.3 \left(\frac{.5}{.4} \right)^2 = 6.7 \approx 7 \quad (7)$$

*ABM, *An Evaluation of the Decision To Deploy an Antiballistic Missile System*, Ed. Abram Chayes & Jerome Wiesner, Signet, 1969, p. 276.

vets estimate their C.E.P. to be 1/2 mile. Then from Equation (6)

three 5 megaton warheads and that the Soviet SS-9 missile contains Suppose each Soviet SS-9 missile contains This would be the number of attack missiles successfully launched against each Minuteman. Based upon many published figures, it would be difficult to envision that the Soviets could assign a probability of successful launch any greater than 50%. In this case they would have to target 14 missiles on each Minuteman, or about 5 SS-9's each MIRVed three ways.

Destruction of our Minuteman force of 1000 missiles with 95% certainty (50 left standing) would, under these conditions, require 5000 SS-9 missiles. Thus, only if their offensive force far outbalance ours would we need to worry about a first strike on this basis.

If the C.E.P. figure of 1/4 mile quoted by Dr. John S. Foster were used in Equation (7), the required number of attack missiles per Minuteman would be reduced by a factor of 4, from 14 to 4. This is still far in excess of his estimate. In addition, a C.E.P. of 1/4 mile is unrealistically small, as will be shown from the following discussion.

2. ESTIMATING MISSILE ACCURACY

It is seen from Equation (6) that the number of missiles which must be targeted is strongly dependent upon the C.E.P. Doubling the C.E.P., for example, quadruples the required number of attack missiles. A C.E.P. of 1/2 mile in a 5000-mile missile flight will be caused alone by an azimuth misalignment of only .1 mil, or 20 seconds of arc. Those familiar with the art will recognize that this is very high precision, particularly under field conditions. But the C.E.P. of an ICBM is determined by many separate error sources—errors from gyroscopes, accelerometers, errors in thrust-cut-off time, in the computer, in wind dispersion, in mapping, in the gravitational model of the earth, as well as in initial alignment.

Most of these errors can be estimated from laboratory tests on separate components, and from this data the C.E.P. can be computed. This is, of course, not considered adequate, and therefore test firings of complete missiles are used to verify the accuracy. The number of test firings that is practical is always limited, however, and even with attempts to use randomly chosen production missiles in these tests, the test conditions are invariably different from the operational conditions. With even 5000 attack missiles, the number of men which must be trained to operate in missile crews becomes exceedingly large, and hence will never reach the level of competence of test crews. The crews must be continually checking and maintaining their missiles over a period of years, and then on very short notice be ready to fire. Under these circumstances, an allowance of an unknown amount must be made for deterioration of missile C.E.P. Even if this deterioration were not to take place, it is simply not possible, with any confidence, to predict statistically the C.E.P. of a large number of missiles from a relatively small number of tests.

These considerations lead to the conclusion that the C.E.P. can never be known with any great confidence. To estimate values as small as 1/2 mile, considering the very great precision this requires of many components, is open to serious question.

3. THE CONSEQUENCES OF ERROR IN THE ATTACKER'S ESTIMATES

Suppose that, based upon his best estimates of C.E.P. and destruct radius R, the potential attacker estimates n from Equation (4) so that N_R is say 50, i.e., so that only 50 Minuteman missiles will remain after his attack. Then we ask the question: If he errs in his estimates of C.E.P. and/or of R, how will his error affect the number of missiles N_R that will remain after the attack?

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	nB^2	N_R
1.	1	500
2.	$4.3/(2)^2=1.08$	472
3.	$4.3/(1.5)^2=1.91$	263
4.	2	250
5.	3	125
6.	4	63
7.	4.3	50
8.	5	31

We can answer this question from the adjacent tabulation of values. These values are the solution of Equation (4). If, following the D.O.D. judgment, the attacker would proceed with his attack if only 50 of 1000 missiles would remain afterwards, then $N_R=50$, and from line 7 of the table, $nB^2=4.3$. This means that, after determining B from Equation (2), he would compute n so that $nB^2=4.3$ to get $N_R=50$. If the actual C.E.P. during the attack is higher than his estimate by only 50%, i.e., by a factor of 1.5, then nB^2 decreases by a factor of $(1.5)^2=2.25$ and line 3 shows that N_R jumps to 263. If the estimate is low by a factor of 2, line 2 shows that $N_R=472$. Similar errors could occur, of course, if the attacker overestimated the destruct radius. With as many missiles left as indicated, the attacker would have to conclude that his first strike effort would fail, the consequence of which would be the destruction of his entire society. If the leaders of the potential attacking country are thoroughly appraised of the above facts, i.e., of the potentially disastrous effect of *entirely reasonable errors in estimates of C.E.P.*, it is difficult to believe they could ever conclude that a first strike attempt would be less than suicidal.

BIOGRAPHICAL DATA

J. Edward Anderson, Associate Professor, Mechanical Engineering Department, University of Minnesota. Bachelor of Science, Iowa State College, 1949; Master of Science, University of Minnesota, 1955; Doctor of Philosophy, Aeronautics, Massachusetts Institute of Technology, 1962. From 1949-1951, Aeronautical Research Scientist, National Advisory Committee for Aeronautics, Langley Field, Virginia. From 1951-1963, with Honeywell, Inc., Aeronautical Division and Systems and Research Division in Minneapolis; 1951-1953, Work Director, aircraft instrument design; 1953-1956, Senior Research Engineer and Research Project Engineer, analysis and synthesis of autopilots for military aircraft; 1956-1959, Principal Research Engineer and Research Staff Engineer, invented and directed development of inertial guidance systems for aircraft, ICBM's and for the Polaris submarine. 1959-1962, M.I.T. Fellow in Aeronautics; 1962-1963, Manager of Space Systems.

From 1963 to present, with the University of Minnesota, Mechanical Engineering Department, Teaching and research in thermodynamics, heat transfer, magnetohydrodynamics, large-scale computer solution of fluid dynamic problems, system design; consultant to industry. Spent academic year 1967-1968 in the Soviet Union as Exchange Scientists for the National Academy of Sciences.

Virtually all of his professional experiences have involved use and/or design of digital and analog computers of many types. Has written numerous technical papers in his fields, holds six patents, and has written two technical books, both of which have been selected for translation into Russian by Soviet publishers.

Dr. Anderson has been a speaker for the United Fund, is a Past Club President of Toastmasters, Int., was Board Chairman of a Symposium on the Role of Science and Technology in Society, Univ. of Minnesota, April 7-8, 1969; and is on the Board of Directors of HELP, an organization to promote rapid transit.

He is an Associate Fellow of the American Institute of Aeronautics and Astronautics and Chairman of the Twin Cities Section, a member of the American Association for the Advancement of Science, the American Society for Engineering Education, the American Association of University Professors, the American Metric Association, the Citizen's League, Sigma Xi, Tau Beta Pi, Phi Kappa Phi, Pi Tau Sigma and Eta Gamma Tau.

His biography appears in *American Men in Science* and in the forthcoming edition of *Who's Who in the Midwest*. His travel experience includes 8 years in China as the son of missionary parents, three weeks in Western Europe in 1964, eleven months in Europe in 1967-8 including 9½ months in the Soviet Union, and extensive business travel in the United States.

Mr. FULBRIGHT. Mr. President, the other point mentioned is the blackout effect and the fireballs created by the nuclear explosions. I asked the distinguished chairman of the Armed Services Committee the other day if any evidence had been received on this matter at the hearings. At that particular time he said he was not prepared to answer, but he later furnished me with a copy of the hearings in the House Appropriations Committee in which there was a passing reference of less than one full page devoted to the blackout effects upon ABM radars and the communications systems.

We had a hearing in the Foreign Relations Committee on the subject. Unfortunately, the people invited to testify on short notice were not specialists in the field of radar, but they were knowledgeable in communications only.

They professed an inability to testify upon the effect of nuclear explosions on radar. But it is quite clear from their testimony that the radiation effect is quite substantial upon communications because of the electromagnetic waves created by nuclear events. While these explosions may not affect cable communications, the kind of communications that radar must use could well be knocked out, and probably would be knocked out by precursors—nuclear explosions—as the Senator has mentioned, or by radiation from them.

So it is really inconceivable to me, and I think utterly indefensible, to undertake and authorize a program about which so little is known in such very important areas, or in which so little progress had been made in certain areas such as the computers, the hardening of the radars, or in understanding the effect of blackouts or fireballs. There is not any good, substantial, credible evidence in the record of these hearings to justify believing these problems have been faced and overcome.

Proponents say they have made the Sprint explode properly. They have; there is no doubt about it. We have all kinds of missiles that will explode properly; and the Spartan has been tested. But to create the explosion involves only the most primitive and simple parts of the whole program. The most delicate and sensitive parts of this proposed system are the radars and computers, and there has been virtually nothing done on them. Neither the radars nor the computers have been built, much less tested,

at the present time. So I would say the Senator is absolutely correct and sound in stating that these weaknesses would justify at least another year before any deployment is made.

I think the Senator has done a fine job.

Mr. GRAVEL. I thank the Senator for his kind remarks, and compliment him on the work he has done in this area. I certainly thank him for the hearings that have been held before his committee, from which I have learned a great deal.

Mr. FULBRIGHT. I ask the Senator, does he know of any evidence, aside from the hearings I have mentioned, as to the effect of radiation on the radar?

Mr. GRAVEL. I have found no evidence to contradict the Senator. As to the computers, I find quite persuasive the argument that even if they were developed to do just what they are supposed to do, it would seem logical, in my judgment, that computers could be created by the Soviets to confuse the computations of our computers. I can only say to the Senator that I share his views in that regard.

Mr. STEVENS. Mr. President, will the Senator yield?

Mr. GRAVEL. I yield.

Mr. STEVENS. I thank my colleague from Alaska for giving me notice of his intention to present this statement today. I would like to stay and listen to his presentation, but another engagement prevents me from doing so.

As the Senator knows, we are in disagreement on this matter. However, I appreciate the candor with which he has presented his position, and can only hope that, in the long run, he will be able to review the matter further.

I should like to ask the Senator one question, though, if he will permit me to do so: Will he tell me whether he intends to support the appropriation for research and development of the ABM program?

Mr. GRAVEL. Yes. The Cooper-Hart amendment will solve that problem.

Mr. STEVENS. I thank the Senator.

Mr. GRAVEL. I yield to the Senator from Vermont.

Mr. AIKEN. Mr. President, I should like to say that in my opinion the Senator from Alaska is making an excellent speech, in which he points out the effectiveness of the nuclear submarine as a deterrent to war. Apparently the ABM is designed and promoted as a way to protect our retaliatory power; but, I believe it is far more important to stop an enemy missile before it leaves the enemy country than it is to try to intercept the missile on arrival here in the United States.

I must say that my first apprehension over ABM occurred when it became apparent to me that the strongest proponents of the ABM were perfectly willing to downgrade our nuclear submarine fleet over the next few years. I began to wonder then if it was not a question of who got the contracts.

But I commend the Senator from Alaska. I have read his speech, and believe it is excellent and accurate all the way through.

Mr. GRAVEL. I thank the Senator.

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Mr. AIKEN. I might add, if I am not robbing the Senator of his time, that Russia is concentrating today on constructing a nuclear submarine fleet superior to our own. Russia already has submarines with a range of 1,500 miles for the missiles fired from the sea. Russia is today constructing submarines which are believed to be speedier than ours, and also more quietly operated. Russia intended to surpass us in the nuclear submarine field, knowing perfectly well that whoever controls the seas will control the overriding question of peace or war.

Mr. GRAVEL. I thank the Senator from Vermont.

Mr. President, I ask unanimous consent that I be permitted to speak until noon.

The PRESIDING OFFICER. Is there objection? Without objection, the Senator from Alaska is granted 15 additional minutes.

Mr. GRAVEL. I thank the Chair.

Finally, the arms race moves swiftly. If this system is deployed 7 years from now, it more than likely will face an entirely new family of threats. This was the case of our air defenses planned in the early 1950's. When the bomber defense began to function in 1960, it faced not just bombers, but missiles also. It had no way of protecting itself against missiles. These could outflank the defense and destroy its ability to defend against bombers. Any new weapon in the mid-1970's that can destroy a few radars will turn Safeguard into billions of dollars of junk.

Even if the ABM were a dependable way of protecting our deterrent, I question whether public confidence could be reestablished in this option after so much controversy. All past Presidential science advisers have been critical of missile defense. Obviously the system can never be realistically tested in a war situation, so public confidence in it can never be reestablished.

In summary, of all our options, the proposed missile defense seems to be the one most likely to fail completely and catastrophically, and the least likely to inspire confidence.

THE POSSIBILITY OF ACCIDENT OR CHINESE ATTACK

My prior analysis has concerned itself with the defense of Minuteman. Now let us turn to two other arguments that have been raised in an attempt to justify deployment of the ABM—the possibility of an attack by China and the possibility of an accidental firing.

The authorization before us does not commit us to build a defense against either contingency. The Senate has not yet been asked to consider these questions. This administration has not asked for a thin defense of the entire country, and in fact rejected one proposed by the previous administration. A favorable vote by Congress and subsequent deployment of the system proposed and before us today will not protect any American city from any missile attack, accidental or on purpose. We are being asked only to protect a small portion of our deterrent.

I emphasize this point because there is a risk that observers outside the country may misinterpret this vote. They may

believe that approval of the administration's proposal would indicate our intention to push ahead with the full phase II defense of the entire country. There has been no such indication.

While this vote does not concern itself with a defense against Chinese missiles, I feel impelled to comment on some of the issues such a defense would raise.

The Chinese are not irrational. China can be deterred in the same way Russia has been deterred. China is the only nuclear power that has asserted it will never use nuclear weapons first. We want to improve our relations with China not turn them into a carbon copy of the United States-Soviet arms race. We want trade with China, not threats. We want to open doors to China, not play into the hands of those who want to keep them closed. We do not want the only exchanges we consider with China to be missile exchanges.

In my opinion, the isolation of China and our ignorance of it, have contributed to these unreal fears. China has enough problems of her own, and so do we. The sooner we put aside talk of mutual threats, the sooner China and America can resume normal relations.

THE RELATIONSHIP OF ABM TO ARMS LIMITATION TALKS

Apart from the technical aspects of ABM, proponents offer the argument that ABM's approval is necessary as a prelude to successful arms limitation talks.

Therefore, the question is, would approval of Safeguard weaken or strengthen the administration's position in these talks.

The trouble is that many people refer to the forthcoming talks as if they were some kind of union-management bargaining. They are not. The arms limitation talks are a search for an accommodation that will satisfy the legitimate security needs of each side. In such a search our hand cannot be "strengthened" or "weakened." But our search can be facilitated or complicated.

For example, even before the talks begin, the administration has already indicated in White House question and answer sheets that it will not negotiate the entire phase II, 12-site thin defense of the United States. This is a way of complicating the arms talks. This thin defense would protect cities and be more modern and 10 times larger than the Soviet defense of Moscow.

What will happen when the Soviet Union insists in the arms discussions on the right to build a missile defense equally large? Then we shall surely insist on maintaining our MIRV warheads to be able to penetrate that defense. Then they will insist on maintaining their MIRV warheads to match us. Then we shall fear that their MIRV warheads can destroy Minuteman. Then this debate will continue. And on and on and on. Each new weapon system triggers development and deployment of another.

When the new director of the Arms Control and Disarmament Agency, Mr. Gerard C. Smith, testified before the Senate Foreign Relations Committee, he suggested that any Soviet response to the Sentinel program was "already in train."

In other words, we are still reconsidering the original proposal at a time when the Russians already have made provisions to counter it. Every signal we emit that we are going ahead with defense of cities will encourage Soviet planners to offset it, just as our planners launched MIRV and other preparations to offset Soviet defenses.

The very Soviet SS-9 procurement of which we are complaining may be the reaction which Director Gerard Smith said was "already in train." It would seem imprudent to give off any more escalatory signals when we have imminent prospects of talking these things over with the Russians. We do not want to be constantly responding to the responses we have ourselves induced.

No amount of U.S. strength can prevent the Soviet Union from building more weapons. For 20 years we have had arms superiority relative to the Soviet Union. For 20 years we have had an arms race. Surely one more weapons system will not provide additional leverage to the President in arms limitation talks. Certainly no one can be advancing as a good argument for the ABM system the fact that it can be torn down.

I can only conclude that approval of this proposal will assist the President in no important way. Indeed it may undermine our hopes for eventual successful negotiation by encouraging the view that the United States has embarked on a major nonnegotiable program of building missile defenses.

ABM AND THE ARMS RACE

In summary then, as I see it, the narrow issue of Safeguard has not been difficult to resolve. Safeguard seems likely to require the longest leadtime, to be the least reliable, and most expensive way of defending a few of the evermore obsolete Minuteman.

The threat against which Safeguard is proposed seems exaggerated.

The other options for resolving that threat seems insufficiently considered.

And since the arms limitation talks are themselves a method of resolving the threat, the timing of Safeguard seems inappropriate. If the talks begin to succeed, Safeguard will be entirely unnecessary.

The Hart-Cooper amendment, which I shall vote for, permits research and development to continue in support of a better missile defense. And it permits a year of arms talks to occur before a deployment decision is made. But there is another reason why this amendment appeals to me. It provides a year in which other alternatives to Safeguard can be analyzed and presented to the Senate by this administration.

I have explained why other alternatives may be cheaper, more dependable and quicker to build. Equally important, these alternatives may also be more acceptable to the Senate. It would be unfortunate indeed if a major national security program were approved by a margin of one or two votes.

This close contest in the Senate cries out for alternatives that can muster broader support. Congress should insist on being presented with options in major national security decisions.

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Beyond the question of Safeguard itself, I would like to say a few words about the context in which this debate has taken place. Something is seriously wrong with our approach to national security. Twenty years ago, we were as secure as a nation could be. Ten years ago, if nuclear war occurred, half our population would have been annihilated. Today if nuclear war occurs, virtually every man, woman and child in the United States could be killed.

We have tended to think that our greatest danger is a Soviet surprise attack. But the Russians are not insane. They will not deliberately strike at us in a world filled with hostile nuclear weapons—weapons armed and pointed at all their population centers.

War can happen. There can be a war that is unwanted by both sides—a war by escalation. Our fear of calculated, deliberate Soviet attack has blinded us to the even greater dangers of an unwanted war by escalation.

Our fear of deliberate Soviet attack has caused us to put our main priority on staying ahead of the Soviet Union in the arms race. It has led us to ignore the rising levels of arms that make war even more destructive. And since war can always happen, we have lost irreplaceable security. More arms, in the nuclear era, do not mean more security. This is a situation without parallel in the history of warfare. Gen. Douglas MacArthur summed it up well in 1961 when he said:

Global war has become a Frankenstein to destroy both sides. No longer is it a weapon of adventure—the short cut to international power. If you lose, you are annihilated, if you win, you stand only to lose. No longer does it possess even the chance of the winner of a duel. It contains now only the germs of double suicide.

No missile defense, and no missile, can save us from ever greater threats to our security if the arms race continues. Our own arms efforts only stimulate and encourage Soviet efforts. There is no solution but to stop the Soviet weapon program and this can be done only by negotiating to stop our own.

Agreements are feasible. We now have methods of reconnaissance that can reliably monitor Soviet actions. So we can have agreements with the Soviet Union in which trust plays no role. And we can maintain a deterrent that can reduce risks of calculated deliberate attack to an irreducible minimum. So we can have arms limitations and a deterrent, too. But we cannot try to stay ever further ahead of the Soviet Union, and at the same time ask them to stop trying to catch up.

Unfortunately, the arms race has become business as usual. We accept the risk that one thousand Soviet ICBM's could be fired at us as the result of a disagreement over Berlin or a war in the Middle East. But we measure the risk of arms limitations on a different scale. We ask that agreements for arms limitations be totally without risk.

Today, all the political and strategic elements for an agreement exist. We and they have adequate deterrent forces. We and they have many other problems that encourage arms controls. They have

problems in China and Eastern Europe and with their economy; we have our problems in Vietnam and at home.

Both of us have agreed to talk. And both of us are afraid the other side will do the same two things: build large, expensive ABM's and MIRV's.

These two weapon systems are the very elements about which we and they want to negotiate.

If the Soviet Union does not build MIRV, we will not need Safeguard. If the Soviet Union does not go forward with ABM, we will not need MIRV. Why, under these conditions, is it not prudent to talk to the Russians before buying ABM and MIRV? Otherwise, we will induce them to match us. This will then foreclose any chances we have of stopping deployment of ABM and MIRV by both sides.

The Senate cannot control the SALT negotiations. But Safeguard is something which is before us. The Senate must express itself on the issue of the arms race. And this debate over Safeguard is an opportunity to affirm that new methods and approaches are necessary for national security.

If this administration is overly burdened with the near and medium term risks, then the Senate must be statesmanlike enough to give heavy priority to the long-term risks.

The long-term risks to the survival of this country and our way of life come from a war nobody wants.

The long-term solution lies not in Safeguard, but in taking seriously every opportunity to halt the arms buildup simultaneously both here and in the Soviet Union.

If this historic debate only determines whether we should, or should not, defend a few Minuteman, this debate will have been a failure.

However, in my mind, this debate has catalyzed a new awareness among Americans as to where the dangers to our Nation really are. Mr. President, I believe this debate in the Senate of the United States has fulfilled its promise.

The PRESIDING OFFICER. The time of the Senator has expired.

Mr. MANSFIELD. Mr. President, I ask unanimous consent that the Senator may have an additional 20 minutes.

The PRESIDING OFFICER. Without objection, it is so ordered.

Mr. MANSFIELD. Mr. President, will the Senator yield?

Mr. GRAVEL. I yield.

Mr. MANSFIELD. Mr. President, I have waited for some time for the last of the new class of Democratic Senators to make his maiden speech. I have urged our new Members to make an early start in expressing their views. I have urged them not to sit back and remain silent. All the others, in varying degrees, have taken my advice, all except the distinguished Senator from Alaska. However, his judgment has been correct for, if I may say so, this speech has been worth waiting for; well worth waiting for. It is one of the best speeches, if not the best, that I have heard in the Senate, on the issue which now confronts this body, this country and, in effect, the world. It exhibits a good deal of research and study. It goes into a good deal of detail.

On page 2 of his speech, the Senator said:

I take this opportunity to assure Americans that the dedication and integrity of the Senate has not been compromised by this debate.

I express my wholehearted agreement with those remarks. This debate has been, on the whole, statesmanlike. There have been, of course, differences of opinion, not only among Senators but also between Senators and the administration. I do not doubt for one moment the integrity and the beliefs of the administration in their advocacy of this program. Who knows, history may prove them right. But, by the same token, I do not doubt the integrity, the patriotism, or the sincerity of those who oppose the program, because the reasons are many and varied, and all of them have been brought out. Most of them have been carefully analyzed today in the speech of the distinguished Senator from Alaska—who, incidentally, I am happy to say, has a direct tie with the State of Montana through the girl who is his wife.

On page 9 of his speech, the Senator raises this question:

What will happen when the Soviet Union insists in the arms discussions on the right to build a missile defense equally large? Then we shall surely insist on maintaining our MIRV warheads to be able to penetrate that defense. Then they will insist on maintaining their MIRV warheads to match us. Then we shall fear that their MIRV warheads can destroy Minuteman. Then this debate will continue. And on and on and on. Each new weapon system triggers development and deployment of another.

As the Senator has pointed out so well, we are not really talking about an initial deployment of radar, computers, Sprints, and Spartans at two sites in Montana and North Dakota. What we are really talking about is a program which may well go far beyond that and cost not the \$6.3 billion as originally alleged and which has now gone up to \$10.8 billion, but will cost rather tens and tens and tens of billions of dollars on the one hand and tens and tens and tens of billions of rubles on the other. And at the end, we will be just about where we are now.

If I may so, this country has unquestioned nuclear superiority over the Soviet Union at the present time. In the field of the ICBM's we have 1,054—200 of them in my own State of Montana. As of the moment, I would guess that the Soviet Union may have approximately 1,065, and at the end of the year may have 1,075. But that is the only area that approaches comparability.

With respect to the Polaris, for example, we have 41 submarines, each with 16 missiles, or a total of 656 Polaris missiles, compared with the Soviet Union's 45. And that is where the core of defense in this country lies—on the sea.

Let me repeat those figures. Within our Polaris fleet, all 41 of the submarines, there are 656 missiles. The Soviets have 45.

In the field of bombers—the B-52's and the B-58's—we have 646; and so far as Soviet counterparts are concerned—the Bisons and Bears—there are 150. As a matter of fact, that is a

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decline of 5 from the Soviet figure of last year.

Those figures should be kept in mind at all times.

There are many further questions I would like to raise. Other Senators wish to speak, however. Indeed, I have seldom seen so many Members turn out to greet the maiden speech of a Senator—for which I am grateful, as—I am sure—is the Senator from Alaska. Therefore I shall not take much more of the distinguished Senator's time, except to say that I am in wholehearted accord with the arguments he has advanced in his most statesmanlike speech; a speech presented, moreover, in a most high level and statesmanlike manner.

I only hope that the way to peace will lie not through arming and rearming, not through acting and reacting, but through negotiations. To that end I hope it will be made definite very soon that the so-called SALT negotiations will get under way—sometime this month—between the Soviet Union and the United States. It hardly needs saying that every effort should be made to see that these negotiations succeed; that there is brought about an arms freeze or arms limitation to the end that the syndrome of acting and reacting will be done with and to the end that less and less will be spent on this type expenditure and more and more spent to face up to the problems that face this Nation at home.

Mr. President, again I extend my sincere congratulations for a great speech by the distinguished junior Senator from Alaska. I am confident that it has marked the beginning of many outstanding contributions hereafter.

Mr. GRAVEL. I thank the Senator. I yield to the Senator from Ohio.

The PRESIDING OFFICER (Mr. BYRD of Virginia in the chair). The Senator from Ohio is recognized.

Mr. YOUNG of Ohio. Mr. President, the address we have just listened to, the maiden address of the distinguished junior Senator from Alaska, has been a very superior and a most convincing speech, and a most devastating speech against the pending proposal of the administration for the ABM.

I think the citizens of the great State of Alaska have every reason to be mighty proud that they are represented here in Washington by the distinguished junior Senator of their State.

He has manifested that he has been most diligent. He has manifested that he is serving his State and the Nation with vitality, zeal, and great industry. His excellent analysis of the problems posed in the proposed deployment of the ABM system has been irrefutable. As the majority leader stated, this is probably the best, and it is certainly one of the best, arguments that have been made on the floor of the Senate expressing opposition to the ABM proposal.

The Senator from Alaska is absolutely correct in stating that our only real defense against the threat of a nuclear attack is the deterrence of our overwhelming offensive forces, primarily the Polaris and the soon-to-be Poseidon submarine force. These nuclear submarines of our Navy are capable of re-

maining underwater for as long as 300 days and nights. Their missiles have presently a maximum range of 2,875 miles. Soon, with the Poseidon, that figure will be more than doubled. No area in the vast land mass of the Soviet Union or Communist China is safe from the devastation from missiles fired from these submarines, as has been so eloquently stated by the Senator from Alaska. Furthermore, in addition to our nuclear submarines, our combined strategic bombers and land-based missile forces assure survival of one or the other from attack.

I agree with the prediction of the Senator from Alaska that, should we proceed to build this system, the leaders of the Soviet Union are almost sure to respond with increases in offensive strength which would negate any advantage from an ABM deployment.

We should continue to seek an understanding with the Soviet Union whereby neither side would expand its defensive facilities beyond the present level. Such an understanding would freeze the strategic situation as it is today with each side depending on its offensive missiles to provide the deterrent. We should be considering arms cutbacks, not increasing arms; we should be encouraging arms limitation negotiations, not a new and accelerated arms race. It is of the utmost importance that the President give top-most priority to winning and achieving a nuclear missile limitation agreement with the Soviet Union.

It is ironic that the first crucial vote on the ABM will occur on the 24th anniversary of the dropping of the atomic bomb on Hiroshima.

I wish to say it is a fine thing not only for the State of Alaska but for the Nation and the world that the distinguished junior Senator from that great State has made his convincing address on the eve of the vote we shall take.

I believe implicitly that the Safeguard proposal must be defeated. I am utterly opposed to the appropriation of taxpayers' money for the ABM. However, I recognize the fact that this proposal may be approved by Congress—I do not believe it will be—and every effort must be made to delay deployment until sanity prevails and until the administration explores the possibility of an arms limitation agreement with the Soviet Union.

Therefore, I intend to vote for the Cooper-Hart amendment which would assure that delay and give us a vital breathing spell to avoid the ramifications of this boondoggle.

Again, I congratulate the distinguished Senator from Alaska.

Mr. CHURCH. Mr. President, will the Senator yield?

Mr. GRAVEL. I yield.

Mr. CHURCH. Mr. President, I wish to join my colleagues in expressing my admiration for the maiden address which has just been delivered by the distinguished junior Senator from Alaska.

I must say this is not just a promising, praiseworthy maiden address; it is unusually and impressively perceptive and profound.

I could not possibly guild the lily by elaborating further, except to say the

Senator has demonstrated on this floor today that he will have a bright future in the Senate. I congratulate him.

Mr. GRAVEL. I thank the Senator.

Mr. CASE. Mr. President, will the Senator yield?

Mr. GRAVEL. I yield.

Mr. CASE. Mr. President, I thank the Senator. I would not want it to be thought that the enthusiasm of our Democratic colleagues which leads them to rise in support of what the Senator from Alaska has said, is attributable in any sense to the fact that they liked it because they are Democrats and he is, too. This has been a great speech in a great cause. As a member of the party which sits on this side of the aisle I join my Democratic colleagues and all our colleagues in congratulating the Senator, and in congratulating his State for sending to the Senate someone who has dealt so well with a matter so vital.

Mr. GRAVEL. I thank the Senator.

Mr. HARRIS. Mr. President, will the Senator yield?

Mr. GRAVEL. I yield.

Mr. HARRIS. Mr. President, I wish to commend the distinguished Senator from Alaska for an outstanding speech on a subject of great import to the country. I listened with great interest and admiration. I do not believe that the Senator could have chosen a more important topic during this session of Congress, and perhaps for several sessions before and after this session, upon which to make his maiden speech.

I think that what the Senate and what the Congress decide to do in regard to this issue, the deployment of the Safeguard ABM missile system, may well determine the direction this country takes for many years to come.

I think the Senator was quite right in pointing out the crucial element of time that is in our favor and which enables us to make this decision on a more careful and more rational basis. We have time because of our tremendous deterrent force. As the distinguished Senator so well outlined, our deterrent force is composed of Polaris missiles, intercontinental ballistic missiles, strategic bombers, and intermediate range ballistic missiles and planes which fly from carriers.

We have time, as the Senator has so well said, to make these and related decisions without having precipitously now to agree to the deployment of the system is untested. A system that has not been completely tested and one which will make more difficult the talks which are upcoming, and which are so important to the security of this country and the stability of the world.

I certainly commend the distinguished Senator for his very fine speech.

Mr. GRAVEL. I thank the Senator from Oklahoma.

The PRESIDING OFFICER. The time of the Senator from Alaska has expired.

Mr. YOUNG of Ohio. Mr. President, I ask unanimous consent that the Senator from Alaska may proceed for 15 additional minutes.

The PRESIDING OFFICER. Without objection, it is so ordered.

Mr. HART. Mr. President, I have never found a word formula on an occa-

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sion such as this that could express adequately both sincere admiration and yet avoid the appearance of going through a Senate ritual.

I wish I had a formula that conveys how much we really mean it as we rise to congratulate the Senator from Alaska.

As the able Senator from New Jersey said from across the aisle, it was a great speech in a great cause from one who demonstrates today that he shall be, indeed is, a great Senator.

Mr. GRAVEL. Mr. President, I thank the Senator very much.

Mr. NELSON. Mr. President, there is not much that I can add to what has already been said by our distinguished majority leader and other Senators who followed him in commending the excellent speech of the Senator from Alaska, except to say that I wholeheartedly endorse his comments.

His speech is a most thoughtful contribution to the dialog now going on over the development of a weapons system by this country and Russia.

I join other Senators in congratulating the distinguished Senator from Alaska on an excellent job.

Mr. GRAVEL. I thank the Senator from Wisconsin very much for his comments.

Mr. COOPER. Mr. President, the breadth, quality, and even the calmness of the speech of the distinguished Senator from Alaska reflects his enormous work in the hard process of arriving at a decision, a process which he described so well in the early part of his address.

I agree with the Senator from Wisconsin. I believe that the Senator from Alaska has analyzed as clearly as anyone has, the various weapons systems and their relation to security.

I should like to highlight one reference on the last page of the Senator's speech, in which he states:

THE LONG-TERM RISKS TO THE SURVIVAL OF THIS COUNTRY AND OUR WAY OF LIFE COME FROM A WAR NOBODY WANTS

The long term solution lies not in Safe-guard, but in taking seriously every opportunity to halt the arms buildup simultaneously both here and in the Soviet Union.

I congratulate the Senator from Alaska on his maiden speech. It is a great speech.

Mr. GRAVEL. I thank the Senator from Kentucky.

Mr. FULBRIGHT. Mr. President, when I asked questions of the Senator from Alaska a short time ago, I did not refer to his speech as being a maiden speech. However, I knew that it was when I came into the Chamber.

It reminds me that, 26 years ago, I made my maiden speech in the House of Representatives, but the Senator's was on a much more important subject and a much better speech.

I congratulate the Senator from Alaska once again on producing such a thoughtful and appropriate speech in his maiden effort in the Senate.

I, too, join the majority leader in saying that I agree with the reasoning of the Senator. The Senator from Alaska has obviously interpreted, I believe correctly and thoroughly, the testimony which has

been taken by the various committees of the Senate.

Congratulations to the Senator.

Mr. GRAVEL. I thank the Senator from Arkansas.

Mr. HARTKE. Mr. President, the speech of the distinguished Senator from Alaska is an excellent one, with a most persuasive argument against deployment of the ABM system.

I am not surprised at the depth and intensity of the Senator's remarks, and the way he has expressed himself, because I know him personally. I know that he is a man of intelligence, one who is dedicated to the sincere, best interests of the United States of America.

I know that the State of Alaska is very proud of him, as I know all Senators in this Chamber are proud of the fine work he has performed today.

Mr. GRAVEL. Mr. President, I thank my good friend, the distinguished Senator from Indiana for his kind remarks.

Mr. KENNEDY. Mr. President, I join my colleagues in commending the distinguished Senator from Alaska on his statement to the Senate today.

All of us realize that this is one of the most complicated, involved, and sensitive questions with which the Senate has ever been confronted.

In the Senator's speech, he has shown insight, perceptiveness, and judgment from which all of us can benefit. He is to be commended for his remarks.

The Senator from Alaska renders a valuable service to the Members of this body and to the American people, and I commend him on what he has done today.

Mr. GRAVEL. Mr. President, I thank the Senator from my native State.

Mr. HUGHES. Mr. President, it is with a great deal of pride that the freshman Senator from Iowa rises today to join in the compliments being paid to the freshman Senator from Alaska.

I say a great deal of pride, because I have enjoyed the relationship the two of us have been sharing since coming to the Senate.

I have long waited for the Senator from Alaska to express himself on this issue. I have never heard a more reasoned, a more thorough speech to a subject than was made here today by the Senator from Alaska. I share completely the views he has expressed.

Naturally, a person feels good when he agrees with a man, but I think that the reasoned, the studied, and the intellectual approach which he has made, obviously for weeks and months into research and soul searching on this subject, as well as the patriotism displayed and the best interests of the people of this great Nation considered, could only reflect on the part of this freshman Senator a great pride in the Senator from Alaska.

Certainly, I join all Senators with more years of service than I in saying to the Senator from Alaska what great joy I share in this fine hour on the floor of the Senate.

Mr. GRAVEL. Mr. President, I thank my good friend from Iowa.

Mr. MURPHY. Mr. President, I, too,

should like to congratulate the distinguished Senator from Alaska on his maiden speech.

It is a very thoughtful and very scholarly address. I disagree with much of the logic in it, as he knows, but I think that its preparation and delivery deserve a great measure of the acclaim which has been given him by many of his colleagues today.

Let me ask the Senator one question. Page 8 contains a statement that China is the only nuclear power which has asserted it will never use nuclear weapons first.

I was under the impression that that was the policy of the United States also; is that not true?

Mr. GRAVEL. The only answer I can give to that is that I know of no pronouncement by the United States in that regard. China has repeatedly made that statement.

Mr. MURPHY. I thank my distinguished colleague.

There is one other point I should like to make. Continually in the discussion here, concerning sums of money, I should like to ask my distinguished colleague whether he understands that in the bill before this body the only amount that is within discussion at this particular time—and I understand my distinguished colleague agrees—is that research and development should precede, and that the only objection is to the construction of the building or deployment of the two bases asked for in the bill, and that the amount of money involved is not in the billions of dollars but actually less than \$400 million.

I wonder if my colleague understands that before further expenditures can be made, it must come back to this body. Thus, we have a chance to reassess it, look at it, and decide whether further expenditures possibly are necessary. I assume my colleague knows that.

Mr. GRAVEL. The Senator from California knows the high esteem in which I hold him, but I answer him by asking if that is an argument for the ABM—the fact that it is going to cost only \$400 million.

Mr. MURPHY. No. The argument for ABM is that all seem to agree that we need a defensive system. From all the testimony the Senator from California has listened to in all the Armed Services Committee secret meetings and open meetings, it seems this is the only system available under the state of the art at the present time. Both proponents and opponents on the scientific side agree to that.

It is the feeling of the Senator from California that the President of the United States certainly has carefully considered all the information, and he has asked for this system. He said something which I think is very important. He said we will have a reassessment and review every year.

The Senator from Alaska and the Senator from California—and I am sure every Member of this body is in complete agreement—hope and pray that the coming arms talks will be productive. Experience of the past has taught us that

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we must not take too much for granted; that at least one party at the negotiating table has a strange reputation for its manner of negotiating and, later on, the manner in which it stands by its agreements.

The President of the United States, who has the responsibility in this matter, has, at the outset, said he feels the adoption of this proposal will help him at the negotiating table. Others feel it will not help him. I am inclined to believe that perhaps the more he has to deal with in the way of strength, the more the opportunity and the better the chances will be that he will accomplish what we all fervently hope for.

Mr. GRAVEL. I would only add to the comments of the Senator from California that in my mind he reemphasizes the point that no argument is made based on dollar amounts.

Second, I have stated in my remarks that there are alternatives. I believe these alternatives have not been sufficiently studied and they have not been presented to the Congress.

Mr. MURPHY. May I say, in response, I know there are alternatives, but again, as I stated, in discussions with the scientists, who are both for and against the ABM Safeguard system, in answer to direct questions they all agreed that this was the only available system under the present state of the art that is known. There may be a new system later, but—

Mr. GRAVEL. I disagree with the Senator on that. They could, as an alternative possibly expand our primary force. They could harden the sites—

Mr. MURPHY. May I say they were all discussed in the committee?

Mr. GRAVEL. I can only say to the Senator from California that the scientists he has listened to and the opinions I hold, differ.

Mr. MURPHY. As I have explained, I have listened to scientists who were proponents, and also those who were opponents. We went through the matter of hardening. We went through the matter of defense capability and radar and all the other details. The statement has been made that the system will not work. There are just as many, just as capable, who say the system will work. One expert witness said the ABM system which the Russians had already deployed was a "bunch of junk." I do not really think his information on that system is better than the Senator's or mine. I am not sure it is a "bunch of junk." I wish we had one.

I do not think adoption of this proposal will increase the arms race. The Russians have so stated.

So it seems to me that if there is to be a disagreement in a matter of this importance, the point in controversy must be decided in favor of the future security of the United States. At this time, as I pointed out, we are considering in this bill only an amount involving the difference between research and development—which everybody seems to agree should continue—and the building of the two sites, which is less than \$400 million. If it gets into billions, we get into a further consideration. It is a matter which will get back to this body. It must be re-

considered. At that point we hope we can say we do not need it and can cut out the whole thing.

The PRESIDING OFFICER. The time of the Senator has expired.

Mr. MURPHY. I thank my distinguished colleague for his courtesy.

Mr. YARBOROUGH. Mr. President, will the Senator yield?

Mr. DOLE. Mr. President, will the Senator from Alaska yield to me?

Mr. MANSFIELD. Mr. President, I ask unanimous consent to have 2 additional minutes.

The PRESIDING OFFICER. Without objection, it is so ordered.

Mr. GRAVEL. First I yield to the Senator from Texas (Mr. YARBOROUGH).

Mr. YARBOROUGH. Mr. President, I commend my colleague, the Senator from Alaska, for his very able statement and forceful argument. As he says, it is his maiden speech, but it would be a speech worthy of one who had been in this body for 10 or 20 or 30 years. It is a speech that would be to the credit of any Member of the Senate. His marshaling of the facts has been irrefutable and his marshaling of the arguments unanswerable. It makes me proud that I was the first Senator from the State of Texas who advocated statehood for Alaska.

Mr. GRAVEL. I thank the Senator.

I now yield to the Senator from Kansas.

Mr. DOLE. I commend the Senator from Alaska. I have had an opportunity to read his statement very hurriedly. I am impressed by the statement found on page 11, that it would be unfortunate if a major national security program were approved by a margin of only one or two votes. There is another body in this Congress, whose Members are made up of very patriotic and capable men and women. I would say a vote taken there would be by a margin of two to one. So I would guess there are about 533 Members of the Congress, with a couple of vacancies, and the margin would be much larger than one or two votes. The Senator may be correct as far as this body is concerned.

The Senator is not saying, in essence, that we do nothing; is he? Does the Senator support further research and development?

Mr. GRAVEL. I support the Cooper-Hart amendment.

Mr. PEERCE. Mr. President, the Senator from Alaska (Mr. GRAVEL), in his first formal presentation to this body, has made a significant contribution to the debate on the Safeguard ABM system. I congratulate him on the quality of his argument and the wisdom of his conclusions.

LIMITATION OF STATEMENTS DURING TRANSACTION OF ROUTINE MORNING BUSINESS

Mr. MANSFIELD. Mr. President, I ask unanimous consent that statements in relation to the transaction of routine morning business today be limited to 3 minutes, beginning now.

The PRESIDING OFFICER (Mr. Young of Ohio in the chair). Without objection, it is so ordered.

THE WRONG MAN FOR VENEZUELA

Mr. CHURCH. Mr. President, I wish to discuss briefly the pending nomination of Mr. John Hurd to be our new Ambassador to Venezuela.

The President sent this nomination to the Senate June 18. No action has been taken on it by the Foreign Relations Committee, and my purpose today is to urge the President to withdraw it.

I do not know Mr. Hurd. From all accounts, he is an estimable gentleman. If he were nominated to be Ambassador to some Latin American country other than Venezuela, I would have no objection. But I believe it would be a costly blunder to send him to Venezuela; and if the nomination is not withdrawn, I shall do everything I can to oppose its confirmation by the Senate.

The problem is that Mr. Hurd is an ex-president of the Texas Independent Producers and Royalty Owners Association and has served on the imports committee of the Independent Petroleum Association of America where he has been actively engaged in the movement for tighter oil import quotas.

I do not propose here to argue the pros and cons of our import policies. But to send an oil protectionist to Caracas is like sending a Zionist to Cairo. Given our gigantic oil investment in Venezuela, it would be dubious enough to send an oil man there under any circumstances. But to send one who has lobbied for tighter import quotas boggles the imagination.

U.S. oil import policy far overshadows any other issue in United States-Venezuelan relations. Up to this point, our import quotas have not forced a curtailment of Venezuelan exports to the United States. But, at the same time, Venezuelan production and exports are not increasing. This needs to be viewed in the context that:

Oil accounts for 90 percent of Venezuela's foreign exchange;

The Venezuelan Government is strapped for money;

Venezuela is one of the very few Latin American countries that has moved forward in the spirit of the Alliance for Progress and that is making democratic government work; and

Venezuelan oil would have trouble increasing its share of the U.S. market even without import quotas. It is substantially more expensive than Middle Eastern oil—even allowing for transportation differentials.

To send to Caracas as the new American ambassador an American oil man who has lobbied for stricter import quotas would inevitably inflame Venezuelans across the political spectrum; it would be like sending fire to fuel.

I emphasize that my objections to Mr. Hurd apply only to his assignment to Venezuela or to some other important oil-producing country. I have no doubt that he would make a commendable ambassador to a country where oil does not figure so largely in U.S. policy, but I cannot give any advice and consent to sending him to Venezuela.

An interpretive account of the consternation that President Nixon's nomination of John Hurd has caused in Venezuela is contained in an article

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written by Jeremiah O'Leary, the Latin American correspondent for the Washington Star, which appeared in last Sunday's edition of that newspaper. I ask unanimous consent that the article, entitled "Choice of Hurd To Be U.S. Envoy Jolts Caras," be printed in the RECORD.

There being no objection, the article was ordered to be printed in the RECORD, as follows:

CHOICE OF HURD TO BE U.S. ENVOY JOLTS CARACAS

(By Jeremiah O'Leary)

Nothing since its last earthquake has rocked Venezuela as much as President Nixon's nomination of controversial Texas oilman John Hurd as ambassador to Caracas.

Hurd, president of the Independent Oil Producers Association and a Nixon campaign fund-raiser, is an avowed enemy of loosening restrictions on foreign petroleum imports. Oil is the life-blood of the Venezuelan economy, and the South American's foreign policy is keyed to obtaining more favorable conditions for marketing its petroleum in the United States.

Veteran observers of Latin-U.S. affairs consider the nomination a blunder in view of Hurd's opposition to imported oil and Washington's desire to improve relations with other countries of the hemisphere.

Hurd is viewed in Venezuela about as favorably as a Ku Klux Klan member would be in Tanzania. Reaction of Venezuelan government officials to the nomination, while publicly correct, has been choleric in private. Venezuelan newspapers have not been so restrained, and they have been swinging freely at the nomination since it was announced June 12.

CALDERA HAS TROUBLES

President Rafael Caldera, a minority election victor still in his first year in office, is having trouble enough governing his turbulent democratic nation without the added tribulation of a U.S. envoy with a record of protectionist oil advocacy. Caldera won election last winter as a candidate of the Social Christian (COPEI) party over the incumbent Democratic Action party but inherited a large deficit and faces restlessness in several quarters.

The youth wing of COPEI, which is considerably to the left of the party main stream, has been stirred up by the Hurd nomination. In addition, Caldera permitted the first July in recent Venezuelan history to pass without promoting any of the army's generals. This could come back to haunt him even though the well-budgeted armed forces are not coup-minded.

Political observers believe Caldera would have withheld Venezuela's placid—the diplomatic agreement to receive an envoy—in the case for Hurd if he had not found it necessary to ask New York's Gov. Nelson A. Rockefeller to skip Venezuela in his fact-finding tour for Nixon. Rejection of both Rockefeller as Nixon's personal emissary of the U.S. President and Hurd as ambassador would have been, or seemed, more provocative than Venezuela cares to be in relation to Washington.

Venezuela's manifest intention, in the event Hurd is confirmed by the Senate, is to receive him with what might charitably be described as restraint. Some Venezuelan officials make no bones about saying Caracas will simply ignore Hurd if he comes as ambassador and attempt to deal with Washington through its envoy here.

HINT OF SECOND THOUGHTS

It is difficult to see how the 54-year-old native of Laredo, Tex., could function as an effective ambassador under these conditions, and there is some evidence that Washington is already having second thoughts about the wisdom of the nomination. Hurd's nomination already has gone six weeks without being

scheduled for a confirmation hearing by the Senate Foreign Relations Committee. Some sources take this as an indication that the nomination may be withdrawn.

There have been hints around Capitol Hill and the State Department that Hurd may be redesignated as ambassador to another country where oil is not an explosive domestic issue.

Hurd was Texas state chairman for the Nixon-Agnew campaign last year. He figured in the news when the Pearson-Anderson column reported Spiro T. Agnew had given a secret pledge to Texas oilmen that a Nixon administration would block a proposed free trade zone at Machiasport, Me. The incident reportedly occurred at a fund-raising affair in the Petroleum Club of Midland, Tex., in October.

Agnew reportedly said, "I assure you any gimmick to get a refinery at Machiasport will be killed."

Hurd was quoted as saying, "I have good news for you. I have talked directly to Mr. Agnew. He has assured me that the Occidental (Petroleum Co.) effort at Machiasport is dead. If he and Nixon are successful, there will be no refinery."

Both Agnew and Hurd denied making the statements but Hurd admitted discussing the hope that the Nixon-Agnew administration would not show favoritism to any part of the oil industry as to import quotas.

ABM
AUTHORIZATION OF APPROPRIATIONS FOR FISCAL YEAR 1970 FOR MILITARY PROCUREMENT, RESEARCH AND DEVELOPMENT, AND FOR THE CONSTRUCTION OF MISSILE TEST FACILITIES AT KWAJALEIN MISSILE RANGE, AND RESERVE COMPONENT STRENGTH—AMENDMENTS

AMENDMENTS NOS. 114 THROUGH 116

Mr. NELSON. Mr. President, in behalf of the Senator from New York (Mr. GOODELL) and myself, I send to the desk three amendments.

CHEMICAL-BIOLOGICAL WARFARE

Mr. President, it is only recently that we have begun to penetrate the highly secret Pentagon world of the deadly weapons of chemical-biological warfare. So secret is that world that few Members of Congress know what this country is doing in the experimentation, development, stockpiling, and disposal of these weapons. But the magnitude of the threat to the people of this Nation and the world requires the fullest congressional examination and investigation.

Most Congressmen were surprised and shocked recently when the Wall Street Journal revealed that 24 persons had been injured in a nerve gas accident, but in the disclosure that deadly weapons had been secretly moved to the Ryukyu Islands base that is a major jumping off point to the war in Vietnam.

Reacting in its usual manner, the Defense Department denied the accident on Okinawa. A few days later, however, the Pentagon made a vague admission that the accident had occurred and that some chemical agent was involved. The Okinawa incident is one of several that have occurred recently. It is mentioned here as one example of what has been happening. But the Pentagon should not receive all the criticism for keeping all CBW activity in strictest secrecy. Congress has permitted the Pentagon to go its own way without asking for an ac-

counting and it must be obvious to the Nation and the world that Congress has failed to devote sufficient time and energy to debating and reviewing the chemical-biological program.

The seriousness of this failure was emphasized last week in the statement made by Senator ALLEN ELLENDER who said:

As far as the Continental U.S. is concerned, evidence has recently been brought out that tremendous stockpiles of various deadly compounds are on hand at centers throughout the country. Most of this work has been done without the knowledge of the Congress. During my twenty years service on the subcommittee of the Appropriations Committee for Defense, I never have come across any line item for the production of nerve gas.

But in spite of the fact that Senator ELLENDER has not seen a line item for production of nerve gas in his 20 years on the subcommittee, this country is spending approximately \$1 million a day on chemical-biological warfare weapons.

It is well known that these chemical-biological weapons have the frightening capacity of backfiring, especially if the wind happens to change direction. That happened only last year when the winds carried poisonous gasses from a Dugway Proving Grounds test in Utah to an area where livestock was grazing and 6,400 sheep died. Fortunately the wind blew in the direction of animals. Had it blown in another direction the tragedy might well have been to people in nearby Salt Lake City.

Certainly, CBW deserves the same careful attention and scrutiny that Congress is presently giving the question of the deployment of the ABM. Biological weapons, even in the best circumstances, are highly unreliable devices that always carry the threat of epidemic for people all over the world. The threat of these dangers has been discussed by concerned persons everywhere. Just last week Senator THOMAS J. McINTYRE expressed his concern and a concern I am sure many Members of Congress share when he said:

We all share the fervent hope that we won't have to fight again once peace is secured in Southeast Asia. But if ever we must retaliate in the event of a germ warfare attack, I would hope we would use a more effective response than the chaotic dissemination of deadly germs. I think most Americans would agree with me.

That is why this group of Senators has come to the floor today to offer a number of amendments to the military appropriations bill. Senator CHARLES GOODELL is joining me in the sponsorship of three amendments. Senator VANCE HARTKE is sponsoring three others. Senator CLAIBORNE PELL is sponsoring another and cosponsoring one with Senator RALPH YARBOROUGH.

Congress must act now to fulfill its responsibility in discussing a program that has safely escaped careful congressional scrutiny for 50 years. The proposals offered today are not radical; nor do they jeopardize the security of this Nation.

It is our conviction that our proposals, if passed, will offer greater protection to our citizens and will guarantee the right of Congress to review the actions of the executive branch of Government. Perhaps, more importantly, these amend-

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ments might be significant contributions toward cooling the spiraling arms race.

The first amendment Senator GOODELL and I will offer prohibits the open air field testing of nerve agents or any other pathogenic biological organism. This amendment does not prohibit the field testing of tear gases, incapacitating gases, chemical simulants, or nonpathogenic biological organisms. It also does not prohibit the testing of agents done within the confines of a laboratory.

The next amendment prohibits any procurement of biological bomblets, biological spray tanks to be attached to aircraft, biological missile warheads, any shells containing nerve agents or a biological toxin, and other devices that could be used to disseminate lethal chemical or pathogenic biological agents in warfare.

The third amendment is twofold: First, to insure that foreign nations are consulted before the United States deploys CBW agents on their soil; and second, to assure that Congress is consulted before the United States deploys CBW agents on those lands outside the United States which are under its jurisdiction and control, such as Okinawa.

Hopefully this last amendment will eliminate the dangerous international repercussions of deployment of such weapons on foreign territory. In addition to the Okinawa incident which threatens our relations with Japan, the West German Government has now revealed that poison gas is being stored in that nation.

The package of CBW amendments offered here today is aimed at answering the question that concerned Congressmen and people all over the world are asking. After the ABM issue is settled, Congress should plan to set aside time for several days of debate and consideration of these amendments and a thorough examination of our total CBW program.

These are modest and very limited amendments which do not reach the much more important issue as to whether we should be developing such a weapons system at all. There are grave practical, political, and moral questions that must be debated and resolved by the Congress and the people of this country. It is my own view that we are developing a chemical and biological monster that cannot be controlled. It will ultimately proliferate into the armaments race of all nations large and small and we will have made it possible because of our own research and development. As the Columnist James J. Kilpatrick put it in a column in the July 31 Washington Evening Star:

The "possible poisoning of whole populations" is a caged monster, dwelling in the dungeons of the unseen hell that men of all nations have fashioned.

On the moral question—I cannot believe that the people of this Nation would ever sanction the use of deadly disease germs and lethal gases on defenseless civilian populations.

These important questions cannot be left for settlement in the military arena; it is in the public forum where such issues must be weighed and resolved.

Mr. President, I ask unanimous consent to have printed in the RECORD an

article entitled "Time To Lift the Veil on Grisly CB Weapons," written by James J. Kilpatrick and published in the Washington Evening Star of Tuesday, July 1, 1969.

There being no objection, the article was ordered to be printed in the RECORD, as follows:

TIME TO LIFT THE VEIL ON GRISLY CB WEAPONS

(By James J. Kilpatrick)

For the first time in many years, possibly since the mustard-gas days of World War I, the American people are beginning to think uneasily about the most grisly weapons in contemporary arsenals—the weapons of chemical and biological warfare. It is a subject that cries out for sober discussion.

Several events have served the useful purpose of provoking debate. There was the killing of sheep in Utah last March. In late spring a hullabaloo arose over the army's effort to dispose of obsolete stocks of chemical agents. Then came the row over storage of nerve gas on Okinawa—a row that Secretary of State Rogers has been trying to quiet this week in Japan. A few days ago, Louisiana's Senator Ellender complained publicly that in the 20 years he has served in Congress, the military establishment has kept its CB program a tight secret.

At least some of the secrecy ought to be ripped away. No one reasonably could ask that the Joint Chiefs of Staff make full disclosure of every last detail of research, development, production and storage of its CB agents. At the same time, a thorough ventilation of the nature of these frightful weapons might well lead to stronger covenants against their use.

Contrary to widespread assumption, the United States never ratified a treaty banning the use of poison gas. Such an agreement was signed at Geneva in 1925, but when the Geneva Protocol reached the U.S. Senate the following year, a number of objections were heard. Gen. John J. Pershing, speaking from his own searing knowledge of chemical warfare, did his best to help the agreement along:

"I cannot think it possible that our country should fail to ratify the protocol," Pershing wrote the Foreign Relations Committee. "Scientific research may discover gas so deadly that it will produce instant death. To sanction the use of gas in any form would be to open the way for the use of the most deadly gases and the possible poisoning of whole populations of noncombatant men, women and children. The contemplation of such a result is shocking to the senses. It is unthinkable that civilization should deliberately decide upon such a course."

Unfortunately, the Senate took the unthinkable course. Alone among the powers of the earth, the United States failed to ratify. Meanwhile, in the 43 years that have passed, Pershing's prophecy has come true. The "possible poisoning of whole populations" is a caged monster, dwelling in the dungeons of the unseen hell that men of all nations have fashioned.

In closed-door testimony before a Senate committee last April, Dr. Matthew S. Meselson, professor of biology at Harvard, gave several senators an elementary course in chemical and biological warfare. His statement, carefully sanitized, was released in printed form a few weeks ago. Copies may be obtained from the Foreign Relations Committee.

The U.S. has seven chemical warfare agents. These begin with CN, which is ordinary tear gas. At the next level is CS, a super tear gas used in Vietnam. Slightly stronger is DM, an agent that causes violent sneezing, nausea and vomiting. Little is known of BZ, a "temporary incapacitant that interferes with normal mental and bodily processes." Another incapacitant is

HD, better known as the blistering mustard gas.

The two remaining chemical agents are VX and GB. Both are highly lethal. "A tiny droplet of VX on the skin will cause death," Dr. Meselson said. This was the agent that killed the 6,000 sheep in Utah. As for GB, a nerve gas developed but never used by the Germans in World War II, a single bomber in a single run "might be able to kill most unmasked persons within an area of at least five square miles." This would happen "within a matter of seconds."

The biological agents are more dreadful still: "These pose a threat to the entire human species." Space prevents a description of them here; but these agents exist, and one does not have to be a professional pacifist to raise an alarm about them. As Senator Ellender said, it is high time for the Senate to get concerned.

Mr. NELSON. I ask unanimous consent that the amendments offered in behalf of myself and the Senator from New York (Mr. GOODELL) be printed in the RECORD.

The PRESIDING OFFICER. The amendments will be received and printed, and, without objection, will be printed in the RECORD.

The amendments are as follows:

AMENDMENT No. 114

At the end of the bill add a new section as follows:

SEC. 402. None of the funds authorized to be appropriated by this or any other Act may be used for open air tests of lethal chemical agents or pathogenic biological microorganisms or biological toxins.

AMENDMENT No. 115

At the end of the bill add a new section as follows:

SEC. 402. None of the funds authorized to be appropriated by this or any other Act may be used for the procurement of delivery systems designed to disseminate lethal chemical agents, pathogenic biological microorganisms, or biological toxins, or for the procurement of any part or component of such delivery systems.

AMENDMENT No. 116

At the end of the bill add a new section as follows:

SEC. 402. None of the funds authorized to be appropriated by this or any other Act may be used for the storage or deployment of any lethal chemical agent or any pathogenic biological microorganism or any biological toxin at any place outside the United States, or for the deployment at any place outside the United States of delivery systems designed to disseminate any such agent or microorganism or toxin unless the country exercising jurisdiction over such place has prior notice of such action. In the case of any place outside the United States which is under the jurisdiction or control of the Government of the United States, no such action may be taken unless prior notice of such action has been given to the Committee on Armed Services, the Committee on Foreign Relations, the Committee on Interior and Insular Affairs, and the Committee on Appropriations of the Senate and the Committee on Armed Services, the Committee on Foreign Affairs, the Committee on Interior and Insular Affairs, and the Committee on Appropriations of the House of Representatives. As used in this section the term "United States" means the several States, and the District of Columbia.

Mr. GOODELL. The amendments being offered today by the Senator from Wisconsin (Mr. NELSON) and myself as well as the amendments of other Senators indicate that the period of silence

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over gas and germ weapons is over. It is time for open discussion of CBW. What is needed is some plain speaking between Congress and the Pentagon, between our Government and other Governments and between our Government and the American people.

Chemical and biological weapons have long been one of the Pentagon's most closely held secrets.

We, however, have come to know and to think about weapons. As with nuclear weapons, we must come to know and understand chemical and biological weapons. Only in this way, will we be able to consider gas and germ weapons with sustained understanding rather than to react sporadically on impulse and ignorance. Congress and the Nation have a right to know the facts from the Pentagon and to debate the issues of CBW just as we have come to know and debate nuclear weapons.

What we need to consider are the grave moral issues which arise when we stockpile munitions filled with lethal gas and disease-producing bacteria. What is needed is an in-depth examination of the Pentagon's retaliation-in-kind concept used to justify this program.

Peril points do exist in this weapons program. There are dangers that can no longer be ignored or hushed in secrecy.

Consider the peril to the health and safety of the American people unless CBW testing, transportation, stockpiling, and disposal are regulated. Consider the peril to constitutional guarantees of checks and balances unless Congress can review requests and the rationale for an expanded CBW program. Consider the peril to U.S. relations with other countries unless deployment of these weapons is with mutual consent.

Now let us think about the example that our CBW program presents to both nuclear and nonnuclear nations.

One aspect of our program is CBW training for foreign officers from over 35 nations. Does this inspire an appetite for acquisition and proliferation of these weapons throughout the world? What if we receive requests from nations engaged in war for supplies of deadly nerve gas or disease-producing biologicals. Under these circumstances, what would the American people want our Government to do?

Finally, what about arms control? CBW is a driving wedge splitting meaningful action from general disarmament goals?

Let us weigh carefully the horrors in actual use of these insidious weapons of war. Let us weigh the escalation-of-weapons risks to the soldier and to civilian populations if gas and germs are unleashed in war.

The three amendments which I will introduce with Senator NELSEN today aim at limiting the dangers posed by offensive lethal chemical and biological weapons. We hope that our discussion of these amendments will help to answer some of the difficult questions which CBW poses.

The first amendment prohibits the open air field testing of nerve agents or any pathogenic biological organism. This amendment does not prohibit the field testing of tear gases, incapacitating gases, chemical stimulants, or nonpatho-

genic biological organisms. It also does not prohibit the testing of agents done within the confines of a laboratory. Distressing as it may be to have to guard against gas and germ warfare, it is vitally important to continue testing in the laboratory for protective devices aimed at both military and civilian defense.

The next amendment prohibits any procurement of biological bomblets, biological spray tanks to be attached to aircraft, biological missile warheads, any shells containing nerve agents or a biological toxin, and other devices that could be used to disseminate lethal chemical or pathogenic biological agents in warfare. Chemical and biological warheads for the Sergeant have brought CBW to the missile age. Weapons escalation has come a long way since 1944 and the Army's ill-fated scheme to use bats to deliver incendiary bombs.

The third amendment is twofold: First, to insure that foreign nations are consulted before the United States deploys CBW agents on their soil; and, second, to assure that Congress is consulted before the United States deploys CBW agents on those lands outside the United States which are under its jurisdiction and control, such as Okinawa. Hopefully this last amendment will eliminate the dangerous international repercussions of deployment of such weapons on foreign territory. In addition to the Okinawa incident which threatens our relations with Japan, the West German Government has now revealed that poison gas is being stored in that nation.

Mr. President, the possibility of accidental death, contaminated land, or the spread of disease due to outdoor testing is an unacceptable price for adding still more to the vast offensive capability of our CBW arsenal.

Lethal chemical and biological weapons are a menace to life in the outdoor testing stage. Throughout the procurement and deployment stages, CBW designed for offensive military purposes, presents a perilous barrier to meaningful arms control. From the perspective of war strategy, tactical use of lethal chemical weapons is of marginal utility. Moreover, it opens up the question of weapons escalation on the battlefield and threats to civilian population. Tactical use of disease-producing bacteria is simply indefensible. Still, the Pentagon wants to add to its CBW arsenal.

It is time we ask if we must continue up the "balance of terror" ladder with CBW. It is time we ask whether the United States is contributing to an erosion of past anti-CBW restraints by its CBW program.

In chemical and biological weapons funding over the years, we have been guided by the Pentagon's "retaliation-in-kind" argument. Where do we find ourselves now?

We find ourselves now in a near perfect model of weapons escalation. We have witnessed escalation in the potency of CBW agents. In gases: chlorine became more powerful than tear gas, phosgene more so than chlorine and the arsenal expanded with the addition of mustard gas and the nerve gases, GB and VX. In biological agents: micro-biological agents of increased resistance to pro-

TECTIVE treatment are constantly being searched for in our BW laboratories. Our BW effort has now reached a point where it appears to be the world's most ambitious effort to develop deadly germs for offensive military weapons.

There has been escalation in delivery systems and in target potential.

The size of our budget for CBW program development has also been built up. In the last 10 years, our expenditures for a CBW program have increased sevenfold to over \$350 million estimated for fiscal year 1970. Other estimates put CBW funds at double this figure.

Mr. President, what will be in store for future generations if we pursue this course of action? Today our attention is focused on nuclear weapons. The Pentagon is asking for funds to deploy an ABM as a defense against nuclear attack. While this nuclear defense question is before us, I wonder about the future and CBW.

Is the handwriting on the wall? In the years to come, will the Pentagon be asking us for an ACBM, an anti-chemical and biological monitoring system?

Life and death decisions are now being made in the Pentagon's laboratories as well as at test sites. The Pentagon can add or detract from the capabilities of CBW now available.

Yet the issues that gas and germ weapons pose to the military are dwarfed by the policy problems which we must face here in Congress. The American people must face these problems with us.

Precautions can be taken now against the perils of CBW if we have the will to take them.

Many of us have requested that the President send to the Senate the Geneva protocol outlawing the use of chemical and biological warfare. Hopefully, this will be a step taken in the immediate future.

I am hopeful also that Senate consideration of our amendments and those of the Senator from Indiana (Mr. HARTKE), the Senator from Rhode Island (Mr. PELL), and the Senator from Texas (Mr. YARBOROUGH) will lead to better understanding of chemical and biological weapons. The issues which these weapons raise to Congress and the Nation are too serious to let CBW spiral in secrecy any longer. The time of discussion review and hard choice is at hand.

The PRESIDING OFFICER. The amendments will be received and printed, and will lie on the table.

AMENDMENT NO. 117

Mr. YARBOROUGH. Mr. President, the chemical and biological warfare program of the United States raises vital questions in the area of public health and safety. I believe I have a special responsibility to bring these questions to the attention of the Senate because I am chairman of the Labor and Public Welfare Committee and its Health Subcommittee.

The chemical and biological warfare program of the United States costs approximately \$1 million per day. Yet to date, Congress has not devoted sufficient time to analyzing this weapons system and what it means to the domestic health and safety of the country.

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The chemical and biological warfare program has already caused great concern throughout the Nation because of the hazards to the public health and safety of our people and their environment, caused by the field testing and transport of CBW agents. In addition, we are concerned with its effect on our relations with other countries. Most recently, we have had to deal with the severe repercussions which resulted from the accidental release of nerve gas on Okinawa.

Pursuant to a request last year by the Special Subcommittee on Science—now the Special Subcommittee on the National Science Foundation—of the Committee on Labor and Public Welfare, the Legislative Reference Service of the Library of Congress prepared a background report on chemical and biological weapons. This background report is the source of much of the discussion which follows.

The U.S. Army defines chemical warfare as the tactics and techniques of conducting warfare by use of toxic chemical agents. Chemical weapons can be designed to cause, first, either death or disability in a man; second, destruction or damage to food, animals and crops; and third, depression or removal of other living things in accordance with a specific military tactic.

Types and effects of the principal chemical agents are as follows:

Nerve gases are the most lethal—or deadly—chemical weapons. Generally odorless and colorless, they cause asphyxiation by paralyzing the human nervous system. As little as one-fiftieth of a drop can kill a man.

Incapacitating agents can produce temporary paralysis, blindness, or deafness.

Harassing agents include mustard gas, which caused many casualties in World War I. Mustard gas causes severe burns to eyes and lungs and blisters the skin. Large amounts can kill.

Defoliants and herbicides are used against vegetation rather than humans; can be sprayed on forests and jungles to expose enemy hiding places, also effective in killing crops in enemy-held territory; may cause eye irritation, stomach upsets, or arsenic poisoning in humans.

Biological warfare is the deliberate introduction of disease-producing organisms into populations of people, animals or plants. The organisms are the same as those found in nature, but can be selected and cultured to be more virulent and resistant than those in nature. Some organisms, and especially bacteria, can be grown so as to be resistant to drugs and antibiotics.

It might also be possible to develop a kind of "super germ" or new strains of germs for which the body has not evolved antibodies and for which vaccines have not been developed. The Hong Kong flu is an example of a virus—evolved by nature—to which we had no serological resistance and for which a vaccine could not be developed until the disease was discovered and the organism isolated.

There are diseases such as influenza which are basically incapacitating and there are others which cripple or kill.

Hundreds of pathogenic organisms are available in nature from which the scientist and military strategist can select those which will serve the planned effect. Among the most effective and most feared BW diseases are the following:

Anthrax is a bacterial disease usually found in animals. Symptoms include high fever, hard breathing, and physical collapse. It can cause death within 24 hours if it affects the lungs.

Brucellosis is a bacterial disease usually found in cattle, goats, and pigs. Also known as undulant fever. Not usually fatal to humans although can cause high fever and chills which may last for months.

Plague is a bacterial disease sometimes carried by rats. Usually fatal within a week. Pneumonic plague affects the lungs, may be transmitted by coughing.

Q-fever is a highly infectious disease usually carried by ticks. Rarely fatal, can cause fever lasting 3 months.

Because biologic agents are invisible, odorless, and tasteless, and usually produce no immediate physiologic damage, their early recognition is often impossible. Another reason for the delay in recognition of a biologic agent lies in the fact that physical detection from samples of air, food, and water might take days and even longer, especially if the organism were foreign to the affected population.

Protection against biologic agents is extremely difficult. For example, the "Emergency Manual Guide on Biological Warfare—1959" states:

Decontamination of extensive areas is not considered practical. Rather, natural decay, assisted by sunlight, temperature and air movement must be relied on.

The population is better protected if it has been immunized actively or passively before biologic attack. Thus far it has been impossible to have available a multitude of vaccines capable of being dispersed and administered to a large population. Also, there are as yet no effective vaccines against certain diseases. It is likely that the young, the elderly and the infirm will be particularly susceptible victims.

Biological weapons systems have potential as a device for mass destruction. This is especially true if the combination of virulent agents and susceptible population, along with other conditions, are suitable to epidemic results. It is a self-replicating weapon—it proliferates itself, not only in the affected individual, but also in the entire population.

Not all diseases are equally contagious, but in one way or another they may spread from those who receive the direct inoculum to those who do not.

Crops are vulnerable to biological attack. Some biological agents are persistent; that is, they have spore forms which resist destruction and may remain in the environment, especially the soil, for tens or even hundreds of years.

Increasing attention is being given by the media to recent accidents and potential for accidents in the testing, development, transportation, and disposal of chemical and biological weapons. The July 25 edition of Medical World News contains an article on this subject, en-

titled "Biological Warfare: Off Limits to Doctors." Most of the following information is from that excellent article, including this quote:

Congressman's Question: What amount of VX nerve gas currently being tested in the open air over Dugway Proving Ground in Utah can kill a man?

Physician's Answer: I don't know.

Congressman's Question: Were you aware that the Army's own maps show a permanent biocontaminated area about 17 miles outside Dugway?

Physician's Answer: Not until I read about it in yesterday's papers.

The doctor who was thus forced to admit ignorance at a recent congressional hearing was the Surgeon General of the United States Public Health Service, William H. Stewart, who becomes chancellor of the Louisiana State University Medical Center next month. "I have primary responsibility within the federal government for the protection of public health," Dr. Stewart noted. To make the paradox more bitter, Dr. Stewart had served as chairman of the blue-ribbon committee set up to determine whether Dugway's testing programs, which killed some 6,000 sheep last year, have safety precautions adequate to protect humans, plants, and animals outside or inside the proving ground.

Much of the information about current U.S. biological warfare programs was apparently off limits to Dr. Stewart, as it is to nearly all other physicians, and to just about everybody else as well. The government, university, and drug industry scientists actively involved in these programs apparently include relatively few physicians. The Army's major bio-war center at Fort Detrick, Maryland, for example, has only 14 MDs on its staff, compared with 120 PhDs. And despite the claim that the U.S. programs are purely defensive, physicians who have tried to find out about possible medical defense measures have had little luck with the Army. In the information that has been made available, there is no evidence of any substantial work on ways of protecting the civilian population against a biological attack, or against an air crash, train wreck, lab explosion, or earthquake involving U.S. research or storage facilities.

I believe it is imperative that the Surgeon General be allowed to exercise primary responsibility within the Federal Government for the protection of public health of the citizens of the United States. Thus, I am offering an amendment to the military procurement authorization bill, S. 2546, so that the Surgeon General may be allowed to exercise his responsibility.

The amendment simply states that the Surgeon General of the Public Health Service must determine that any testing, development, transportation, or disposal of chemical and biological weapons will not present a hazard to the public health before any funds can be used for these purposes.

We must not have other incidents such occurred at the Dugway Proving Ground in Utah. The wind that carried the poison gas which killed 6,000 sheep blew 35 miles to the northeast. But if it had gone 35 miles east to Tooele, or 35 miles north to Highway 40, Dr. Gubler, chief of staff of Tooele Hospital, believes the victims might have been humans as well as sheep.

A witness at committee hearings called by Congressman Reuss, Dr. D. A. Osguthorpe, a Salt Lake City veterinarian,

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who had been one of the people instrumental in tracking down the cause of the sheep deaths, hinted that there may have been another accident at Dugway. Asked by Congressman VANDER JAGT:

Have you ever run into diseases that you have been unable to account for?

Dr. Osguthorpe replied:

I have run into a disease in newborn calves in the area. No antibiotic or drug so far has proved to have any therapeutic value. My theory is that this is a toxin, a biological agent.

Congressman RICHARD MCCARTHY has pointed out:

Fort Detrick, the Army Biological Warfare Research Center, has one of the poorest records among major biological institutions for infections. There was 3,300 accidents at Detrick between 1954 and 1962. Half of these occurred in a laboratory, involving broken test tubes and accidental scratches from needles. About 400 men were infected as a result.

Infections among workers at secret installations pose a threat to the entire neighboring community, MCCARTHY states. He has cited the instance of a worker who caught plague at Fort Detrick some years ago:

He also happened to be a lifeguard at a swimming pool and had been in contact with many people. Local residents who might have come into contact with Detrick personnel were not warned of the danger.

Fort Detrick, of course, is only minutes from Washington, D.C.

Recently, there was a furor over the proposed cross-country shipment of some 800 carloads of poison gas stockpiled from World War II. The gas was to be dumped in the Atlantic Ocean.

Congressional hearings unleashed a horde of disturbing questions about hazards of the proposed dumping. Among them: Might a medical disaster be inflicted on the civilian population of our large cities if an accident befell these trains on the roadbeds of our old, rough railways? As a result of the furor, some of the poison gas will probably be burned or chemically decomposed somewhere near the present storage sites, but the problem still has not been solved to everyone's satisfaction.

I think the time is right for the Senate to take action. It is my earnest hope that the Senate will pass my amendment. This amendment is not designed to prevent the testing and development of such agents if it can be done with safety to the civilian population. It is designed to protect the civilian population, not to hamper the Army and the scientists. It is not meant to cripple our defenses; rather, it is meant to protect our people.

I ask unanimous consent to have printed at this point in the Record the article published in Medical World News of July 25, 1969, entitled: "Biological Warfare: Off Limits to Doctors," and the text of the amendment.

The PRESIDING OFFICER. Without objection, it is so ordered.

The amendment will be received and printed, and will lie on the table.

The article is as follows:

[From Medical World News, July 25, 1969] BIOLOGICAL WARFARE: OFF LIMITS TO DOCTORS

Congressman's question: What amount of VX nerve gas currently being tested in the open air over Dugway Proving Ground in Utah can kill a man?

Physician's answer: I don't know.

Congressman's question: Were you aware that the Army's own maps show a "permanent biocontaminated area" about 17 miles outside Dugway?

Physician's answer: Not until I read about it in yesterday's papers.

The doctor who was thus forced to admit ignorance at a recent congressional hearing was the Surgeon General of the U.S. Public Health Service, William H. Stewart, who becomes chancellor of the Louisiana State University Medical Center next month. "I have primary responsibility within the federal government for the protection of public health," Dr. Stewart noted. To make the paradox more bitter, Dr. Stewart had served as chairman of the blue-ribbon committee set up to determine whether Dugway's testing programs, which killed some 6,000 sheep last year, have safety precautions adequate to protect humans, plants, and animals outside or inside the proving ground.

Much of the information about current U.S. biological warfare programs was apparently off limits to Dr. Stewart, as it is to nearly all other physicians, and to just about everybody else as well. The government, university, and drug industry scientists actively involved in these programs apparently include relatively few physicians. The Army's major blower center at Fort Detrick, Md., for example, has only 14 MDs on its staff, compared with 120 PhDs. And despite the claim that the U.S. programs are purely defensive, physicians who have tried to find out about possible medical defense measures have had little luck with the Army. In the information that has been made available, there is no evidence of any substantial work on ways of protecting the civilian population against a biological attack, or against any epidemic that might be set loose by an air crash, train wreck, lab explosion, or earthquake involving U.S. research or storage facilities.

Until recently, the Army's secrecy has kept biological weapons from arousing widespread alarm among physicians and the public at large. This year, however, the blower program, along with many other Pentagon projects, has lost much of its former immunity. Its congressional opposition, sparked by Rep. Richard McCarthy, a Democratic from Buffalo, N.Y., has now expanded to include the usually hawkish Senate Armed Services Committee. President Nixon has ordered a sweeping review of U.S. policies on chemical and biological warfare. A UN committee with representatives from all 13 countries believed to have blower programs has called for unconditional effective biological and chemical disarmament. And physicians who see biological warfare as off limits ethnically to anyone who has taken the Hippocratic oath, and who believes that the medical profession should take the lead in pressing all governments to rid themselves of these weapons, are getting a hearing in an increasing variety of medical organizations.

Only about 15% of blower research is ever published in the open scientific literature. As a result, some significant data reach the light of day via such publications as the *Congressional Record* rather than the more traditional scientific journals.

If Dr. Stewart had looked in the *Record* a few days before his testimony, he would have found a statement by Dr. Matthew S. Meselson, professor of biology at Harvard, about nerve agent VX. "A tiny droplet on the skin will cause death," Dr. Meselson said, citing Swedish research.

Dr. Meselson lists some of the reasons why a sizable group of scientists and physicians is disturbed: "Important military personnel can be equipped and trained to use protective devices far more easily than civilians can. Civilians are the most natural and most vulnerable targets for chemical and biological attack. Field testing of live biological weapons and especially the outbreak of actual biological warfare would be a menace to the entire human species."

Much the same prediction is made in a UN report on chemical and bacteriological weapons completed by consultant experts from 14 countries and just released by Secretary General U Thant. The experts came from Canada, Czechoslovakia, Ethiopia, France, Great Britain, Hungary, India, Japan, Mexico, the Netherlands, Poland, and Sweden as well as the U.S. and USSR. Of these countries only Ethiopia is believed to have abstained so far from blower research.

The UN report says the idea of biological weapons being used to spread disease "generates a sense of horror."

"And anyone who reads the report—as I urge all physicians to do—will see that there is a technical basis for this value judgment," says this country's consultant expert to the UN group, Dr. Ivan L. Bennett, New York University's vice president for medical affairs.

The UN report discusses various biological agents. From its appetizing menu (see box, page 26) an attacker could pick his weapon on the basis of precisely what he hoped to accomplish. For high mortality, anthrax, glanders, melioidosis, and plague (pneumonic) would be the diseases of choice, especially if reinforced by artificial drug resistance as shown on page 23. For fast transmission to areas and individuals who missed out on the first dose, cholera, smallpox, and pneumonic plague would be the best bet. To incapacitate large numbers of people for several weeks or more, one might choose Chikungunya fever, tularemia, typhus, brucellosis, glanders, coccidioidomycosis, Rocky Mountain spotted fever, or an aerosol version of tick-borne encephalitis. And there is no guarantee that an aggressor would use one weapon at a time. Airborne anthrax, for example, would fall far more victims if it were combined with influenza. Both the U.S. and USSR are believed to be working on all, or nearly all, of the agents discussed in the UN report, and to have large stockpiles of the ones their blower scientists consider the most useful.

Perhaps the most frightening characteristic of these weapons is their unpredictability. Bullets and bombs can be aimed; viruses and bacteria cannot. Bullets and bombs, once used, do not reproduce themselves in ever-increasing numbers; specially bred viruses and bacteria may. As the UN committee's experts point out: "Were these weapons ever to be used in a large-scale war, no one could predict how enduring the effect could be, and how they would affect the structure of the society in which we live. This overriding danger would apply as much to the country which had initiated the use of these weapons as to the one which had been attacked, regardless of what protective measures it might have taken."

Another danger comes from the low cost of these weapons. Just about any country that can find enough funds and know-how to operate a small vaccine laboratory or even a large brewery can initiate blower research. Poor countries can pollute the world almost as easily as rich ones.

The weapons themselves may be cheap, but a lot of money can be spent on delivery systems. These systems include planes with spraying devices and missiles with various type of warheads. In this country, the Army alone spends at least \$330 million per year for chemical and biological warfare activities.

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This official figure, given by Dr. K. C. Emerson, acting Deputy Assistant Secretary of the Army for Research and Development, has been challenged by congressmen as being too low. Some informed observers place the spending by the Army at roughly double that figure.

Delivery systems need not be elaborate, however. For most biological weapons the preferred form of dispersal is an aerosol. In one field trial cited by the UN report, 200 kg of zinc cadmium sulfide, a harmless powder, was distributed from a ship sailing 160 miles along a coastline while staying ten miles offshore. The resulting aerosol traveled more than 450 miles inland and covered an area of nearly 30,000 square miles.

Because biowar research is closest to medical research, it represents the most intense perversion of the humane aims of science, says Dr. Joshua Lederberg, 1958 recipient of the Nobel Prize in Medicine and now professor of genetics at Stanford.

Dr. Lederberg and his fellow critics argue that apart from enforceable treaties there can be no protection against a biological attack or accident. A less scholarly New York City internist puts the point tersely: "If the Public Health Service can't protect the nation against a flu epidemic with six months' advance warning, how in the hell could they ever protect us against an unknown organism that we have no vaccines against?"

One physician in a good position to speak to this question is Col. Dan Crozier, commanding officer of the U.S. Army Medical Unit at Fort Detrick. To Dr. Crozier, the most important aspect of medical defense is quick etiologic diagnosis. "Times considered acceptable in general medical practice would be totally unacceptable and possible disastrous," he said in *JAMA* (Vol. 175, No. 1). His suggestion: a maximum elapsed time of six hours in the lab.

Despite the limited information available to doctors, biowar defense "is primarily a medical problem and is a responsibility of the medical community," Dr. Crozier said. "The civilian medical profession will bear the brunt of the load. It will not matter that one opposes war or is against the use of microbiological agents as weapons, the problem will be one that must be met. At the present time, definite answers do not exist to many of the problems that would be created by such an attack."

Last year at the American Public Health Association meeting in Detroit, Dr. Crozier added another dimension: "It is no secret that the military forces of the U.S. are interested in biological warfare from the offensive as well as the defensive standpoint." In his current book, *Chemical and Biological Warfare*, Seymour Hersh cites Pentagon papers and Army field manuals in documenting a shift, under the Eisenhower Administration, away from the Roosevelt no-first-use policy.

The Committee for Environmental Information, a group originating at Washington University in St. Louis, is concerned with hazards of uncontrolled testing and careless handling. Official secrecy "is a deadly serious matter," pathology instructor Gustave L. Davis says. "If Congress and the people are to make the vital decisions about the manufacture, testing, and use of these agents, they must have the facts. These decisions may determine the life or death of hundreds of thousands of our people."

This is precisely the point emphasized by a "Speaker's Kit" issued by the Federal Civil Defense Administration in the early 1950s. It lists some "Quotable Quotes on Biological Warfare." Among them is this one, attributed to Millard F. Caldwell, who was then Civil Defense Administrator: "One of our toughest problems is what we could call, for the want of a better term, the panic element. Panics can be most costly; they can cost us more

than atomic bomb damage would. The only way to avoid panic is for the people to know the facts, and to have, in advance, the means of protecting themselves through knowledge of what to do."

A small taste of this panic element burst into the news during the recent furor over proposed cross-country shipment of some 800 carloads of poison gas stockpiled from World War II. The gas was to be dumped into the Atlantic Ocean. Congressional hearings unleashed a horde of disturbing questions about hazards of the proposed dumping. Among them: Might a medical disaster be inflicted on the civilian population of our large cities if an accident befell these trains on the roadbeds of our old, rough railways? As a result of the furor, some of the poison gas will probably be burned or chemically decomposed somewhere near the present storage sites, but the problem still has not been solved to everyone's satisfaction.

Some of the other unanswered questions first came to Representative McCarthy from his slim, blonde, pony-tailed wife, who had watched an NBC-TV program dealing with chemical and biological warfare. Constituents in Buffalo also found the program disturbing.

Attempting to answer his wife and his electorate, Representative McCarthy found himself knocking on closed doors. Some of his questions: Why does this country need a biological and chemical warfare capability? What sort of capability do we have now? Under what circumstances would our government use these weapons? Assuming we don't intend to use them first, could biological weapons ever be a militarily useful response to a biological attack? How much do these activities cost us each year? What safety precautions are taken to protect the public against accident? Are our academic and private institutions being improperly involved in this type of research?

BIOLOGICAL WEAPONS AND POSSIBLE MEDICAL DEFENSES

Disease	Mortality	Infectivity	Antibiotic therapy	Vaccination
Bacteria:				
Anthrax (pulmonary)	Almost invariably fatal	Moderately high	Effective if given very early	Available
Brucellosis	Low (less than 5 percent)	High	Moderately effective	Under development
Cholera	Usually high (up to 80 percent)	Low	do	Available
Glanders	Almost invariably fatal	High	Little effect	None
Melioidosis	Almost 100 percent fatal	do	Moderately effective	Do
Plague (pneumonic)	do	do	Moderately effective if given early	Available
Typhoid fever	Moderately high	Moderately high	Moderately effective	Do
Viruses:				
Chikungunya fever	Very low	Probably high	None	None
Dengue fever	do	High	do	Do
Tick-borne encephalitis	Up to 30 percent	do	do	Under development
Venezuelan equine encephalitis	Low	do	do	Do
Smallpox	Usually high	do	do	Available
Yellow fever	High	do	do	Do
Rickettsiae:				
Epidemic typhus	Usually high (up to 70 percent)	do	Effective	Do
Psittacosis	Moderately high	do	do	None
Q-fever	Low	do	do	Under development
Rocky Mountain spotted fever	Usually high (up to 80 percent)	do	do	Do

Source: U.N. report, July 1969.

McCarthy got some of the brush-offs given to physicians and ordinary citizens. But as a congressman, he had some resources not available to others, and he used them. He asked the Army for a congressional briefing on the subject. The Army complied, but declared that the briefing was classified.

Since the congressman could hardly answer his constituents' questions with classified material, he tried another way to leap over the high wall of bureaucratic secrecy. He submitted some of his policy questions to the Secretary of Defense.

The Defense Department replied—five weeks later. Signing the reply was Dr. John S. Foster, Jr., a physicist. As director of defense research and engineering, Dr. Foster is the Pentagon's top scientist.

One paragraph of Dr. Foster's reply is of particular interest to physicians:

"The U.S. does not maintain large stockpiles of medical supplies such as antibiotics and vaccines against the possibility of biological attack. There is no specific antibiotic therapy available for most biological warfare agents. As for vaccines, there are more than 100 possible biological warfare agents and production and administration of 100 possible biological warfare agents, and production and administration of 100 vaccines to the U.S. population is not practical. There is medical reason to believe that such a program would be generally injurious to health in addition to requiring prohibitive expenditures."

If there is no defense against an attack, what about the defense against accidental infection of our own population? Dr. Foster's letter stated that strict safety practices are

enforced at laboratories conducting research on biological and chemical agents: "Elaborate systems of airtight hoods, air filtration, and waste decontamination are employed. These precautions and procedures are reviewed by the U.S. Public Health Service as well as by Department of Defense safety experts. The equipment and building designs developed at the U.S. Army Biological Laboratories, for example, have been generally accepted throughout the world as the ultimate in safety for the investigation of infectious diseases."

In making the reply public, Congressman McCarthy in effect called its author a liar—an experience which Pentagon officials are finding increasingly common on Capitol Hill this year. McCarthy particularly attacked the over-all biological safety record during the past two decades: "Fort Detrick, the Army's biological warfare research center, has one of the poorest records among major biological institutions for infections. There were 3,300 accidents at Detrick between 1954 and 1962. Half of these occurred in the laboratory involving broken test tubes and accidental scratches from needles. About 400 men were infected as a result."

Infections among workers at secret installations pose a threat to the entire neighboring community, McCarthy charged. He cited the instance of a worker who caught plague at Fort Detrick some years ago: "He also happened to be a lifeguard at a swimming pool and had been in contact with many people. Local residents who might have come into contact with Detrick personnel were not warned of the danger."

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Soon other congressmen began to question the Army's veracity in dealing with one spectacular recent chemical warfare accident—the killing of 6,000 Utah sheep by Dugway's poison gas. The Conservation and Natural Resources Subcommittee began hearings on the dangers of open-air testing of persistent lethal chemicals.

Their unrelenting questioning of three Army officials, under oath, established these facts: The Army had first denied testing nerve gas on March 13, 1968, when in fact it had. Even after correcting this, the Army still denied—for 14 solid months—that the gas had anything to do with killing the sheep, even though it had paid their owners \$500,000 in reparations. This misstatement, too, was corrected, but only after the committee spent one entire morning of relentlessly pursuing evasions, hesitations, and disavowals by three Army representatives, including Dr. Mortimer A. Rothenberg, a biochemist who is Dugway's top scientist.

Last year, in reporting the Army's fib about the neurotoxin VX not causing the March sheep kill, *MWN* was the first to catch the brass in a second and more blatant lie—that Army precautions eliminated all peril to humans and indeed were so good that there had never been a single human casualty due to storage or testing of war chemicals at Dugway Proving Ground. Dr. Kelly Gubler, chief of staff at Tooele Hospital in the town of that name 35 miles east of the test site, said he had previously treated Dugway workers for anticholinesterase poisoning such as VX would produce. The wind March 13 blew to the northeast, but if it had gone east to Tooele or north to Highway 40—also 35 miles away—Dr. Gubler believed the victims might have been humans as well as sheep.

MWN's story (April 12, '68), read into the record by the same committee that later grilled Dr. Rothenberg, also trapped the Army in still a third lie—that its tests had gone according to plan on March 13. As Surgeon General Stewart got the Army to admit months later, an airplane had accidentally spewed out VX high above the desert where the winds could take it anywhere, after making a pass at a ground target to test dispersal techniques. The Army eventually promised Dr. Stewart that, in the future, airborne chemicals won't be released above 300 feet and won't cross heavily traveled Highway 40 for at least three hours.

At the hearing, Dr. Rothenberg said he feels secure about the new safety measures. Then Congressman Guy Vander Jagt, Republican of Michigan, asked in a mild voice, "If the Army was wrong about the danger to the sheep, could the Army be wrong about the danger to human beings?"

Vander Jagt did not press for an answer to his question, but committee chairman Henry S. Reuss, Democrat of Wisconsin, did insist on an answer to this one: "Is there Venezuelan equine encephalomyelitis virus in the Dugway storehouse?"

Dr. Rothenberg answered, "That is security information."

"Clear the hearing room," said the congressman, "and we will take your testimony in private."

Few scientists know precisely what is in the Dugway storehouse, but antibodies against VEE virus have been found in cattle in Utah. The only other states in which these antibodies have been found are Florida and Louisiana, where they would be more expected. This virus has been cited as being particularly suitable for biological warfare, because it is so easily spread to humans by inhalation, and because there is little immunity to it in temperate zone nations.

Another witness at the Reuss committee hearings, Dr. D. A. Osguthorpe, a Salt Lake City veterinarian who had been one of the people instrumental in tracking down the cause of the sheep deaths, hinted that there may have been another accident at Dugway.

Asked by Vander Jagt, "Have you ever run into diseases that you have been unable to account for?" Dr. Osguthorpe replied: "I have run into a disease in newborn calves in this area. No antibiotic or drug so far has proved to have any therapeutic value. My theory is that this is a toxin, a biological agent."

All indications are that the debate on biowarfare will continue gathering heat in the months to come. Surveying the situation on both sides of the Atlantic, an editorial in *Nature* (Vol. 218, No. 6) comments wryly: "The point is rapidly arriving when it is as hazardous for a person to carry out research on some aspect of chemical or biological warfare as it is to be a president on a campus torn apart by student power."

There will probably be a substantial rumble at the next meeting of the American Society for Microbiology. "The ASM has long been tied to the biological warfare effort and to the official secrecy shrouding it," says Dr. Richard Novick, a physician who is research assistant professor of microbiology at New York University. "More ASM members are employed at Fort Detrick than at any other institution. Their secrecy is evidently due to a desire to avoid arousing public opinion."

Dr. Novick helped found the microbiologists' Committee on Chemical and Biological Warfare, which seeks U.S. ratification of the Geneva Protocol of 1925, outlawing the use of poison gas and biological agents. They also hope to enlist the aid of microbiologists in other countries—particularly the Soviet Union, England, and France—in outlawing biowarfare.

The American Public Health Association includes a growing list of members opposed to biological weapons. After Fort Detrick's Dr. Crozier reported on biological warfare at last year's APHA meeting, he was challenged to a debate by Dr. Steven Jonas, a physician from Brooklyn. "The session was hastily adjourned when Dr. Crozier indicated he was not prepared to discuss morality," says Dr. Jonas.

The Brooklyn physician then helped organize the Caucus for Peace and Human Rights, which circulated a petition opposing continued development of chemical and biological weapons. "About 200 members signed it, and we mailed it off to the chairman of the APHA executive board. Hopefully, we would like the entire APHA to endorse our position."

For at least two decades, the AMA has virtually ignored the issue. But during the past few months, there have been some stirrings. In *Chemical and Biological Warfare*, Seymour Hersh charges that *JAMA* in recent years has refused to print letters critical of the views presented in *JAMA* by Colonel Crozier and others. Dr. John H. Talbott, *JAMA* editor, says Hersh's charge is easy to make but difficult to prove. Dr. Talbott also says he does not recall rejecting a "thoughtful" letter on the subject, and that he gets a lot of crackpot mail.

As for the ethics of biological warfare, an AMA spokesman says the question has never come up before the Judicial Council. Of the physicians who believe participation is unethical, one of the most articulate is Victor W. Sidel, formerly chief of the community medicine unit at Massachusetts General Hospital and now professor of community health at the Albert Einstein College of Medicine in New York.

To stay ethical, Dr. Sidel says, a military physician must do nothing to contribute to the net increase in disease, disability, or untimely death. "He must also be free to make judgments about his own medical ethics. If the physician becomes a combatant, or unable to make his own ethical judgments, he has stopped functioning as a physician. He may be a good soldier, but he is an unethical doctor."

A civilian physician, Dr. Sidel says, has an

"ethical imperative," stemming directly from the ethical traditions of medicine and from the concept of complicity developed at the Nuremberg Tribunal. "If the physician knows of any unethical activities of other physicians—for example, developing chemical-biological weapons or using medicine for psychological warfare—even if those activities are being performed under the aegis of his government, it is not only his right but his clear duty to make these activities as widely known as he can and to protest against them. In the long run, everyone will gain from this—his profession, his nation, and his species—even though in the short run, the physician himself may suffer from his protests."

Can biological warfare be made off limits to governments—our own and everybody else's—as well as to doctors and other private citizens? A year ago it would have seemed unlikely, but perhaps times have changed.

At the disarmament talks in Geneva, Britain has just proposed a new treaty that would ban production and possession of biological weapons as well as their use. Nixon and Kosygin have voiced interest. And even without any Russian reciprocity, the Senate Armed Services Committee has voted to eliminate all funds for lethal and incapacitating chemical and biological weapons from the U.S. military budget. But cash outlay is one indication of national priorities, and the billions already spent on biological weapons are hardly outweighed by the investment in biological disarmament—which so far consists mainly of Ivan Bennett's plane fare to Geneva.

As a social institution, war is not yet quite ready to follow slavery and human sacrifice onto the list of discarded behavior patterns that no one can any longer regard as part of some unchanging "human nature." But physicians like Drs. Sidel, Novick, Jonas, and Bennett hope that this particular kind of war can be ruled out before it is tried. One Swedish suggestion: Internationalize the entire microbiological profession into an intelligence network with universal diplomatic immunity.

Says Dr. Bennett: "I think things will begin to move. The time is ripe to do something. The problem is to get biological weapons banned by all nations, not by just the U.S. But I do think we are one step further along the way to what we are all after—general disarmament in biological weapons."

The amendment is as follows:

AMENDMENT No. 117

At the end of the bill add a new section as follows:

"SEC. 402. None of the funds authorized by this or any other Act shall be used for the testing, development, transportation, or disposal of any chemical or biological weapon unless the Surgeon General of the Public Health Service determines that such testing, development, transportation, or disposal will not present a hazard to the public health."

Mr. HATFIELD. Mr. President, the mid-July mishap in Okinawa, with the hospitalization of 24 persons exposed to nerve gas in its accidental release, brought to mind the urgency of control of chemical and biological weapons at home and abroad. Last year, reported fatalities from testing were limited in the United States to a flock of 6,400 sheep near the testing site in Utah. This year, it was only loudly voiced repercussions that prevented harm being brought to ocean life and water resources in the halt of disposal of 27,000 tons of chemical and biological agents off the coast of New Jersey. The dangers in testing of CBW agents are indeed grave, and continuation must be carefully weighed

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against the necessity and desirability of maintaining a CBW arsenal.

Chemical and biological weapons seem to be neither feasible strategic, tactical, or humanitarian weapons. While the need to be aware and updated on developments in the area is realized, I am firmly of the opinion that our stockpiling efforts should be reduced and research limited to a possible defense against the agents.

It has been estimated that the damage chemical and biological weapons could yield could easily surpass that of nuclear bombs in destroying civilian populations. It is even believed that the ecological effects would exceed those disastrous damages that have been attributed to capabilities of nuclear fallout.

The Army recently told Congress that \$350 million is spent annually on CBW research in its various phases—that is, for the development of means of disseminating germs, viruses, and nerve gas to destroy or incapacitate populations. At the same time, Congress is being told of the need for funding and programs to build strong minds and bodies within our Nation and to improve the conditions of our people. In light of these demands for crippling and creative programs, the priorities should be obvious; but only after the problems are recognized can they be given broader evaluation.

Therefore, it is with encouragement that I view the introduction today of several amendments to S. 2546, the military procurement bill, relating specifically to matters of testing, development, and international cooperation with chemical and biological agents. The aim of the amendments is to stimulate needed discussion and to establish a viable military policy for this area of question.

AMENDMENTS NOS. 118 THROUGH 120

CONGRESS NEEDS MORE INFORMATION ON CBW

Mr. HARTKE. Mr. President, the mysteries which surround our chemical and biological warfare program have served to compound and to amplify public doubts and fears about CBW. In the belief that better public information will prevent CBW from developing into a dangerous emotional issue, I am introducing three amendments designed to provide a more complete disclosure of the scope and purposes of our CBW program.

My first amendment will require the Secretary of Defense to furnish semi-annual reports to the Congress on the size and nature of various aspects of our CBW program. Such information is not readily available to the Congress at the present time. A reporting amendment of this nature is listed in a May 1969 Labor and Public Welfare Committee report as one possible approach to reducing the threat and danger of CBW. A similar amendment, introduced by Senator Clark, passed the Senate last year, but was deleted in conference. Since that time, it should have become clear to all of us that CBW deserves closer congressional attention and that the Congress deserves broader access to CBW information.

My second amendment will explicitly prohibit "back door" spending for the

purposes of CBW. Informed private estimates point to an expenditure of funds for CBW far in excess of official statements from the Defense Department. Representative RICHARD D. McCARTHY has also cast doubts on official Pentagon expenditure reports. He noted that a McGraw-Hill investment newsletter has stated that Edgewood Arsenal, only one of our CBW centers, will spend about \$420 million in 1969 for CBW materials, more than \$100 million above the total official program figure of \$300 million.

We are all too familiar with the technique of hiding unpopular program expenditures in the unnoticed budgets of unsuspected agencies—a \$1.2 billion authorization request for ABM warhead development was hidden in the AEC budget for a while this spring. Similar practices may characterize our CBW program as well. The Public Health Service, ironically enough, has a record of close cooperation with the Army's chemical warfare program. In 1960, for example, the PHS received more than \$380,000 in Army funds to bolster ongoing projects in fields in which it has an independent interest. According to a PHS spokesman, the annual transfer of funds measures only a fraction of the real cooperation between the two agencies. My second amendment would make sure that this questionable cooperation would not involve a similar transfer of funds in the opposite direction.

My third amendment was drafted in response to growing public fears about rail shipment of lethal chemical and biological weapons. As chairman of the Surface Transportation Subcommittee of the Commerce Committee, I have become acutely aware of the need to provide maximum safety precautions in the shipment of hazardous materials. My amendment will give the Congress and the civilian agencies advance notice of such shipments, will require strict adherence to established safety standards, and will require detoxification of lethal chemical and biological agents prior to shipment for disposal whenever practicable. In addition to the need for more adequate disclosures with regard to CBW, this amendment deals with the substantive problem of safety. Reports of a casual official attitude toward safety standards make restatement of these standards necessary. And a growing consensus that onsite detoxification is the safest, if not the fastest, way to dispose of unneeded CBW agents, has prompted the other restriction expressed in subsection (b) of this amendment.

Mr. President, my three amendments are modest in appearance, but they can be far reaching in their consequences.

A more complete disclosure of information is little to ask—and in our CBW program, which has never quite emerged from the wartime secrecy of the forties, it is long overdue. In the hope that congressional doubts will be answered, and in the belief that public fears should be eased, I submit these three amendments to the pending military-procurement bill.

The PRESIDING OFFICER. The amendments will be received and printed, and will lie on the table.

AMENDMENT NO. 121

Mr. PELL. Mr. President, as chairman of the Subcommittee on Ocean Space of the Committee on Foreign Relations, I have twice in recent months risen to discuss the international legal implications of the transportation and disposal of obsolete chemical weapons outside of the continental United States. Since that time the attention of the Senate has been brought to another question of equal significance for international law, the disclosure that the United States has been providing nerve gas to West Germany without notifying the Western European Union as required by the Final Act of the Nine Power Conference held in London, September 28, through October 3, 1954. Those events form the backdrop for the amendment which I would like to discuss at this time.

As I have mentioned in my previous floor statements, the dumping of obsolete, but still lethal, chemical weapons beyond our territorial boundaries could be regarded not only an expression of de facto jurisdiction over a portion of the seabed contrary to what the United States has espoused at the United Nations, but, as unilateral actions, those dumpings were most likely violations of the Geneva Convention on the High Seas which requires all states to cooperate with the competent international organizations in taking measures for the prevention of pollution of the seas or air space above, resulting from activities with harmful agents such as lethal chemicals.

In 1954 the United States signed the final act of the Nine Power Conference held in London and agreed that it "would notify the Brussels Treaty Organization of the military aid to be distributed to the continental members of that Organization." The past shipments of nerve gas to West Germany without the agreed upon notification not only may have put the United States in violation of the 1954 protocol, but also, West Germany's storage of that gas may have left it in violation of the protocol's provisions restricting the stockpiling of chemical and biological weapons.

At a time when the United States is faced with criticism for its use of tear gas and defoliants in Vietnam and its failure to ratify the 1925 Geneva Protocol forbidding the use of chemical and biological weapons, I find it particularly unfortunate that the United States has left itself open for further criticism by its apparent disregard of its international obligations with regard to chemical and biological weapons.

For the United States to have dumped pollutants into the Atlantic Ocean after having cosponsored a motion adopted by the U.N. General Assembly stating that "In the use of the deep ocean floor States shall adopt appropriate safeguards so as to minimize pollution of the seas and disturbance of the existing biological, chemical and physical process and balances; (and) shall provide timely announcement of any marine activity that could harmfully interfere with the activities of any other State in the exploration and use of the deep ocean floor," and for the United States to be furnish-

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ing nerve gas to West Germany while the 18-Nation Disarmament Conference is considering a proposal by Britain to control chemical and biological weapons programs, would seem to me to be a contradiction of the position the United States presented to the United Nations and a demonstration of lack of faith in the efforts being made in Geneva at the disarmament conference.

If the two events which I have discussed are not disturbing enough, there are reports of other incidents which also have international legal implications.

The United States furnishes nerve gas to a number of allied countries under various arms agreements. A question has arisen whether the United States is permitted to ship VX nerve gas to other nations without the consent of the British who invented it and allow the United States only to manufacture it under special license.

Rear Adm. R. W. Goehring, Chief of Operations of the U.S. Coast Guard, told the House Subcommittee on International Organizations and Movements in June that at least 50 people at the Coast Guard Station at Peale Island in the Pacific had to be removed from that island in April of 1968 after they were struck ill by an airborne toxic irritant. In the surrounding waters dead marine life was observed. Gas masks were used on the island until the wind shifted 3 days later. The subcommittee said it had a report that gas was dumped off the island sometime after World War II. I would note at this point that the Geneva Convention on the High Seas includes pollution of the air above the seas.

There has also been a report in the press that the U.S. Army has been conducting nerve gas tests on an Hawaiian island and tests with bacterial toxins in Micronesia. I would question whether countries whose fishermen might be near those islands have been appraised of the possible dangers of fishing in the surrounding waters.

The existence of the disturbing questions which I have raised may be in part explained by a consideration of the recent hearings held by the House Subcommittee on International Organizations and Movements on the Department of Army's most recent plan to dump obsolete chemical weapons in the Atlantic Ocean.

After Brig. Gen. James A. Hebbeler of the Department of the Army told the subcommittee that previous to the planned dumping being discussed there has been three other dumpings of obsolete chemical weapons and nine dumpings of other weapons into the ocean, John S. Leahy, Office of the Assistant Secretary of State had for Congressional Relations, told the committee that the Department of State had not become aware of the dumpings until 2 days before the House hearings.

Mr. Leahy's statement was confirmed 2 days later by Mr. Herman Pollack, Director of International Scientific and Technological Affairs of the Department of State, when he told the subcommittee that for the 2 years that he has been director, he had not been apprised of the dumpings. The subcommittee also

learned that the Department of State was not notified about the 13th planned dumping until after the decision had been made to send the trains to New Jersey.

The Department of State testified that there were at least 18 treaties and international agreements signed by the United States which should have been considered before the Defense Department undertook to dispose CBW materials outside of the continental United States. I ask unanimous consent to insert that list in the Record. Included in that list is article 25 of the Geneva Convention on the High Seas to which, as I mentioned earlier in my statement, particularly close attention should have been given.

As one person who believes the United States should strictly adhere to its international agreements, I am surprised at the negligence of the Defense Department in not providing proper consideration of those agreements in consultation with the Department of State.

Perhaps the Defense Department's action or, rather no action, is understandable in the light of their attitude toward an agreement on a national CBW policy which was circulated within the executive branch last January. It is reported that, as a result of conversations originating from 1963 among representatives from the Department of Defense, the Department of State, and the Arms Control and Disarmament Agency, a proposed national policy was developed which would have prohibited the first use of chemical and biological weapons, with the exception of herbicides and tear gas, and would have required Presidential authorization for the combat use of chemical and biological weapons. Each of the executive agencies approved the proposed statement except the Department of Defense.

Another telling example of the Defense Department's attitude toward the State Department's concern with the CBW program is revealed, in what I understand is the Defense Department's reported recent refusal of the State Department's request to delay, until the new CBW study is completed, the shipment of 40 kilos of nerve gas to West Germany.

The Department of State has the responsibility and authority for the interpretation of international agreements to which the United States has subscribed. Past events have suggested that the Department of Defense believes that the Department of State's responsibility is extraneous to its movement and disposal of chemical weapons outside of the continental United States.

The Defense Department's independent action within the executive branch in the disposal of chemical weapons in the oceans and in the provisions of nerve gas to West Germany have resulted in a needless disregard of American international obligations and unnecessary embarrassment for the United States abroad.

I believe it is time that the Department of State and the Department of Defense assume and fulfill their appropriate and separate responsibilities.

There must be one policy within the

executive branch with regard to chemical and biological weapons based upon existing international agreements and canons of international law. This coordination will not be possible if the Department of Defense does not recognize the responsibility of the Department of State for interpreting the international obligations of the United States.

I offer an amendment today which, I believe, will insure the proper consideration within the executive branch, of American obligations abroad in the provision, disposal, transportation, and testing of chemical and biological weapons outside of the continental United States.

As undesirable an increment in the arms race as I find the chemical and biological weapons program, I do not offer an amendment to reduce the authorization for that program. I simply offer a moderate amendment asking for the proper consideration for our international responsibilities when elements of that program require the disposal, or movement of chemical and biological weapons outside of the United States.

My amendment would require that the Secretary of State's determinations be reported to the Committee on Foreign Relations in order that the committee will be assured that the United States is fulfilling its obligations under the Geneva Convention on the High Seas and under the other treaties and agreements which have a bearing on chemical and biological weapons. It is also important that the Foreign Relations Committee knows which of our allies are receiving offensive or defensive CBW materials under the various arms agreements if the Foreign Relations Committee is to be able to judge accurately the arms balance in the world. I would also like to say regarding this point that I believe it would be more desirable for the Foreign Relations Committee to be receiving that information on a confidential basis from the executive branch than it would be if the committee was receiving such information, as it has in the past, as a result of exposés by the communication media.

The amendment would also require the Secretary of State to report his determinations to the appropriate international organs if agreements to which the United States have supported demand such notifications. Examples would include notification to the North Atlantic Treaty Organization when the United States furnishes nerve gas to West Germany, and notification of such international organs as the U.N. Inter-Governmental Maritime Consultative Organization and the U.N. Oceanographic Commission, in the instance of the dumping of obsolete chemical weapons in the ocean.

The evidence is clear that there has been inadequate consideration within the executive branch of international responsibilities with regard to chemical and biological weapons. The handling of chemical and biological weapons outside of the continental United States presents serious implications for world peace and understanding. I believe the passage of the amendment I propose is necessary if the United States is to maintain re-

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spect abroad as a nation which upholds its international obligations.

Mr. President, I ask unanimous consent to have printed in the RECORD a list of treaties and other international agreements containing antipollution provisions to which the United States is a party.

The PRESIDING OFFICER. The amendment will be received and printed, and will lie on the table; and, without objection, the document will be printed in the RECORD.

The list, presented by Mr. PELL, is as follows:

LIST OF TREATIES AND OTHER INTERNATIONAL AGREEMENTS CONTAINING ANTI-POLLUTION PROVISIONS TO WHICH THE UNITED STATES IS A PARTY

International convention for the prevention of pollution of the sea by oil, done at London May 12, 1954, as amended April 11, 1962.

12 UST 2989; TIAS 4900.

17 UST 1523; TIAS 6109 (amendments).

(Convention sets up prohibited zones around the coasts of all countries into which ships of Governments parties to the convention are prohibited from discharging oil or oily wastes.)

Convention on the high seas, done at Geneva April 29, 1958.

13 UST 2312; TIAS 5200.

(Art. 24 requires States parties to draw up regulations to prevent pollution of the seas by discharge of oil from ships or pipelines or resulting from exploitation and exploration of seabed and its subsoil. Art. 25 requires parties to prevent pollution of seas from dumping of radio-active waste and to cooperate with international organizations in measures for preventing pollution of seas or airspace above, resulting from activities with radio-active or other harmful agents.)

Convention on the Continental Shelf, done at Geneva April 29, 1958.

15 UST 471; TIAS 5578.

(Art. 5, par. 7, requires a coastal State party to undertake, in the safety zones around installations and devices for exploiting and exploring natural resources on its Continental Shelf, all appropriate measures for the protection of the living resources of the sea from harmful agents.)

The Antarctic Treaty done at Washington December 1, 1959.

12 UST 794; TIAS 4780.

(Art. V prohibits nuclear explosions in Antarctica and the disposal there of radio-active waste material.)

Interim guidelines for conservation of fauna and flora, adopted as Recommendation, III-IX under the Antarctic Treaty at Brussels June 2-13, 1964.

17 UST 991; TIAS 6058.

(Provides that each participating Government shall, to the extent feasible, take all reasonable measures towards the alleviation of pollution of the waters adjacent to the coast and ice shelves.)

The treaty banning nuclear weapon tests in the atmosphere, in outer space and under water, done at Moscow August 5, 1963.

14 UST 1313; TIAS 5433.

(Art. I prohibits any nuclear explosion in the atmosphere, outer space or under water and in any other environment if it causes radio-active debris outside its territorial limits.)

Treaty on principles governing the activities of states in the exploration and use of outer space, including the moon and other

bodies, done at Washington, London and Moscow January 27, 1967.

18 UST 2410; TIAS 6347.

(Art. IX requires States parties to avoid harmfully contaminating Outer Space and adversely changing the environment of the earth by introducing extraterrestrial matter.)

Convention on International Civil Aviation, done at Chicago, December 7, 1944.

61 Stat. 1180; TIAS 1591.

(Art. 12 requires contracting States to adopt measures to insure that every aircraft carrying its nationality mark shall comply with rules of the air in force wherever it is. It requires each State to keep its own regulations uniform, to the greatest possible extent, with those established under the Convention, and declares that over the high seas, the rules in force are those established under the Convention. Annex 2 (Rules of the Air) established under the Convention provides in Chapter 3, paragraph 3.1.4 that "Nothing shall be dropped or sprayed from an aircraft in flight except under conditions prescribed by the appropriate authority.")

International sanitary regulations, adopted at Geneva May 25, 1951.

7 UST 2255; TIAS 3625.

(Art. 31 provides that no matter capable of causing any epidemic disease shall be thrown or allowed to fall from an aircraft when it is in flight.)

Treaty relating to boundary waters and questions arising along the boundary between the U.S. and Canada, signed at Washington, January 11, 1909.

36 Stat. 2448; TS 548; III Redmond 2607.

(Art. IV provides that the boundary and waters flowing across the boundary shall not be polluted on either side to the injury of health or property on the other. The International Joint Commission has made a number of recommendations to carry out the provisions of Art. IV of the Boundary Waters Treaty that have been approved by the U.S. and Canada. See "Documents On the Use and Control of the Waters of Interstate and International Streams", H. Doc. 319, 90th Cong., 2d sess., pp. 391-393.)

Convention between the U.S. and Canada concerning operation of smelter at Trail, British Columbia, signed at Ottawa April 15, 1935.

49 Stat. 3245; TS 893; IV Trenwith 5009.

(Provided for payment by Canada to U.S. of \$350,000 in damages caused prior to 1932 by fumes discharged from the smelter of the Consolidated Mining and Smelting Co. at Trail, British Columbia, to property in the State of Washington, in accordance with finding of International Joint Commission pursuant to Art. IX of 1909 Boundary Waters Treaty; submitted to arbitration the U.S. claim of damages after January 1, 1932.)

Convention between the U.S. and Mexico to facilitate the carrying out of the principles contained in the treaty of November 12, 1884, and to avoid the difficulties occasioned by changes which take place in the beds of the Rio Grande and Colorado River, signed at Washington March 1, 1899.

26 Stat. 1512; TS 232; I Malloy 1167.

(Establishes the International Boundary Commission to decide all questions and differences growing out of changes in the rivers, works constructed therein, or any other cause affecting the boundary.)

Treaty between the U.S. and Mexico relating to the utilization of waters of the Colorado and Tijuana Rivers and of the Rio Grande, signed at Washington February 3, 1944.

59 Stat. 1219; TS 994; 3 UNITS 313.

(Renames the Commission as the International Boundary and Water Commission, with a U.S. Section and Mexican Section, and with additional powers and duties. Art. 3 provides that in making provision for joint use of international waters, the Commission shall be guided by the following order of pref-

erences: 1. domestic and municipal uses; 2. agriculture and stockraising; 3. electric power; 4. industrial uses; 5. navigation; 6. fishing and hunting; 7. any other beneficial uses. All of the foregoing uses "shall be subject to any sanitary measures or works which may be mutually agreed upon by the two Governments, which hereby agree to give preferential attention to the solution of all border sanitation problems".)

Recommendations of the International Boundary and Water Commission to improve the quality of water reaching Morelos Dam in Mexico from the U.S., approved by the Presidents of the U.S. and Mexico on March 22, 1965.

52 Dept. of State Bulletin 556 (1965).

(Construction of a drain to permit control of the salinity of water impounded by and diverted from Morelos Dam for irrigation purposes.)

Isthmian canal convention between the U.S. and Panama, signed at Washington November 18, 1903.

33 Stat. 2234; TS 431; II Malloy 1349.

(Under Art. IV Panama grants to the U.S. in perpetuity the right to use the rivers, streams and other water for navigation, water supply, and for maintenance, operation, sanitation and protection of the Canal.)

General treaty of friendship and cooperation between the U.S. and Panama, signed at Washington March 2, 1936.

53 Stat. 1807; TS 945.

(Art. I declares that the 1903 Convention contemplates use, occupation and control by the U.S. of the Canal Zone and additional lands and waters under U.S. jurisdiction for the purposes of "efficient maintenance, operation, sanitation and protection of the Canal and its auxiliary works.")

Agreement for enlargement and use by Canal Zone of sewerage facilities in Colón Free Zone Area, concluded by exchange of notes at Panama March 8 and 25, 1954.

5 UST 782; TIAS 2966.

(Facilities to be constructed at U.S. expense; to be owned by Panama, subject to continuous use by U.S.)

Agreements between the U.S. and other countries providing for desalination studies or projects:

Israel: October 14, 1964 (not printed).

Mexico and the International Atomic Energy Agency: October 7, 1965 (16 UST 1252; TIAS 5874).

Saudi Arabia: November 11 and 19, 1965 (16 UST 1952; TIAS 5932).

Spain: June 25, 1968 (TIAS 6514).

U.S.S.R.: November 18, 1964 (15 UST 2146; TIAS 5897) extended to November 18, 1963 (17 UST 2310; TIAS 6174).

Agreement between the United States and the Union of Soviet Socialist Republics, signed at Washington, February 13, 1967, as amended and extended by the agreement of January 31, 1969:

18 UST 190; TIAS 6218; TIAS 6636.

(Paragraph 7 provides: "Both Governments will take appropriate measures to ensure that, to the extent practicable, waste materials are discharged at sea only in waters deeper than 1000 meters.")

EXECUTIVE COMMUNICATIONS, ETC.

The PRESIDENT pro tempore laid before the Senate the following letters, which were referred as indicated:

REPORT ON DEPARTMENT OF DEFENSE PROCUREMENT FROM SMALL AND OTHER BUSINESS FIRMS

A letter from the Assistant Secretary of Defense, transmitting, pursuant to law, a report on Department of Defense procurement from small and other business firms for the period July 1968 to April 1969 (with an accompanying report); to the Committee on Banking and Currency.

¹ This list does not include general provisions of Treaties bearing upon uses of the seas, such as Article 2 of the Convention on the High Seas, or rules of Customary International Law which may be relevant.

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of Health, Education, and Welfare, and the present administration, they are not going to be able to get that quality education.

Mr. President, I thank the distinguished Senator from Mississippi very much for yielding to me.

Mr. STENNIS. I thank the distinguished Senator from Alabama for his comments.

Mr. President, I yield the floor.

ABM

AUTHORIZATION OF APPROPRIATIONS FOR FISCAL YEAR 1970 FOR MILITARY PROCUREMENT, RESEARCH, AND DEVELOPMENT, AND FOR THE CONSTRUCTION OF MISSILE TEST FACILITIES AT KWAJALEIN MISSILE RANGE, AND RESERVE COMPONENT STRENGTH

Mr. MILLER. Mr. President, I ask unanimous consent that the Senate resume the consideration of the unfinished business.

The PRESIDING OFFICER. The clerk will state the bill by title.

The ASSISTANT LEGISLATIVE CLERK. A bill (S. 2546) to authorize appropriations during the fiscal year 1970 for procurement of aircraft, missiles, naval vessels, and tracked combat vehicles, and research, development, test, and evaluation for the Armed Forces, and to authorize the construction of test facilities at Kwajalein Missile Range, and to prescribe the authorized personnel strength of the Selected Reserve of each reserve component of the Armed Forces, and for other purposes.

The PRESIDING OFFICER. Without objection, the Senate will proceed to the consideration of the bill.

The Senate resumed the consideration of the bill.

IN SUPPORT OF THE PRESIDENT ON THE ABM

Mr. MILLER. Mr. President, the Senate debate on the ABM has been in the finest traditions of a separate, coequal, independent branch of the Government. Everyone has had an ample opportunity to make his points. In my judgment, further debate will change no minds, and I hope we can get on with the voting on this matter and any amendments that may be offered.

I have been pleased that this debate has been free from partisanship, because anything relating to the security of our country certainly should not appear in the partisan political arena. I note, for example, the great leadership among my Democratic colleagues, especially the Senator from Mississippi (Mr. STENNIS) and the Senator from Washington (Mr. JACKSON), in support of the President on this issue.

It is regrettable that a certain amount of emotionalism has entered this controversy—not so much here on the floor of the Senate as among some members of the public. When the national security is involved, it is most inappropriate and unhelpful to suggest that those on either side of the controversy have a premium on morality, good faith, or wisdom. Resort to such extreme tactics, I might add, generally tends to weaken the position of those who follow them, because the natural inference is that a genuinely

strong position would command a confidence which would preclude the use of such tactics.

This is a most complex issue for all of us. None of us is a physicist, and no Member of Congress I know of has had much contact with Soviet or Red Chinese officials, much less has participated in extensive negotiations with them. Accordingly, we are forced to look to those possessing expertise in the fields of physics and diplomacy, supplemented by experts—both civilian and military—in the field of national defense and such knowledge and experience as we individually possess on that subject. Ultimately a judgment factor is involved, and when some of the experts differ among themselves, judgment is more difficult. It is for this reason that I have constantly made the effort to point out that there are good, honest, decent, and conscientious people on both sides of the controversy.

MY CONCLUSION

I do say, however, that my own careful analysis of the evidence, the arguments, and the professional judgments advanced has caused me to conclude in support of the President on this issue. And let me point out that the President's assurance to the Congress that each phrase of the deployment of the ABM will be reviewed to insure that we are doing as much as necessary but no more than that required by the threat existing at that time—this assurance seems most reasonable in light of the anticipated negotiations with the Soviets on the subject of arms control and limitation.

PUTTING COST IN PERSPECTIVE

A great deal has been said about the cost of the ABM, the size of the national defense portion of the budget, and the needs of other areas of Government for money. Interesting as this information is, it seems to me that it is somewhat beside the point. If, indeed, one concludes that the the ABM "won't work," we should not approve it—regardless of how lean or fat the budget may be. If, on the other hand, one concludes that it will work and that it is likely to be necessary to our Nation's security, then it should be approved, and the state of the budget is very secondary.

I appreciate that the Senator from Missouri (Mr. SYMINGTON) is concerned about the size of the defense portion of the budget. So is everyone else. However, the size should be placed in perspective if we are to properly evaluate it. Thus, for example, the \$78 billion defense budget is about 40 percent of the total expenditure budget of \$195 billion. It is estimated that our total GNP for fiscal 1970 will be \$960 billion, so you can see that defense will comprise approximately 8.1 percent of our GNP. If the estimated cost of the war in Vietnam totaling \$28 billion is taken out of the \$78 billion defense budget, this leaves \$50 billion or 5.2 percent of our GNP.

For fiscal 1969, our GNP totaled \$895 billion and Defense Department expenditures \$75.2 billion, or 8.4 percent of our GNP. If the estimated cost of the war in Vietnam totaling \$28 billion is taken out of the \$75.2 billion defense

budget, this leaves \$47.2 billion, or 5.7 percent of our GNP.

These percentages should be compared with 1964—8.1 percent, GNP \$612 billion and defense \$48.9 billion—when the war in Vietnam costs were relatively small; 1959—8.5 percent, GNP \$469 billion and defense \$40 billion; and 1954—9.5 percent, GNP \$362 billion and defense \$34.4 billion.

Compared to 15 years ago, 10 years ago, 5 years ago, and last year, the portion of our gross national product going to all Department of Defense costs for fiscal 1970 is smaller in three and equal in one. And if the costs of the war in Vietnam are taken out, and this should be done to look at the defense budget from the standpoint of "sufficiency" compared to Soviet military power and also to accurately compare 1964, 1959, and 1954, the percentage of GNP for fiscal 1969 and 1970 is greatly less. This is the perspective we should have in evaluating the argument of the Senator from Missouri. Furthermore, it would be well to consider that, with a GNP of only half that of the United States, the Soviets have a military budget equal to ours—exclusive of the costs of the war in Vietnam—so it is clear that the burden on the people of the Soviet Union is very great.

On the money point, which, as I have pointed out, is something of a side issue, it appears that most of the opponents are favorable insofar as strictly research and development costs are concerned. Of the total authorization before us, they only question some \$345 million, which is scheduled for procurement leading to deployment. Of the \$78 billion defense budget, one could hardly argue that \$345 million is a major factor. For those who do not favor even the research and development and think the whole ABM program should be canceled, we are talking of a system which, fully deployed at all sites, would cost an estimated \$10 billion, of which \$9 billion would be spread over the next 7 years. This could hardly be said to be of major significance in the overall Federal budget.

WILL IT WORK?

The first real point to judge on this issue is whether or not the ABM system will work, because, regardless of how lean or fat the budget may be, it would be improvident to spend any money at all for something that will probably not work. Here is where one must look to the scientific community—particularly the physicists. As I pointed out to the Senate on May 1, Prof. Eugene P. Wigner, Nobel Laureate of Princeton University, is preeminent; and his speech of April 29 supporting the ABM before the American Physical Society, which I placed in the RECORD, is most persuasive. Even Prof. Hans Bethe of Cornell University, one of the opponents, concedes that the system could be effective and places his opposition on the matter of timing rather than on the "won't work" theory.

IS IT NEEDED?

The next point is whether it is needed, because, even if it is likely to work, it would be improvident to go ahead on it

if it will not be needed. Here is where so many opponents have so much trouble, because it is necessary to project not only our own capabilities, but those of the Soviets and Red Chinese, many years into the future. It is not a question of our relative strengths today, but rather our relative capabilities in the mid-1970's. The best intelligence information we have indicates that by that time period the Soviets will have sufficient power to seriously threaten our deterrent capability; and the Red Chinese will have sufficient power to hold some of our major cities hostage. What their intentions will be then, no one knows, and there has been too much hair splitting, I think, over whether the Soviets are "going for a first strike capability"—as if it was their intention to follow a first strike strategy—or whether they will have such a capability. It is the capability which poses the threat. Hostile intentions, without the capability, do not pose the threat. Friendly intentions, with the capability for a first strike, do not pose a threat either; but intentions can change. So it is the capability which is of primary importance.

Against this there are those who argue that we should, nevertheless, ignore the capability and stand still. Otherwise, they say, we will escalate the arms race. But who, indeed, has been doing the escalating? Who was the first to deploy an ABM? Who was the first to test it? Who is moving toward a capability of destroying our deterrent power? Who has refused during all of these years to enter into negotiations, much less an agreement, on nuclear arms limitation and control, with effective inspection to prevent cheating? It has not been the United States. I find this argument not only invalid but a dangerous form of unilateral disarmament; because one can have unilateral disarmament by standing still while a potential adversary moves ahead—just as well as by destroying one's weapons while a well-armed adversary stands still. Additionally, as I shall point out later on, the cost considerations make it unlikely that the Soviets would attempt to neutralize our ABM system.

Hopefully, the United States and the Soviet Union—and eventually the Red Chinese—will enter into a meaningful agreement which will put a stop to the arms race. To be meaningful, there will have to be some procedure to prevent cheating, and this means a certain amount of inspection. However, we have been advised that negotiations—even if they prove successful—will be terribly complex and of several years' duration—much longer than those resulting in the Nuclear Nonproliferation Treaty. It would be suicidal to entrust the security of our people meanwhile to mere hopes and trust in the "good faith" of our adversaries.

IS AN ABM THE BEST ANSWER?

The third point is whether, assuming something is needed to counter the capability of the Soviets and Red Chinese, the ABM is the best answer. For example, it is argued that it would be cheaper to simply add more Polaris submarines, or to add more Minuteman

missiles, or to put our missiles in harder sites. There are several insuperable difficulties with such alternatives. For one thing, they do not afford us a capability of protecting a few of our cities which could be threatened by Red Chinese intercontinental ballistic missiles. To the people in those cities, it would be no protection if our only option was massive retaliation against Red China. If a small attack, by accident or design, occurred from the Soviet Union, our President surely should have another option than massive retaliation, which could work a holocaust on both sides. From the standpoint of the Soviets, there is no cause for concern about a purely defensive system, like the ABM, which is designed to protect our deterrent capability and, to the limited extent necessary to guard against a Red Chinese threat, a few of our cities.

TIMING OF "DEPLOYMENT"—UPCOMING TALKS WITH SOVIETS

A fourth point relates to timing of deployment. This is raised by those who say they recognize the first three points; but for the current fiscal year, at least, we should authorize the President merely to engage in further research and development on the ABM. There are three arguments revolving around this point, any or all of which are dominant in the thinking of those who advocate delay in deployment:

First. The design of the ABM system is defective in that the radars are too vulnerable to enemy attack. There are two answers to this: If, indeed, there were an enemy attack of sufficient size to threaten the radars, there would be no choice except massive retaliation—launched before the radars were struck; and, with deployment of both phases of the ABM system not scheduled before the mid-1970's, there will be time to modify the radars or to "harden" them if such action is feasible.

Second. Future action by the Soviet Union in deployment of missiles which would threaten our retaliatory force hopefully may indicate that they are not pursuing a first strike capability. There are two answers to this: If we wait, our hopes may well not be borne out. After all, there is no indication that the Soviets will slow up or stop their deployment of such missile power; all indications are the other way. And if our hopes are not borne out, it could be too late due to the long leadtime required for deployment of an ABM system. This, incidentally, is where I must respectfully disagree with Prof. Hans Bethe. If, indeed, the Soviets slow up, reorient their system to meet a Red Chinese threat, or stop such deployment, we can slow up, reorient, or stop our own ABM deployment in line with the President's assurance to which I have previously referred.

Third. If the Congress authorizes the President to Commence the long lead-time procurement required for deployment by the mid-1970's, this will undercut the arms control and limitation talks which are scheduled to begin late this summer with the Soviets. The point seems to be that the President's bargaining position with the Soviets will be bet-

ter if the Congress refuses the authorization which the President has requested. My reaction is that his position would be undercut by such action by the Congress. This is supported by the recent testimony of former Secretary of State Dean Acheson—June 11, 1969, before the Subcommittee on Economy in Government of the Joint Economic Committee—as follows:

As we add to maintain, and protect our power, we do not in any way diminish the possibility of an agreement with the Soviet Union. In fact, we strengthen it . . . The idea that the Soviet Union will negotiate with us in the sense in which we use that term is quite untrue . . . The Russian conception of negotiation is carrying on of war by other means . . . Therefore, as we strengthen ourselves, we bring about that calculation of forces by the Russians which induces them to make a deal. They are not moved by argument, nor by exhortation, nor by considerations of morality. They are moved only when their calculations lead them to believe that it is more advantageous to make a deal than not to do so.

Mr. Acheson has had considerable experience in negotiating with the Soviets. With the Korean war, one could say that he learned the hard way and, having done so, his viewpoint is even more to be respected.

But there is an even greater deficiency in this argument to limit the President's authority to research and development without deployment. It is that "research and development," in the broad sense, includes service testing, and there cannot be service testing without deployment. It is in the service testing that deficiencies are very often detected on the basis of which modifications are made in a weapons system—be it an aircraft, a tank, a missile, a radar, or an ABM system. Those Members of the Senate who seek to limit deployment to Kwajalein Island rather than to North Dakota and Montana, as the President requests, understand very well that service testing is a part of research and development. Where they err, it seems to me, is that service testing at Kwajalein would have to be followed by final deployment to North Dakota and Montana; whereas deployment for service testing in North Dakota and Montana would be followed by final deployment, with such modifications as service testing indicates should be made, at minimal cost to the taxpayers. I understand informally that at least \$2 billion would be saved by handling the service testing this way, and there seems to be no good reason why this extra cost should be incurred.

POSSIBLE SOVIET RESPONSE

A fifth point to be considered is whether a fully developed ABM system in the mid-1970's could be neutralized by the Soviets simply by increasing the number of their SS-9 missiles. Theoretically this is possible, but as a practical matter it is unlikely because the assured destruction required to preclude us from making a sufficient retaliatory strike would be too costly. In other words, although a large force of SS-9 missiles could destroy most, if not all, of our Minutemen without an ABM protection, with an ABM system there would be enough Minutemen which would survive

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to provide us with a deterrent capability. From that point on, the cost of adding to our ABM system would be much less than the cost of the additional SS-9's required to overcome our deterrent capability.

It is for this reason that William R. Kintner, in his article "The Prudent Case for Safeguard," published last June, concludes that, with the Chinese Communist threat by the 1970's, the most stabilizing system as between the Soviets and the United States is the Safeguard ABM system.

The interesting and informative statement by the Senator from Wisconsin (Mr. PROXMIRE), "Russian Military Power Limited by Economic Weakness," lends support for the conclusion that cost considerations make it unlikely that the Soviet response to Safeguard would be to try to neutralize it. And this holds true even if the Soviets proceed to provide their SS-9's with a MIRV capability.

POSEIDON AND BOMBER FORCE

The so-called "overkill" adherents argue that even if all of our Minutemen were destroyed, we would have sufficient deterrent power left over in our Poseidon submarine force and our strategic bombers. This argument, of course, completely ignores the Red Chinese threat to hold some of our cities hostage unless we have a defensive system. But vis-a-vis the Soviets, it ignores the observations made by Dr. Wigner about the city evacuation program in the Soviet Union. Estimates of fatalities in the Soviet Union which are made by the "overkill" adherents therefore are unrealistic. As Dr. Wigner points out, only 35 to 45 percent of such fatalities could be attributed to Poseidon, and this could be a gross overestimate because the calculation assumes that all our submarine fleet is on station and the people have not evacuated their cities; further, technical developments may negate its effectiveness, so that it would be dangerous to put all our trust in a single type deterrent. The capability of negating the effectiveness of our bomber force is even greater.

The underlying weakness of the "overkill" argument is that it proceeds on the false assumption that our planners are seeking to add to the number of weapons that can be detonated on major targets in the Soviet Union. Rather, what is being attempted is to maintain the number of such weapons we believe required for "assured destruction capability" after—not before—a first strike against us and after—not before—running the gauntlet of Soviet defenses, taking into account also anticipated failures among our strategic weapons. Accordingly, it is invalid to take into account our tactical nuclear weapons, which are designed to deter attack against Western Europe and, because of their short range, cannot be taken into account in calculating assured destruction capability against the Soviet Union.

NAIVETE TOWARD SOVIET LEADERS

Opponents of the Safeguard system are motivated by various arguments, the major ones of which I have sought to rebut. I do not question the good faith behind the arguments, although the logic, assumptions, emotionalism, and side issues must be questioned. But there

is one weakness which, though not representative of the opponents, characterizes the approach of a few of the opponents and concerns me more than all of the questionable arguments. It is a naivete toward the Soviet leaders—an inexplicable tendency to overlook their words and especially their deeds, and to proceed on the basis of hope rather than on the basis of realism in our relations with them.

I am not talking about Red Chinese leaders or Rumanian leaders or Yugoslavian leaders, whose ideological differences demonstrate that there has been a departure from the Communist monolith—one which, in the case of Yugoslavia and Rumania, at least, provides optimism for genuinely friendly relations. All of us hope for genuinely friendly relations with the Soviet leaders, but this hope must be tempered with realism and a willingness to look at things as they are. As former Secretary of State Acheson testified on June 11:

The power of the United States alone blocks the Sino-Soviet ambitions in the world. They may fall out between themselves, they may have difficulties, they may fight with one another in a minor way, but on one matter they are completely and wholly agreed. The United States is the enemy.

He continued:

The idea has been expressed that if we take the step proposed here [authorization of the Safeguard system] it is going to make negotiations much more difficult. It is not going to make it any more difficult. Any negotiation will be difficult to start with. All the problems are very difficult. They are not made any more difficult by adding to our defense. I doubt emphatically that some great transformation of relations with the Soviet Union is about to move us from an era of confrontation to a phase of negotiation. We have been negotiating with the Soviet Union all along. We shall be involved in confrontation into an indeterminate future. The two go hand-in-hand in the Soviet view, and perforce we must see the matter in that perspective. The Soviet Union will come into agreement with us only in the measure that it discerns advantage in doing so and detriment in doing otherwise. I certainly do not oppose such negotiations. I am merely warning against the notion that the Soviet Union is on the verge of a conversion to tractability and accommodation.

It seems to me that the recent Czechoslovakian invasion underscores the realism of the former Secretary's views.

I have always supported negotiations with the Soviets, and I have advocated people-to-people type programs between our two countries as a means of laying a foundation for better relations. We must keep trying for better relations, because these would diminish the possibilities of war and enhance the progress toward a more orderly and peaceful world. But our efforts will not succeed and, indeed, could cause us to go backward if we do not proceed on the basis of things as they are rather than on the basis of what we would like them to be—if we do not maintain a posture of resoluteness and firmness of purpose.

SUPPORT OUR PRESIDENT

Mr. Acheson well summarized the ABM controversy when he said:

Suppose the expenditure is not made, and suppose the choice turns out wrong. The consequences could be disastrous. Turn the

proposition around. Say to yourself that, to be on the safe side, we had better go ahead. Then suppose that the proponents of the ABM turn out to be wrong and that this weapon will not do all that they say it will do. Has anything disastrous happened? Have you wrecked the United States? Have you ruined the internal economy? Certainly not. . . . The responsibilities seem to be wholly different. To reject ABM may mean terrible trouble. To go ahead with it cannot mean terrible trouble. It may indeed bring great assurance. If you lose the whole investment, it is not a very serious loss.

In this perspective, and assuming this is a close decision for some of my colleagues, I believe prudence requires us to support the President of the United States.

Mr. LONG. Mr. President, will the Senator yield?

Mr. MILLER. I yield.

Mr. LONG. Mr. President, I congratulate the Senator on his very intelligent speech, which I think pretty well destroys the arguments I have heard made in this body against proceeding with the ABM.

There are two kinds of waste one can contemplate. One is the kind of waste that we all hope would occur—that we would never have to use these weapons. We should all hope that we would be strong enough to defend this great Nation, and so strong that no one will attack us.

There is an old Spanish saying:

If you would have peace, be prepared for war.

If you would be independent and free, you should be prepared for war. If, by being strong, no one cared to go to war with us, that is the kind of waste we should hope for—possession of the latest weapons which we never have to use, such as the hydrogen bomb. We developed it; we hoped we would never have to use it, and we never have; and may God grant it will never be necessary. That is one way in which we can waste something and hope we would waste it.

The other waste is where you spend a great deal of money for defense, perhaps \$80 billion or more a year, and, having done all that, you fail to provide the essentials, so that when the showdown comes, you cannot save your country. In that event, it all has been wasted; but, in addition, you have lost your country, your lives, and your freedom. There is the supreme waste one should avoid—the failure to have the sophisticated weapons of the future that would assure you that you could fight successfully in the defense and salvation of your Nation and your people, if that should become necessary. That is the fantastic supreme waste, as I see it, that some Members of this body have been advocating, in their folly and poor judgment, although they may be sincere.

The Senator has pretty well answered the argument.

It may well be that one could not develop a successful ABM system, although I cannot see how we could put men in orbit around the earth, then have the vehicle leave the earth's gravity, orbit the moon several times, land on the moon, reenter space outside the pull of the moon's gravity, bring the two vehicles together, then dispose of one, then orbit

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the earth again and splash down within 3 or 4 miles of a carrier waiting to receive the capsule, and then not be able to shoot down a missile. It seems to me that all the technical problems involved in one would indicate that if one can solve all that, we can shoot down a missile. It might take a great amount of technical expertise. It might take some practice and knowhow. But if those three men can do all that, with the help of a vast army of technicians back them up, then something can be developed to shoot down a missile.

But I should think that if we cannot do it, the Russians cannot do it, either. If it is possible for one to develop it, it would be sad to think that, although we have the technical competence to build the weapons to save this great Nation, there are some in this body who lack the foresight to recognize that this would be the difference between liberty and destruction for this great Nation—when one would try to save a few billion dollars in the hope that the Communists have all of a sudden changed their ways, changed their minds. I cannot buy those arguments.

We have been successful in saving this great Nation by following the logic that the Senator has pursued; and, insofar as the major Communist powers are concerned, we have saved it without going to war with them.

I think the Senator makes an argument that is irrefutable.

Mr. MILLER. I thank the Senator from Louisiana for his kind and gracious comments. I do think that he puts his finger on a very important part of this matter.

It is something like life insurance. We have been carrying life insurance policies for a long time, and somebody could say: "Look at the waste. All those premiums down the drain. Look at what you could have been doing with those premiums—buying some extra things you would like to buy; but you never got them because you put it on insurance, and here you are, still alive."

But I assure the Senator that most of us are carrying life insurance, and we are very pleased that the premiums have been wasted, because they did provide us with the assurance that if something happened, our loved ones would be taken care of.

I hope, with the Senator from Louisiana, that the expenditures made on an ABM system will be a complete and utter waste of the taxpayers' money, in the same sense as life insurance premiums have been a complete and utter waste for those of us who are still around. I hope we will never have to use them. But I do think that prudence requires us to keep strong as a matter of life insurance to the people of our country.

Mr. THURMOND. Mr. President, will the Senator yield?

Mr. MILLER. I yield.

Mr. THURMOND. Mr. President, I commend the able and distinguished Senator from Iowa for the magnificent presentation he has made today on the necessity for going forward with the antiballistic missile. The able Senator was a member of the Committee on Armed

Services for some time, and his experience in the Air Force Reserve as well as the experience in World War II undoubtedly gird him with a lot of information from practical standpoint in military matters. In addition, the Senator from Iowa is a distinguished Reserve general, and he is well informed on military matters.

There is no question in my mind that it would be a fatal mistake for the United States not to go forward with the ABM, and as quickly as possible. If we build the ABM and never have to use it, well and good. If we build the ABM and the enemy sends over a missile to destroy our country, then we will be mighty glad we have it.

For the life of me, I cannot see how anyone would object to building a purely defensive weapon such as the antiballistic missile. This is not the type of missile that would cross the ocean and kill millions of people. This is not the type of missile that would cross the ocean and destroy military installations. This is not the type of weapons that is calculated to kill anybody. This is purely a defensive missile that will destroy the enemy's missiles in the event the enemy sees fit to send its missiles over here to try to destroy us.

To me, it only makes good sense that we can. I think it is a very peaceful weapon. It will help to preserve peace because if we do not have this missile, suppose the Soviets by accident, a pure accident, should send an ICBM across the ocean. Suppose some sergeant misunderstood orders or someone miscalculated through error and sent an ICBM over here. If we had an ABM we could knock that missile down. The exchange could stop there. If we did not have an ABM and an ICBM kills millions of people or destroys much property in this country, or if we feel it might be the beginning of a nuclear war, naturally we would respond and quickly. When we do respond with our ICBMs, the Soviets might feel we intend an all-out war and we might have a nuclear exchange which could result in the loss of millions of lives.

I think it is vital to our country that we go forward and build the ABM, not only from the standpoint of a defensive weapon but also from the standpoint of national security and preserving peace.

Again, I commend the distinguished Senator on his fine argument.

Mr. MILLER. I thank the Senator from South Carolina for his kind remarks.

Mr. President, I might say, as I pointed out in my speech, none of us in the Senate is a physicist and I do not think anyone in the Senate has had very much negotiating experience with Soviet diplomats. Therefore, we have to go outside to the experts, to the physicists and the diplomats. It becomes difficult for all of us when there are experts who disagree. In that event, who is one going to support?

As I pointed out in my remarks several weeks ago, I have put my confidence in Dr. Eugene P. Wigner because he is preeminent in the field. He is the only one of the physicists of the world who

received all the major awards for physicists. He received all of them. Other physicists have received one or two of the awards but Dr. Wigner has them all and to me he is preeminent. That does not mean that there are not other good physicists who disagree with him, because there are. One must make a judgment on which physicist he is going to rely upon. I put my judgment with Dr. Wigner. Further, I must say the logic of his argument to me is almost irrefutable.

In the area of diplomacy, how many people do we find in the United States who have had much experience negotiating with the Soviets? I do not think very many of us, outside of Averell Harriman, have had as much experience as former Secretary of State Dean Acheson. I say that the logic of Dean Acheson's statement is irrefutable. One might say he learned the hard way from the Korean experience. When someone has learned the hard way and takes a position, it is more realistic than someone who did not learn the hard way.

I think on those two points we all have to make up our minds as to where we are going to go and in whom we are going to have confidence.

Then, we get into the fine points such as the one which will be coming up by way of an amendment on Wednesday as to whether or not we are going to go ahead only on research and development, or permit deployment.

The Senator from South Carolina alluded to the fact that I served on the Committee on Armed Services and that I have had a number of years' experience in the Air Force. That experience gave me an opportunity to evaluate the amendment which will be voted on Wednesday, because early in World War II, I was engaged in some research and development activities for the Air Force. Along came a phrase known as service testing. I did not know anything about service testing before, but I do now. Service testing means we have to have deployment for an ABM system. Service testing is a part of the broad concept of research and development. If we were going to consider buying a new fighter aircraft, I can assure the Senator he would find no procurement on it until after it had been deployed for service testing at the proving ground at Eglin Field, Fla.

I am sure the Senator from South Carolina, who has had a great deal of experience in the Army, would say, "You are not going to have the Army procure a tank unless it has been deployed and tested at one of the proving grounds."

This is where the amendment we will be voting on misses the point. They do not appreciate that there must be service testing and that is part of research and development. It is in the service testing phase of research and development when many so-called bugs are worked out. I never heard of an aircraft being sent to Eglin Field that did not have bugs in it during the first testing phase.

Some of our colleagues are opposed to the ABM as it is now. They want to confine the deployment to the Kwajalein Islands. They appreciate the fact that

deployment and the service testing is a part of research and development. Where I part company with them is if it is done that way it will cost the taxpayers \$2 billion more than if it were done at the sites in North Dakota and Montana. I have not heard any argument with respect to incurring that extra expense.

Mr. THURMOND. Mr. President, will the Senator yield?

The PRESIDING OFFICER (Mr. GRAVEL in the chair). Does the Senator yield?

Mr. MILLER. I yield.

Mr. THURMOND. Is it not a fact that all of the component parts of the ABM have been tested except the perimeter acquisition radar, that is, PAR? In other words, the missile site radar, that is, MSR, has been tested. The Spartan that can go 400 miles and knock down a missile has been tested. The Sprint, which would be used in the event the missile gets by the long range Spartan, has been tested. The computers have been tested. Mostly, it is a matter of assembling all these parts and getting them together and deploying this weapon because then undoubtedly there will be some bugs that have to be ironed out and the quicker we do this service testing the quicker we will have a more perfect weapon.

Is it not sensible that we go forward and not delay? Is it not a fact that the Soviets built their system in 1962 and had it deployed in 1963, when the Senator from South Carolina called for a secret session to tell the Senate about it, the dangers of it, and urged then, 6 years ago, that we go forward? Is it not a fact that we are at least 5 years behind the Soviets today? Can we afford not to go forward? Some say this would be provocative. The Soviets have said they do not consider it to be provocative. However, if they believe it to be provocative, they took a provocative step then and they could not blame us for doing it today. If they do blame us is it not our first duty to the American people to protect this country and our national security?

I thank the Senator.

Mr. MILLER. I thank my colleague.

I yield the floor.

DEPLOYMENT OF THE ABM

Mr. MATHIAS. Mr. President, in an earlier speech in the Senate several months ago, prior to any statement of position by the administration, I explained my reasons for opposing deployment of an anti-ballistic-missile system. I emphasized that the relatively imperfect and fleeting protection offered by such a system could not compensate for its large social, economic, and diplomatic impact.

Since expressing those thoughts, I have studied closely the voluminous literature on the subject which accumulates in undiminished quantity each day, perhaps because of our efforts. During this time, of course, the proposed system and its rationale have been significantly revised by the new administration. Improvement was needed. By indicating a U.S. policy of protecting cities through active defense, the Johnson administration's Sentinel proposal implied adop-

tion of an essentially new and open-ended defense policy goal. Not only would we maintain deterrence through secure second-strike forces, we also would advertise to the world that for the first time since the abortive fallout shelter campaign we claimed technical ability to protect our people if deterrence fails.

This new commitment, to the extent it succeeded in achieving credible population defense, seemed to suggest a U.S. resolve to retain the option of a first strike. This option—and this protection—would entail virtually unlimited increases in defense spending, since the United States would have to respond to every anticipated improvement in the Soviet or Chinese offense. Such a policy would accentuate the action-reaction cycle of the arms race.

The Safeguard proposal, on the other hand, seemingly avoids this major new turn in our armaments policy. By focusing on defense of Minuteman missiles—a key part of our second strike forces—the Nixon administration proposal indicated continued dependence on a deterrence strategy. The President courageously accompanied his recommendation with a declaration that population centers could not be protected against major attack.

This new approach was less provocative than Sentinel since it did not envisage a degree of effectiveness that would give us a plausible first strike option. Thus, despite a larger estimated cost, Safeguard is a more limited and sophisticated proposal than its predecessor. It does not commit us to the nearly impossible, and thus egregiously expensive business of protecting population in the midst of nuclear conflagration, a form of combustion, we should remember that naturally occurs on, and consumes, whole stars.

The Safeguard recommendation is also tactically superior to Sentinel in terms of domestic politics. By focusing debate on ABM's technical utility—essentially a scientific question—rather than on its strategic and diplomatic implications which Senators are more qualified to judge, the new proposal seemingly locates the debate on the Pentagon's own ground of expertise. The Pentagon, however, also offers an argument for supporters of the coming disarmament and arms control negotiations. It is alleged that endorsement of ABM would strengthen the President's hand in the talks.

Yet, despite all, I have concluded that I should oppose deployment of Safeguard at this time, as well as Sentinel. In fact, if I may be permitted to use rather blunt and provocative language, I have come to believe that such deployments may weaken the United States just as surely as a program of unilateral disarmament. I believe that under present conditions Safeguard represents a step in the wrong direction in the arms race and actually could be a blow to the national security. Further, I believe that the proposal is based on an overall arms race strategy that has been steadily weakening the United States over the past several years.

I do not believe the Pentagon has won

the technical arguments. But I think Safeguard deployment is unwise even if the system works as well and Soviet capabilities are as great as its proponents claim.

The nature of the arms race has been radically changed by the quickening rate of technological progress. During the last decades, there has been a revolution in the nature of strategic war approximately every 5 years. Bombers have given way to several generations of liquid fueled missiles, which in turn were replaced by solid fueled Minutemen and by mobile Polaris submarines. Strategies relying on instant response to enemy attack preparations have given way to a determination to wait out an attack before retaliating. Now MIRV—assuming its deployment is not arrested—promises yet another overwhelming change in the configuration of the military balance. The Poseidon missile system, submarine based, seems the ultimate in mobile, invulnerable retaliatory power, but in the realm of technological advance, the word ultimate is regarded as an impertinence.

This pace of change means that most existing systems are obsolescent—that is, more effective alternative or countervailing technology is already in prospect. Thus heavy investment in deploying or multiplying present systems is ordinarily uneconomical.

But the Pentagon does not adequately take this reality into account. Its proposals for new bombers, air defense, and other traditional systems mean enormous commitments of resources to strategically obsolescent weapons. These investments greatly reduce our flexibility in responding to unexpected new threats in the future.

Our current propensity to deploy and expand any new system and to retain and elaborate any old system with some utility is partly based on a false notion of national security. Our national security in future years depends on what is going on today not at our missile sites, but in our classrooms. In fact, in a time of such rapid change, our national security, even in the relatively short run, relies at least as much on civilian as on military activity.

It is speaking in these terms that I say ABM is a step backward for the United States. It represents not only an extravagance in the use of resources, but also a grievous failure of strategic imagination. Minutemen in fixed bases are already a technology with predictable obsolescence. For they are ultimately vulnerable to refinements in missile accuracy; ABM, for all its redoubtable intricacy and ingenuity, is also of little usefulness in the strategic environment of the seventies. It is a system of the sixties that we wisely refrained from deploying in different forms earlier in this decade despite repeated demands from the military. The Pentagon, in effect, now is putting together two obsolescing technologies in the hope of getting one useful system. What it gets is futility at compound interest for the taxpayer.

Even if the United States succeeded in creating and deploying a completely effective ABM system—one that hermet-

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ically sealed our skies from missile attack—we could not expect our adversaries to relinquish their retaliatory ability. They would simply find other ways to visit devastation on our country—whether by exploding nuclear weapons in the ocean off our shores and flooding our coastal cities; or by some unidentifiable low altitude delivery system; through resort to chemical and biological agents; or through some as yet unanticipated mode of destruction. The only thing we can confidently say about future offensive technology—whether Russian or Chinese—is that it will be designed to frustrate any defense in which the United States invests as heavily as ABM would require.

Technologically advanced and strategically retarded, ABM symbolizes the American defense posture. New technology is too often employed not to produce more cost-effective and less provocative systems, but to redeem old modes of thought and obsolescent hardware. We do not sufficiently acknowledge the implications of mutual deterrence in an essentially qualitative arms race at a time of rapid technological change.

In these new conditions, a sure way of losing an arms race is to spend too much money on it. The Vietnam war provides an example of another kind. In Vietnam we are also using expensive new technology in an attempt to make up for strategic and political failure. But despite a spending ratio of 10 to 1 over the Soviet Union, we are not winning. Of course, Vietnam is not directly analogous to other areas of arms competition. But vis-a-vis the Soviet Union, our experience confirms the principle: the race will be won not by the side that most readily deploys its hardware but by the side that most effectively employs its resources.

In supporting the policy of heavy deployment of existing technologies, it is said that we must emphasize the capabilities rather than the intentions of our adversary. But capability is just as problematical and elusive a concept as intention. If we—or the Soviet Union—are willing to sacrifice civilian, economic, and social stability and longer term technical and military goals, either side is capable of mustering a military establishment of incalculable power. Either side can produce a military machine that would boggle the mind. But in the nuclear age, that is all that such a military machine can accomplish: it would boggle the mind, and, by extension, the social and political stability of the country that acquired it. But it would not permit either side to gain a peremptory first-strike position. And it would impair the social, economic, scientific, and educational base on which future security will depend. It would hurt our society without helping our security.

One reason for the futility of an attempt to "win" the arms race in this manner is the advantage possessed by the side that is behind. In a sense one can even win such a competition—that is, achieve one's military goals at lower cost than one's opponents—by staying behind. For the dynamics of technological arms races favor the underdog, if his basic capacity is comparable. Not only is

he relieved of the expensive burden of anticipation but long before a new discovery is translated into an effective and operational weapons system, integrated in the military forces of the leader, it has usually become known to the side that is behind.

Even if the follower cannot determine the particulars of a new development, his knowledge of the general area of experiment which produced it will enable him to concentrate his effort and make similar progress more quickly and cheaply. He may be able to avoid costly experimentation with other methods of acquiring the same weapon or other weapons designed to fulfill a similar function.

Thus the country which is defeated in a race for a particular technological development may be able to save both time and money as a result. Much of the expense for weapons development is directed toward the pursuit of unsuccessful possibilities. The follower in a technological race can eliminate some of these failures.

Examples of this handicapping system abound. It is illustrated by the remarkable achievement of the Soviet Union in closing the enormous gap between herself and the United States at the end of the Second World War. American scientists consistently overestimated the time it would take the Soviet Union to equal American achievements in nuclear technology. That this process also works the other way, to our benefit, may be indicated by the speed with which we closed the presumed Soviet lead in ballistic missile technology after Sputnik. It would appear that qualitative arms races between comparable technologies tend to equalize military forces.

Of course, this does not mean we should allow ourselves to fall behind overall military strength. But the handicap for the underdog does mean that attempts to forge ahead have more to do with national vanity than with national security. In fact, if the Soviet Union did decide to invest everything in deploying new technology it would likely doom itself as a first-class power in coming decades. Already falling behind Western Europe and Japan in economic growth—already stinting on industrial modernization—the Soviet Union would fall back irretrievably if it undertook some futile and extravagant ABM-SS-9 campaign for first-strike supremacy.

In other words, achievement of the ultimate war capability of each side would combine military futility with social and political impoverishment: each side is capable of foundering its ship of state with military ballast. Neither is capable of striking its opponent without suffering devastating retaliation.

Although I do not wish such a disaster on the Soviet people, if I were exclusively concerned with disproving Communist theory with bringing down the Soviet experiment, I would hope that the Soviet leaders would embark on an attempt to fulfill their theoretical military possibilities. But since the attempt would inevitably be accompanied by an enormous aggrandizement of the power of

the Soviet military—and by an expansion of their imperial designs—I shrink from an American military posture that could contribute to such an imbalance in Soviet leadership.

It should not be imagined, however, that the United States can proceed with impunity on its present course. It is sometimes asserted on the left that the American economy benefits from defense expenditures. During the ABM debate, it has been implied that the system's supporters are motivated in part by its impact on employment. This notion only reveals a failure to recognize the changing nature both of defense expenditures and of the American economy since World War II. I can say that spending, such as that proposed for ABM, contravenes most of the urgent economic and social objectives of current U.S. Government policy.

The administration currently declares that its first economic priority is to curb inflation without significantly increasing unemployment or substantially reducing real economic growth. Spending on ABM increases inflation and unemployment without contributing significantly to real economic growth. It is peculiarly inflationary because it generates demand in the economy without providing goods to fulfill it. It increases unemployment because it diverts resources into highly specialized technical industries which hire very few marginal workers who could not easily afford to find a job elsewhere. It impedes economic growth because it employs the most valuably catalytic manpower in the economy. These are technicians and scientists who could make far greater contributions to economic growth in the private sector or in public services which improve our economic infrastructure.

When analyzing the impact of defense spending, it is crucial to consider the benefits we forgo, whether in the public or private sector. I do not deny the enormous amount of employment created by the defense budget. I merely say that the amount of employment and growth generated by a dollar of defense spending is much less than that generated by a dollar of spending in the private sector or on public services.

Strategic defense spending is now concentrated in industries with high, technically specialized labor intensity, and with relatively low capital expenditures and value added per employee. These industries make a relatively small net contribution to the economy. Yet they deprive the private sector of essential expertise for research, which is only partly recovered through military development convertible for civilian use.

I do not exaggerate when I suggest that, in purely economic and social terms, the United States would benefit more from building pyramids than from building missiles.

Mr. FULBRIGHT. Mr. President, will the Senator yield at that point?

Mr. MATHIAS. I am happy to yield to the Senator from Arkansas.

Mr. FULBRIGHT. I have read the Senator's speech, and I wish to congratulate him on the entire speech; but that particular passage he has just read,

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in a way, sums up this whole issue. Although the Senator uses the allusion in a way that could be discounted, perhaps, I think there is a great deal of truth in it. At the last hearing the Foreign Relations Committee had with regard to this whole complex of weapons it was urged that the Minuteman itself is becoming obsolete, because it can be destroyed by these more accurate missiles. This means, therefore, we are considering the development of an obsolescent ABM to protect an obsolescent weapons system.

This, I think, makes the Senator's analogy to the pyramids very appropriate indeed. At least the Egyptians did end up with a tourist attraction, which is of use to that country hundreds of years later.

I think the Senator has made a great contribution to this debate. I think his speech is one of the most thoughtful I have read on this subject.

Mr. MATHIAS. I thank the Senator very much for his very kind remarks and his helpful counseling.

I repeat, Mr. President, that I think in economic and social terms the United States would benefit more from building pyramids than from building missiles—since pyramid construction would at least employ people who need work, and, as the distinguished Senator from Arkansas, the chairman of the Committee on Foreign Relations, has pointed out, would at least serve as a tourist attraction. Pyramids aside, the economy would benefit far more, of course, from investments in education, medical care and housing. But even if defense re-trenchments were passed on to taxpayers in tax cuts, the economy would benefit since private demand would be released into areas which employ more marginal workers per dollar of investment or which contribute to real economic growth.

Compared to most other industrial products, moreover, defense items do not have a significant multiplier effect. A missile or a submarine is not serviced, retailed, or otherwise introduced into the catalytic flow of the domestic economy.

The arms race thus is economic insanity. But I contend further that current arms race policies are also irrational in terms of the national security. Our defense budget tends to overreact to current threats, overspend on present technology, and produce a useless overkill capacity, while diverting funds and energies from efforts to reinforce the social foundations of our national strength and stability. It hurts our society without helping our security.

The problem thus is not excessive emphasis on national security in the order of our priorities. In a broader sense, the security of our Nation—considered not as just a geographic or demographic entity but also a spiritual and institutional cause—national security in these terms, which indispensably include military defense, must be the primary concern of Government. The problem is the tendency of Government to identify national security with the immediate demands of the military leadership, which understandably fail to recognize the broader

prerequisites of national preservation. These are popular morale, economic stability and growth, educational progress, balanced technological development and maintenance of broadly supported popular institutions. Vast multiplication of existing systems might be valuable if one planned to initiate nuclear war in the immediate future; but nuclear war is suicide. For the maintenance of our defense over a long period, advanced technology, social progress, and economic growth are imperative. Deployment should be relatively modest until real new threats materialize. We should maintain a continuing reexamination of our strategic assumptions.

This means a new set of criteria for specific defense proposals, emphasizing minimal deployment and maximum commitment to basic research, technological development, education, economic growth, and social progress. All these fields—and particularly science and education—are being deprived today. Although Safeguard is a substantial improvement over Sentinel in these terms, deployment now would nonetheless represent a severe blow to our national security.

Several Senators addressed the Chair.

Mr. MATHIAS. I yield to the Senator from New York.

Mr. JAVITS. Mr. President, I have heard a part of the Senator's speech, and I have read the rest of it. I should like to direct his attention to two points, upon which he might like to comment further.

He says:

It is a system of the sixties that we wisely refrained from deploying in different forms earlier in this decade despite repeated demands from the military.

Is it not true that, except for the fact that the system has caught on more vigorously now, that was also the history of the various Nike series—of which the present system is a variant—and that this has been going on for the last 10 years?

Mr. MATHIAS. The Senator is absolutely correct.

Mr. JAVITS. So, if the technological progress and advance have made a weapons system first designed in the late 1950's obsolescent now, the same thing is much more likely now than when Nike-Zeus was first thought of; is that not correct?

Mr. MATHIAS. The Senator is correct.

Mr. JAVITS. I think it is an extremely valuable point. One of the strongest arguments against deployment of the ABM is that it is just about—because of the history of weaponry—to be overtaken by technological advances. If anything, it is a very late starter, and we would be very much better advised to leapfrog it technologically rather than be locked into an obsolescently conceived system.

Another very important point which the Senator makes in his speech, is:

In fact, if the Soviet Union did decide to invest everything in deploying new technology it would likely doom itself as a first-class power in coming decades. Already falling behind Western Europe and Japan in economic growth—already stunting on industrial modernization—the Soviet Union

would fall back irretrievably if it undertook some futile and extravagant ABM-SS-9 campaign for first strike supremacy.

Is it not a fact that the world should know that it is the United States and the Soviet Union which—because of this enormous defense load—are falling behind in productivity, and even in the longevity of their people? Falling behind, for example, Japan and Germany, the two powers which are the least encumbered by military expenditure?

Mr. MATHIAS. The Senator is correct. Of course, just to look at the trade balances with Japan, for example, illustrates what happens when a nation is free to invest its capital and to use its expertise in the social areas and in the private sector.

Mr. JAVITS. Therefore, it is not a sterile but a very real question to ask if the two superpowers are running themselves into the ground by the nuclear arms race, and in our case by the Vietnam war as well. If we are about to come to grips in terms of seeking an arms agreement, is it not best to leave open—without any real jeopardy to the national security—the greatest, most fertile field for agreement, the greatest consumer of resources that might now be conserved, when the two countries are coming together for the purpose of seeking agreement? Does the Senator feel there is the remotest likelihood that in the next 6 months, because the President says he is going to deploy the ABM at two sites in the northwestern part of the United States, that is going to represent such material change to the Russians that they are going to make agreements which they never would have made before, and that we would have won a game of "nuclear blackmail" because the President is going to deploy this system at these two missile sites?

Mr. MATHIAS. I cannot believe that this policy will bring about all of that fallout which has been claimed.

Mr. DOMINICK. Mr. President, will the Senator yield at that very point?

Mr. JAVITS. I will yield in a moment.

Mr. DOMINICK. I am a little tired of the Senator's saying that we are engaged in nuclear blackmail.

Mr. JAVITS. I am not saying that we are engaged in nuclear blackmail.

Mr. DOMINICK. The Senator just finished stating it.

Mr. JAVITS. Not at all. And the Record will not show that, in my judgment. However, if the Senator will, I should like to finish with my inquiry of the Senator from Maryland.

As a matter of fact, is not the concession that this will make no difference to the Russians any more than what they have done in Moscow and in the SS-9 will make any difference to us, practically yielding the whole point? If it will make no difference, why do it?

Mr. MATHIAS. The Senator is absolutely correct.

Mr. JAVITS. To deal with the point of the overkill, we are not seeking to take advantage of nuclear blackmail. It is not so. Then, why argue that it is or that this will strengthen our hand?

Mr. MATHIAS. Exactly right.

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Mr. DOMINICK. Mr. President, will Senator yield?

Mr. MATHIAS. I yield.

Mr. DOMINICK. Mr. President, I do not know whether the Senator from Maryland was present before when the distinguished Senator from Iowa (Mr. MILLER) spoke. The Senator from Iowa had some analyses of the military spending vis-a-vis our gross national product exclusive of the Vietnam war. And he showed that in percentages the proposed budget, exclusive of expenditures for Vietnam, were the same or less in terms of percentages than the budget was for last year, 5 years ago, 10 years ago, and 15 years ago. So, when the Senator speaks of vast military expenditures, I point out that we would all, of course, like to cut them down. Obviously this is what we would all like to do.

As a matter of fact, the committee cut them down by \$2 billion. I think, however, that to leave an impression on the floor that we are engaged in something new and unique at an enormous cost when we are dealing in this particular debate in this particular amendment with \$345 million, is a little bit extravagant.

I was wondering if the Senator had any comment on the percentage figures that the Senator from Iowa placed in the RECORD.

Mr. MATHIAS. I certainly do. I would call to the attention of the distinguished Senator from Colorado the fact that some industrial concerns that want to expand their plants and hire new people and manufacture new goods have to pay an interest rate of 10 or 12 percent to get the money.

I point out that our trade balances with foreign countries are in worse condition today than in recent history.

I point out to the distinguished Senator the fact that it is costing the U.S. Treasury more to borrow money today than it has for a long time, maybe ever in our history.

Mr. DOMINICK. I agree with all of that.

Mr. MATHIAS. I think the Senator must agree with it because it is a fact.

These unhappy facts result in large part from too much defense spending over a long period of time, and the fact that it is down a little now or up a little at another time does not eliminate the fact that over this period there has been too much and that we are suffering for it at this time.

Mr. MILLER. Mr. President, will the Senator yield?

Mr. MATHIAS. I yield.

Mr. MILLER. Mr. President, I think it should be pointed out—and the Senator is talking about our trade balance—that the percentages of gross national product that has been going for national defense was a little higher in 1964 than it was last year or is going to be this year. Yet, if my recollection proves correct, we had a magnificently favorable balance of trade in 1964.

If I may have the attention of the Senator, I should like to make a point because I should like to have a responsive answer.

The Senator talks of a long, sustained period of defense spending. That is ex-

actly why I went back to 1954 and ascertained the percentage of gross national product going for national defense.

I point out to the Senator from Maryland that he will find that the projected defense spending for fiscal year 1970 will be a lesser percentage of our gross national product than it was for 3 years in that period of time—1954, 1959, and 1964. So I must respectfully point out to the Senator that his thesis that this defense spending has ever had a direct bearing or maybe even an indirect bearing on the unfavorable balance of trade simply will not stand scrutiny.

I am concerned about defense spending. In fact, I do not know of anyone who is not. Everyone on both sides of the aisle or on either side of the controversy should be concerned about defense spending and other areas of Government spending.

That does not get us anywhere. We are all equally concerned about it. The question is whether we need something for our national security.

If the ABM will not work, and if we are convinced that it will not work, there is no point in our spending anything regardless of how lean or fat the budget is.

I must say that I think the matter of budget spending is a sort of side issue. I can assure the Senator that if I am persuaded that the ABM will not work, I will not buy it regardless of whether the budget is in good condition or not.

On the other hand, if we need it, then I think the budget condition is very secondary to what we need.

I think it is very important to point out that the defense spending is not involved in our drop in a favorable balance of trade.

Mr. MATHIAS. Since the question of defense spending up and down has been brought into this discussion, and I think very properly so, I refer the Senator from Iowa and the Senator from Colorado to the current issue of Fortune.

There is a very interesting and authoritative article in the Fortune magazine written by Ian Cameron, a splendid and well-informed writer, in which he quotes the Secretary of Defense as saying that even if we are successful in eliminating the war in Vietnam, we will still not come up with a drastically reduced defense budget.

Mr. DOMINICK. Mr. President, will the Senator yield?

Mr. MATHIAS. I will yield in a moment.

Let me say that if we go ahead with the ABM and MIRV, we can, I think, safely project a continuing expenditure of anywhere from \$20 billion to \$30 billion a year for strategic systems alone for perhaps the next 10 years.

Mr. DOMINICK. Mr. President, will the Senator yield?

Mr. MATHIAS. I yield.

Mr. DOMINICK. Mr. President, I had the same discussion with the Senator from Maine (Mr. MUSKIE) on Friday. It is in the RECORD.

I pointed out at that time—which I am sure the Senator from Maryland will recognize—that the question of what our defense budget will be after the Vietnam war will depend upon what Congress authorizes and appropriates. It has noth-

ing to do with the question of what the automatic system might be, what Mr. Cameron and the like do, or anything else.

Let me point out that the question of how much we will spend on an ABM and where we will put it is under constant review, as the President pointed out, and that Congress can reduce funds. The Committee on Armed Services has cut out the funds for the Navy version of the F-111, the F-111B, after we had spent a lot of money on research. We have cut out the Cheyenne helicopter and all of these fast deployment logistic ships and a whole variety of weapons.

The statement made is not borne out by history.

Mr. DOLE. Mr. President, will the Senator yield?

Mr. MATHIAS. I yield.

Mr. DOLE. Mr. President, I have listened with great interest to my friend, the Senator from Maryland, say that we should not proceed with the deployment of the Safeguard system.

The Senator recognizes that the Safeguard system is an improvement over the Sentinel system.

I want to clarify the matter. What does the Senator suggest we do as an alternative? Does the Senator suggest more research and development, or does he suggest doing nothing?

Mr. MATHIAS. Mr. President, the distinguished Senator from Kentucky (Mr. COOPER) has suggested in the amendment which we will vote on on Wednesday that we proceed with research and development for a period of time, during which we can satisfy ourselves as to the desirability of going forward.

Mr. DOLE. Mr. President, the reason I ask the question is that I think there may be a feeling or at least a misunderstanding on the part of many Americans that there are 45 or 50 Senators who want to do nothing and 45 or 50 Senators who want to do something. I point out, as I have in the past, that I think it is misreading the tenor of the Senate.

As I understand it, not one Senator says we should do nothing, that we should go backward. Senator COOPER and Senator HARR are advocating what they think to be in the best interests—appropriate the money and do everything but deploy.

I have said many times that perhaps we could have chosen a better word. Perhaps we should have chosen the words "operational development" instead of "deployment," because that is what I really think it is.

But I commend the Senator from Maryland for his remarks. I disagree with his conclusion, but I am in accord with him when he says we must do something. There must be more research; there must be more development; and we must, even in the case of the Cooper-Hart amendment, authorize the money and move ahead with everything except deployment. Is that, in essence, what the Senator suggests?

Mr. MATHIAS. The Senator from Kansas, I think, has the nub of it, as usual, we find ourselves in broad general

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agreement on the goals to which we are moving.

Mr. DOLE. Or broad disagreement.

Mr. COOPER. Mr. President, will the Senator yield?

Mr. MATHIAS. I yield.

Mr. COOPER. I appreciate very much the statement by the distinguished Senator from Kansas. He has brought into better focus the purpose of the amendment we propose—what we hope our country will do.

We talk about deployment, about making a decision to deploy. That, of course, connotes that we will be able in this fiscal year to actually emplace some component of the Safeguard system on the two missile sites. Of course, that is absolutely incorrect. There is no component, there is no element of a component, that can be physically placed upon a missile site in the coming fiscal year; I am sure that no proponent of the ABM system will question that statement. It cannot be, and I have that statement from the Department of Defense.

I would point out that the funds requested in the bill are proof that nothing can be done in the fiscal year except in research and development programs. Three hundred forty-five million dollars is asked, supposedly for procurement, but when one searches out the elements of that sum, it is chiefly for preparation for procurement. The antimissile system is admitted to be a research and development program. Compared to the sum of \$345 million, which is characterized as a fund for procurement but which is not at all, \$400 million for research and development is requested.

In addition to the \$400 million, the Department of Defense has transferred from the old Nike X program—which they have given up—an additional \$120 million for research and development. A total of \$520 million plus the carryover from last year for research and development, is available and requested for research and development programs, which we believe proves our point: The Department of Defense has transferred \$120 million in addition to the \$400 million for research and development. It is a part of the record. The Senator from Mississippi (Mr. STENNIS) brought this fact out in the hearings.

We ask that there be no decision to deploy in the future, until in this year, we can determine whether there is any necessity for deployment at all. It might turn out—I hope it will—that the Soviets will not proceed with their program of deploying SS-9's. If they do not, there will be no necessity for spending a vast sum in deployment of the ABM system. If they proceed, we believe that our scientists and engineers will design a system which will be of greater effectiveness than the proposed design of Safeguard.

Above all, we hope that, through agreements in talks or action which indicates tacit agreement, the arms race may be limited. The Senator from Maryland and the Senator from Kansas, Senator DOLE, have correctly brought out our purposes.

I was very interested in reading the testimony of Dr. Foster before the Committee on Armed Services. When asked what we will do about the ABM system

around Moscow, he said, "We will simply overwhelm it." That, I think, is what the Russians would propose to do about a system which a great many people think would be ineffective.

The Senator from Maryland has opened up fields which go far beyond the limited question of the feasibility of this program. As usual, he has made a very enlightened and constructive speech.

Mr. MILLER. Mr. President, will the Senator yield?

Mr. MATHIAS. First, I thank the Senator from Kentucky for his astute observations which, as always, help to illuminate these discussions. I concur in his thanks to the Senator from Kansas for really making a very important point, from the point of view of the general public.

I also thank the Senator from Kentucky for shedding light on the question of the possibility of deployment within the next 12 months. In an earlier colloquy with the Senator from Iowa, it was stated categorically that everything is ready to go; all you have to do is hook it up and turn on the lights and see if it works.

Mr. MILLER. Mr. President, will the Senator yield at that point?

The Senator from Iowa made no such comments.

Mr. MATHIAS. I did not say the Senator from Iowa said that. To keep the Record clear, the Senator from Iowa did not make that statement, but it was said in a colloquy which followed the Senator's remarks. I think the Senator from Kentucky has put the right interpretation on that and has stated to the Senate, frankly and accurately, what the situation is.

I yield to the Senator from Iowa.

Mr. MILLER. I thank my colleague for yielding.

I think the Senator understands that the Senator from Colorado and the Senator from Iowa were trying to illuminate this matter, too.

Mr. MATHIAS. And I appreciate that contribution.

Mr. MILLER. The point I was going to bring out is this: I believe the Senator, in about the last sentence that he read from his speech, said something to the effect that we should not have deployment now. That was the point I wanted to bring out—that deployment now is just not feasible, and the Senator from Kentucky has done a pretty good job of bringing that out.

I think it is wrong for people to get the idea that what we are all fighting about is whether we are going to have deployment 6 months or 12 months from now, rather than, as I understand it, the earliest we could have full deployment, for service testing purposes, not for final purposes, would be some years yet ahead.

Mr. MATHIAS. Yes. But the Senator will recall that that was not the statement with which the Senate was left a few minutes ago. I am not saying the Senator was responsible in any way.

Mr. MILLER. But I do think that when it is said we should not have deployment now, we are not really facing up to the real issue. The Senator from Kentucky has put that in perspective.

However, I do think one thing should

be emphasized, and that is that so long as we cannot possibly have deployment now, I wonder what the real reason is for the amendment on which we are going to vote on Wednesday, which provides we are only going to have research and development and not deployment. If we cannot have deployment what are we arguing about? It seems to me that what is getting across to the public and the people around the world is the fact that we are in danger of going on record as tying the hands of the President. I do not like to see us do that. I well remember some of the amendments that were debated here in earlier years during the terms of the late President Kennedy and former President Johnson. Some amendments would be introduced from this side of the aisle. We would be met with the retort from the other side of the aisle that an amendment should be defeated because it would tie the hands of the President. And it will, indeed, in the eyes of many people around the world. His hands are tied by the very fact we cannot have deployment in the next 12 months, whether we wanted it or not.

However, to go on record and indicate we cannot have procurement with long leadtime, looking forward to deployment—I am not talking about final deployment but service testing—I am afraid will give us the picture in the eyes of the world of tying the hands of the President.

More than anything else, I think that is very unfortunate. I do not think we should be debating here about tying the hands of the President, especially when we are debating about something that is not going to happen because, as the Senator from Kentucky said, Mr. President, you cannot have deployment in the next 12 months.

Mr. COOPER. Mr. President, will the Senator yield?

The PRESIDING OFFICER (Mr. SAXBE in the chair). Does the Senator yield?

Mr. MATHIAS. I yield.

Mr. COOPER. Mr. President, the Senator from Iowa has said:

You cannot have deployment in the next 12 months, so what are we arguing about? What is the purpose of your amendment?

The purpose of the amendment has been expressed so many times on the floor of the Senate. Either we do not do it very well, or it is not understood well enough by others.

Mr. MILLER. It is not lack of good faith.

Mr. COOPER. No, it is not lack of good faith. I point out with respect to deployment that the misunderstanding has arisen because of the statements of the Secretary of Defense. We have to be very frank. He said in his testimony before the Committee on Armed Services and before a committee in the other body that the components have been tested and that we are ready to deploy. He was quoted on television a few days ago, as saying that the components have been tested and that we are ready to deploy.

The impression that the United States is ready to deploy a Safeguard system arises from such statements.

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Mr. MILLER. Mr. President, will the Senator yield on that point?

Mr. COOPER. I shall yield. We know it has not been tested.

Mr. MILLER. I think we have to be fair to the Secretary of Defense.

Mr. COOPER. I will be fair.

Mr. MILLER. I do not believe the Secretary of Defense, certainly among the sophisticated Members of the Senate, implied we could have deployment of this system much before the mid-1970's even for service testing purposes. Does the Senator remember how long the Secretary said it would be before there would be service testing?

Mr. COOPER. The initial operation date was 1974.

Mr. MILLER. Very well.

Mr. COOPER. But we are talking about an impression that has gone across our land. Some believe we are holding back on the Department of Defense from deploying a system which is needed to protect the Minuteman when in truth it cannot be deployed in fiscal year 1970.

Mr. MILLER. But the Secretary of Defense said it cannot be fully deployed for service testing purposes before 1974, and he was not in the same breath saying that we are ready to have it deployed in 12 months.

Mr. COOPER. I am only saying that when the head of the Department of Defense makes the statement that "we have tested the elements and we are ready to deploy," people will believe the testimony. I do not question his good faith—I speak only of the impression that people have.

Mr. MATHIAS. Mr. President, if I may interrupt the Senator, he is absolutely correct, because that is the statement that was repeated or paraphrased in the Senate just a few moments ago by a Senator who is no longer in the Chamber, and it gives a completely distorted picture. I think words were used here to the effect that every component had been tested and all that had to be done was to hook it up and get the bugs out. That is not the question.

Mr. COOPER. All of us, opponents and proponents, seek to do what is right on this issue and to do what is best for our country. I certainly would not question the good faith and purpose of any Member of this body, although we may form judgments that differ.

However, the statement has been made on the floor of the Senate that we have had enough research and development; let us go ahead and deploy; the impression has gone forth that the Department of Defense is ready to deploy and as a natural consequence some may believe we are endangering the security of the country by opposing deployment of the system. We do not want to lock the hands of the President, and as there can be no deployment we are not locking his hands. If the statement is made that we are opposing a decision to deploy at some time in the future, we are in opposition on that score.

If, in this year, it should be found that the system which is proposed is not an effective system as presently designed—and I believe that inference can be drawn from the fact that the administration is

putting \$520 million into a research program—and if the Department of Defense should procure parts of the system which may be found later to be inadequate, we may become locked in on an ineffective system. This would not contribute to the security of our country.

Finally, my chief reason for opposing a decision to deploy—and I believe it is the chief reason of many who support the amendment—many people believe there is no chance of reaching any agreement with the Soviet Union. I must say I do not know that we can. Perhaps we cannot. But it is my view that we should not make a decision to deploy a new nuclear weapons system just as we enter negotiations whose purpose is to control new weapons systems.

The President can enter the negotiation in a position that is clear and understandable. He can say, "We are not going ahead. We will not start a new weapons system when we seek to control the deployment of additional weapons systems." This is my hope.

Mr. MILLER. Mr. President, will the Senator from Maryland permit me to respond briefly to the Senator from Kentucky. I realize that I have intruded considerably on the Senator's graciousness and time.

Mr. MATHIAS. I am delighted to do so. The Senator from Iowa has not intruded or trespassed in any sense. I appreciate the spirit in which the Senator from Iowa is participating in the discussion. I think his comments have been extremely valuable and helpful, particularly on the point of deployment. I think there is a lot of popular misconception. The Senator from Kentucky and the Senator from Iowa have made extremely valuable contributions by their candor and fairmindedness. I am delighted to yield further to the Senator from Iowa, to continue the discussion.

Mr. MILLER. I thank the Senator from Maryland.

I do appreciate the delineation by my good friend from Kentucky of the rationale behind the amendment. As I understand, he says that no matter what is in the bill, the President cannot deploy in the next 12 months, but that there are possibilities of going ahead with some procurements looking toward a phased-in deployment of the system, which he does not want us to authorize now.

I suggest that if we authorize the President to go ahead with the long lead-time procurements, which may be 2 or 3 years from now, and maybe start to deploy as a part of a system, it may be that additional research will show that the procurements are not calculated to give us the most effective system, assuming at that time that we want to go ahead with it.

My trouble with that reasoning is, as I understand it, that the research and development necessary to determine whether the system, overall, is the best we can achieve within the time frame we are talking about has really been done. There may be a little extra work that can be done, such as with radar, but the system as a whole will be pretty well set. Additional research may be needed to improve some of the things. But over-

all, the system is pretty well set and pretty well set to the extent that the President and the rest of the Defense Establishment think it will work. If we come along and say, in effect, to the President, "Even though you cannot do anything about deployment, we are not going to let you go ahead on these procurements," I suggest, most respectfully, that we are tying the hands of the President of the United States, even though we may not like to think so. Because I just do not believe that the President of the United States would go ahead with these procurements and get locked in. Let us assume that he did, through an honest mistake; and 1 year from now we will be right back in this Chamber, after running the gauntlet of the committees, on this side of the Capitol and on the other side, and I am quite confident that the fact a mistake has been made will be brought out and Congress will certainly be in a position to vote up or down the appropriations to continue or not to continue the locked-in position.

Thus, I cannot quite understand why we are so concerned about denying the President the authority he asks for, which authority cannot be carried out within the next 12 months, but can only begin to be carried out through long leadtime procurements. Congress has a continuing opportunity to vote up or down appropriations; yet, in many respects, we are involved in a tempest in a teapot, even though it is a very big issue in the minds of many people. The difference between research and development and deployment issue is very fine.

Now if the Senator from Kentucky is saying that we do not want any ABM system at all, let us stop all work on it, that there is no point in having an ABM system, that would be one thing; but here we are involved in a very fine delineation between research and development and deployment, in the case of a bill authorizing expenditures which will not give us deployment until 1972, 1973, or 1974.

We are all men of good will, acting in good faith. I most respectfully suggest that whether we think we are tying the hands of the President in the eyes of many people around the world, the President's hands will have been tied by Congress. I think that is most unfortunate impression to leave in the minds of people overseas at this very touchy time in international relations.

Mr. COOPER. If the Senator from Maryland will bear with me a moment—

Mr. MATHIAS. I am delighted to yield further to the Senator from Kentucky.

Mr. COOPER. It has been stated many times by the proponents of the system that it is vital to the security of this country. Awesome pictures of the growing nuclear strength of the Soviet Union have been given in the form of projections and extrapolations. They may turn out to be a reality.

We respect the President of the United States. We know him, many of us have served with him and know the efforts he is making for peaceful solutions. I respect him. The security of this Nation, while it is very much in the hands of the

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President of the United States, is also in the hands of Congress. We have a joint constitutional responsibility. We too represent the people. It is also in the hands of the people. We in the Congress have a special responsibility to make judgments as to whether a process or program is in the best interests of the security of this Nation. We argue about feasibility, about funds, about deployment, and can reasonably disagree about them. But we too have the responsibility to make judgments about the best way to stop the arms race which threatens the ultimate security of the United States.

It is our judgment that it would be better not to make a decision to deploy a new weapons system in the year when we seek to control nuclear weapons, if this can be done, we would agree that the greatest step toward true national security for our country had been taken.

Thus, as we may differ with the President on this issue, it is done honorably and with great respect for him. Our duty is to be responsible to the people as Members of Congress. If deployment is not agreed to, I do not consider, as Senator ARKEN has said, that it will represent a setback for the President of the United States. He is demonstrating every day his leadership on great issues.

Mr. MATHIAS. Mr. President, I appreciate very much participation in this colloquy by the Senator from Kentucky, the Senator from Iowa, and the Senator from Colorado. It has been extremely helpful to clarify some of the questions which do exist.

I particularly want to concur with the Senator from Kentucky when he says that whatever honorable disagreements may exist, they are taken pursuant to our responsibilities as Senators to provide for the common defense of our country, which is the responsibility imposed on us by the Constitution and which we can only discharge in conscience and in no other way.

Mr. DOMINICK. Mr. President, will the Senator from Maryland yield for a unanimous consent request?

Mr. MATHIAS. I yield.

Mr. DOMINICK. Mr. President, I ask unanimous consent to have printed in the RECORD a report entitled, "Good Guys, Bad Guys, and the ABM," written by Albert Wohlstetter of the University of Chicago, which was submitted to the Los Angeles Times for publication Sunday, August 3, and Monday, August 4, 1969, and which has been published as a report by the Committee to Maintain a Prudent Defense Policy.

I have read this. It refers to several participants in this debate, not on today but on previous occasions. It has some good points, and it states them in very readable language. I think it is worthwhile to have them in the RECORD at this point.

There being no objection, the report was ordered to be printed in the RECORD, as follows:

[A report from the Committee to Maintain a Prudent Defense Policy, Washington, D.C.]

GOOD GUYS, BAD GUYS, AND THE ABM

Choices about bombers or missiles or defenses against them are, in the most literal sense, vital. They can mean life or death. Yet making such choices carefully has never been

easy. And least so now when the closing agonies of Vietnam drive us to wish away all problems of national defense. Even thinking about such questions is unpleasant and can make your head hurt. Answers don't come in black and white and mustering vast public sentiments about precise shades of grey is particularly hard. It is much easier then to make believe that the issues are simpler than they are, that the answers are plain to any man of good will, that the issues are in fact between the concerned men of good will and a reckless entrenched malevolent authority. The good guys are against nuclear war, against taking reckless chances on nuclear accidents, against wasting money that might be used to solve our urgent domestic problems, against the "ever accelerating arms race", against the generals and munitions makers, for peace abroad and redressing the inequities at home. The bad guys. . .

The impassioned ABM debate, as the news media tend to picture it, does array the good guys on one side and on the other, the bad. The forces of virtue at last aroused against the forces of evil. ABM, as many of its opponents have said, is a symbol. One trouble with symbols, however, is that they often have little to do with reality. Any close look at the realities of the ABM and the way the debate has developed, blurs this simple picture. In fact, erases it entirely.

Intense controversy blew up suddenly last fall with an alarm sounded by some Argonne physicists about placing Sentinel defense missiles only a few miles outside Chicago's city limits. It was not hard to arouse public interest groups on this subject. It seems that very few Republicans or Democrats favor nuclear accidents. By spring, however, distinguished opponents of ABM like Hans Bethe indicated that the nuclear safety of Sentinel was not really troubling. And by late spring various opponents of ABM were themselves recommending that, rather than use Safeguard ABM to protect our bombers and missiles, we should undertake (a) an emergency dispersal of armed bombers—which would mean landings and takeoffs with nuclear bombs in commercial airports of large cities; (b) an armed air alert—that on a continuing basis might mean an average of a dozen accidents per year involving nuclear weapons; and finally, (c) most amazing, that we try to empty our silos before enemy bombs get to them by immediately launching our Minuteman at Russian cities on the basis of radar indications—which would increase the nightmare possibility not only of a nuclear accident, but of an accidentally started worldwide nuclear holocaust.

Senator Symington asked, "After PAR finds the incoming missiles, why then couldn't you fire the Minuteman on target instead of the Spartan?" And Senator Fulbright engaged in this dialogue, ". . . if the objective is deterrence . . . then . . . this would really concern the Russians to know what you would really do if they sent over a massive attack."

Senator Gore, "Or a light attack."

Senator Fulbright, "Or even a light attack, one that could be detected. . . I would think that is the greatest deterrent you could have, and you are going to release ours before they are destroyed, and you could do it."

Indeed you could. But such a mode of decision risks delegating to a computer the most terrible decision that would ever have been made, the decision for World War III. Recognizing that, our government decided years ago to try to preserve our political decision centers and to protect our forces so that they could ride out an attack and in that way leave time for responsible political decision. A recommendation by the good guys to launch missiles on radar warnings hardly fits the simple picture. Who are the prudent, reflective, good guys and who are the bad guys?

Even given the deserved unpopularity of nuclear accidents, the ease with which indignation was aroused about the local defense of urban population has in it a good many paradoxes. At the very least it knocks down one widespread argument that was being made as recently as last year against an attempt to defend some cities. That, the argument used to run, can only lead to an arms race, since it was certain that the undefended cities would demand defense. Doesn't this vociferous demand not to be defended at the least suggest some flaws in the older theory?

Trying to fit the pieces of the ABM debate about arms race and military budgets and domestic needs into the simple picture yields many insoluble puzzles. Major critics of ABM (for example, Professors Wiesner, Weinberg, Panofsky and Senators Fulbright and Symington) run on about arms races; nonetheless suggest increasing, even doubling, the Minuteman force rather than defending it with ABM. But a doubled Minuteman force could annihilate the projected large number of Soviet ICBMs: it would seriously endanger Russian ability to retaliate. If the Russians, following the policy suggested by the vociferous ABM critics, responded by increasing their force, an accelerating race in strategic budgets and numbers of weapons would then be on in earnest. It has not been on in the past, despite the stereotypes. In the last 10 years our strategic budget did not "accelerate"; it declined by half and precisely because in the 1960s we did not merely multiply strategic vehicles but increased their protection by methods such as blast resistant silos appropriate to the 1960s threat. In the mid and late 1970s improved offense accuracies will make blast protection inadequate and will make ABM an appropriate method for preserving a fixed offensive force. Moreover such active defense of the offense would not provoke a spiral any more than our silos did. It frustrates an adversary's ability to strike first effectively, without removing his ability to strike second, that is, his ability to strike back after attack. Protecting Minuteman doesn't add to our first-strike capacity. Doubling Minuteman does. Just who is thinking prudently about avoiding arms races?

Or about excessive military costs? Doubling the Minuteman force and keeping B-52s steadily aloft in numbers equal to our ground alert would cost several times more than protecting Minuteman and B-52s with ABM; over 20 billion dollars on a 5-year basis, even neglecting the implicit "spiral"! Hardly the way to free resources for urgent domestic needs. Moreover, unlike Safeguard, doubled Minuteman and air alert B-52s would do nothing to protect our national command or to shield our population against even small attacks.

This neglect of the expense of alternatives to ABM is only one example of the casual handling of costs by the critics of ABM. And treating costs in an offhand way turns out to be crucial for their substantive criticism. Today it is plain that these critics were extremely hasty in presenting calculations that purported to show that Minuteman would be safe without extra protection in the mid and late 1960s. And many of them have retreated on this point: they now say Minuteman will be so unsafe as to be obsolete and not worth defending. It is not yet as plain that their treatment of the costs and effectiveness of a Safeguard defense of Minuteman and its alternatives is as faulty as their earlier proofs that Minuteman would be safe. Perhaps I can make it plain. It is an important matter. Central questions that seem unrelated turn on these matters of cost, for example, the questions below.

1. CAN SAFEGUARD BE "EASILY" OVERCOME?

Opponents of ABM support their claim that overcoming Safeguard is easy by referring to a mysterious secret chart showing how

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the Russians can overwhelm the defenses of Minuteman by adding more of their SS-9 missiles. Such a chart hardly proves their point. Any fixed amount of defense can, of course, be overcome by adding enough to the offense. This is obviously true. It is equally true that any fixed amount of offense can be smothered by adding enough defense. Both these truths are nearly tautological. For adversaries with roughly the same resources, the practical question has to do with how much extra the offense must pay to overcome a given amount of defense and how this compares with the cost of that defense itself. The answer in the case of Safeguard defense of Minuteman is that it would cost the Russians more than twice as much to add offense as it would cost us to add an offsetting number of Sprint missiles with their fair share of the missile site radar expense.

That is why starting to deploy Safeguard is a good way to discourage an adversary from persisting in any attempt to remove our second-strike capability. On the other hand, if we do nothing to protect so large a part of our retaliatory force, we make it relatively cheap and fruitful to get the capability to destroy it. The stereotypes about the arms race talk always of "action-reaction cycles." There are inaction-reaction cycles too. And some positive acts inhibit response by making it fruitless.

How have the critics of ABM missed the point on costs? First, they rarely mention the adversary's costs and never measure the extra cost to the offense to overcome an increment in Safeguard defense. In fact, one distinguished Senator opposing ABM has suggested that the large costs of SS-9s do not concern the Russians since they are not capitalists. Another opposition Senator holds that the Russians are so limited in resources that they will not buy enough SS-9s to destroy Minuteman even if there is no Safeguard to make their resource cost higher. A more reasonable suggestion than either of these two is that expanding the SS-9 involves a serious resource expenditure for the Russians: perhaps worth it if we indicate we have no intention of protecting Minuteman; and not worth it if we can add protection much more cheaply than they can overcome it.

Not only are SS-9 missiles with three 5-MT reentry vehicles expensive, but so are the lower-yield less accurate SS-11s, which have recently been proposed by critics as "cheap defense radar killers." In fact, on a per warhead basis they are more expensive than the SS-9s and much more expensive than the defense missiles that would counter them. Nor would SS-9s with 20-30 low-yield reentry vehicles be cheap radar killers, as recently suggested by Professors Wiesner, Weinberg and Rathjens. They are much more advanced than the SS-9 with three accurate 5 megaton MIRVs. Yet these same critics doubt that the Russians can get the latter. Most important, if one includes the several billion dollars for research and development, getting two dozen missiles especially to kill radar would involve extremely high unit costs, even neglecting the expense of procurement and operation.

The critics not only neglect adversary costs, they inflate the costs of the Safeguard defense of Minuteman. They attribute the entire costs of the Safeguard program to the protection of Minuteman. They include research, development, testing and evaluation costs which both opponents and advocates of Safeguard agree should continue whether or not we start deployment now; these are not properly an extra cost of the decision to deploy Safeguard at the Minuteman sites or anywhere else. Furthermore, they include costs, all or part of which are required for other functions of Safeguard than the defense of Minuteman.

Safeguard is intended also to protect the National Command authority, to defend

manned bombers and to provide a thin shield for population. When the critics of Safeguard want to question the value of the area defense of the bombers and of our population, they may estimate that most of the cost is for area defense and attribute only \$730 million of the entire Safeguard program to the defense of Minuteman. (See Chayes and Wiesner, Eds., *ABM: An Evaluation*.) On the other hand, when they are attacking the use of Safeguard to defend Minuteman, they pile on this function the entire costs of the program including not only research and development, but also expenditures for the purpose of defending National Command, bombers and population. (See Rathjens, Wiesner and Weinberg, "Commentary on Secretary Laird's May 22 Defense of Safeguard.")

In estimating the cost of a defense interception, they neglect a major feature of the Safeguard system, that will permit immediate replacement of defense missiles that fail during or shortly after launch. Since most failures occur within this time period, a reserve of some 15% or 20% assures an extremely high probability of interception. Critics of ABM, by ignoring this, have assumed that some three times more defense missiles are required than the probable number.

This neglect is related to the critics' misunderstanding about the "softness" of the defense radars (MSRs and PARs) and the role of blast resistance in the defense. It is well known that the radars have less than one tenth the blast resistance of the Minuteman silos. They are, however, protected primarily by interceptor missiles, and they are made just blast resistant enough to force an offense warhead to come close and so permit the defense to fire several times at it. If the first or even second Sprint fails, there is time enough for a third to destroy an incoming warhead.

A final major defect in the critics' estimate of the cost of a defense interception comes from ignoring the important strategy for defending an offense force known as "preferential defense." Defending missiles is a very different thing from defending population. If only half the population survived, this would be a catastrophe of unimaginable dimensions. But the survival of fewer than half our missiles may be more than enough to assure retaliation. The defense then can decide which Minuteman silo, or if there is more than one radar, which radar to defend and can decide this at the last minute. The offense cannot know this and therefore must attack all targets as if they were all defended. When the defense doubles the number of interceptors and radars, the offense must multiply its warheads four times.

All these errors in costs add up to a very large mistake about the ease of overcoming Safeguard.

2. WILL SAFEGUARD WORK?

The answer to this question may not seem directly related to the matters of cost we have been discussing. But it is related both to our costs and to those of an adversary. When a critic says Safeguard won't work, it sounds as if he were claiming that when a switch is thrown, there will be a fizzing sound and then merely some smoke coming out of the computers. A closer look at his argument, however, will reveal that he means Safeguard will not work because in an actual war the adversary wouldn't let it work; the adversary will think of all sorts of effective counter-measures.

For the apparent (or smoking computer) meaning, the fact that Safeguard is complicated seems to be crucial. Bell Laboratories, which have technical charge of the Safeguard system design, are most experienced, cautious and successful in engineering complex systems. They are used to making very complicated things work with very high reliability. But if the trouble lies in what an

enemy can do to counter Safeguard or its alternatives, complexity is not the issue at all. Many simple things won't work when a modern adversary won't let it: slingshots, catapults, moderately hardened silos, and even the "cheap" small defense radars and missiles proposed by some of the ABM critics—which unfortunately are very vulnerable to inexpensive counter-measures. The cost of the defense and the cost of offense counter-measures are at the heart of the matter, and it is here that the critics have been weakest.

The components of Safeguard and their interactions have undergone and will undergo very extensive testing. Sometimes the argument is made that this is not enough, that the only realistic test would be an actual nuclear war. This is one test we all want to forego. However, the critics appear unaware of the fact that this is a limitation affecting our certainty as to the performance of our offense also. It applies equally to Russian and American offense and defense. But this limitation does not show that defense is worse off than offense, or that we are worse off than our adversaries.

Finally, the history of the last 25 years suggests that it is hard to take claims about whether a system will work or not work on their face value, especially when there are strong passions involved. When something new is proposed for our side, scientists who oppose it tend to say not only that it would be bad, but that it won't work at all. If they are for it, not only would it be nice, but it works like a dream. So when they were against an emphasis on the offense, the H-bomb wouldn't work. In the late 1940's, when they opposed continental defense as a poor substitute for international control, no defense was possible. In the 1950s when international control was out of the picture and continental defense seemed essential, then an adequate defense was possible. Then in the 1960s, judgments about feasibility were once more reversed to match views on the value of defense.

3. IN CASE DETERRENCE FAILS, IS IT WORTH ATTEMPTING EVEN A LIMITED POPULATION DEFENSE—ONE THAT WORKS AT LEAST AGAINST IRRATIONAL SMALL ATTACKS?

The critics of defense in general hold that there is no need to worry about reducing the damage that would be done in case deterrence fails, because, they say, it is extremely unlikely that it will fail. But they are really of two quite different minds about the possibility of the failure of deterrence, depending on what they are advocating. When they want to forego any attempt to reduce the catastrophe, they are extremely reassuring about the low probability of nuclear war. They say deterrence is stable now and will be in the face of technological change. When they are urging drastic early steps towards disarmament and perhaps risky ones, they say the very opposite. Far from being stable, deterrence is certain to fail. The critics may then even give precise odds on how soon it will fail. The odds are high. The apocalypse, it seems, may be soon.

Take Professor Wiesner. Against the Chinese as against the Russians, he says, "... we must rely on the offensive deterrent... on our known ability to retaliate devastatingly in case of a nuclear attack. Ten percent of our SAC bomber force could kill 200 million Chinese." (*Look*, November 28, 1967.) This is evidently all right, for he also says, "The fantastic power of nuclear weapons provides a high degree of stability. Consequently a few bombs, certain to be delivered, will constitute a powerful deterrent." (*Washington Post*, January 22, 1967.) On the other hand in his apocalyptic mood, Dr. Wiesner has said, "There is an ever-increasing likelihood of war so disastrous that civilization, if not man himself, will be eradicated." (*Daedalus*, Fall 1960.) The probability is not only rising, but apparently it is

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already high. "The odds," he estimated recently, "are in favor of a major war within the next two decades." (*Washington Post*, January 22, 1967.)

Similarly, Senator Fulbright expressed astonishment at recent Hearings that the Department of Defense has sponsored a system for protection against the Chinese, since a Chinese attack would be irrational, suicidal in fact. A system for such a purpose is so far-fetched he suspects an ulterior motive. On the other hand, in an article entitled, "Now Is the Time to Take Great Risks," in which he urges drastic and evidently chancy steps towards disarmament, he explains, "Sooner or later the law of averages will turn against us; an extremist or incompetent will come to power in one major country or another, or a misjudgment will be made by some perfectly competent official, or things will just get out of hand without anyone being precisely responsible as happened in 1914." Under present deterrent arrangements, in short, this suicidal act is in the cards; the apocalypse is certain.

My own view is that the probability of nuclear war, if we are careful, can be kept small. But this requires continuing attention to the protection of strategic forces in the face of technical change. And even then there is always a significant possibility of breakdown and therefore the need for some insurance in the form of defense.

Critics of ABM are strikingly inconsistent in their treatment of the Russians and the Chinese. In saying we don't need to defend Minuteman against Russian attack in the mid or late 1970s, they presume that, 20 years after Sputnik, Russian missiles would not be able to achieve accuracies and other performance characteristics of the Minuteman III and Poseidon missiles that we ourselves are now in the process of deploying. In opposing an area defense of population against Chinese attack, they assume that the Chinese in their first generation ICBMs will be able to deploy penetration aids that took us billions of dollars and many trials and failures, and a dozen years to develop. These are extraordinarily backward Russians and most advanced Chinese.

At a modest extra cost over and above that of defending our offense force, we can manage a very effective defense of our population against a small attack, a defense that can keep us free of substantial damage from the Chinese without our initiating a nuclear attack upon them. Moreover, given the general technological levels in the two societies, we can stay ahead of them for the foreseeable future. Even if Chinese offense technology were at a much higher level, the difference in the resources of the two societies would be decisive. I said earlier that for adversaries with roughly the same resources the practical question has to do with how much extra the offense must pay to overcome a given amount of defense and how this compares with the cost of that defense itself. A relative cost disadvantage to the offense will bear down much harder on an adversary with much smaller resources as is the case for China whose gross national product is less than a tenth and whose per capita income is about 2% of ours.

Those who reject even a thin shield for population manage simultaneously to hold that (1) the shield would have no substantial effect even against a small first generation Chinese attack, but (2) it would be so effective against the massive sophisticated Russian force that the latter could not inflict enough damage on us to deter us, even though (3) it takes only the prospect of a few bombs delivered to deter the Russians. These and other absurdities stem, I believe, from an extreme strategic dogma whose origins go back many years to the French General Staff and to a few members of operational research staffs like the Weapons Systems Evaluation Group of the Joint Chiefs of

Staff. I refer to a doctrine known as "Minimum Deterrence" that holds that any attempt to protect our own civilians will make nuclear war more likely, that we must depend exclusively on a threat to bomb enemy civilians. Not an obviously humane or liberal doctrine. It defies common sense as well as rigorous analysis.

Of course very few of the public interest groups who oppose defense of population are at all aware of the origin of their views. Indeed, they abhor "Think Tanks" like the Weapons Systems Evaluation Group (now a division of IDA, a famous target for the SDS). Yet just as Keynes remarked that the practical man who scoffs at theory is frequently the slave of theorists long defunct, so the ladies in the Women's International League for Peace and Freedom and other similar organizations may say unkind things about Think Tanks, and wear Stop ABM buttons. But the theory behind the button originates from individuals in some of these same Think Tanks.

I would not myself have thought a few years ago that one could organize widespread popular indignation among church groups and mothers on the basis of so extreme and far-fetched a dogma, one that suggests that it is all right to threaten to launch missiles at enemy civilians, but peculiarly heinous to prepare to knock a missile down on its way to destroy millions of our civilians. Clergymen for Bombing Civilians Only? Mothers for the Offense? I'd have thought it would never fly. I was quite wrong. The massive lobbying activity of the last year or two has mustered a plenitude of organizations with names like "Another Mother for Peace," "Womanpower in Action," "The United Methodist Board of Christian Social Concerns." When men and women of good will take it as so obviously right to depend solely on a threat to launch nuclear weapons against cities, we've come a long way from the Spanish Civil War and the world's shocked reaction to the bombing of several thousand civilians at Guernica.

And a long way from the position taken throughout most of the 1950s by the same scientists who now refer to any use of defense as "Maignot Line mentality." "History," quotes the epigraph to the Wiesner-Chayes book on ABM, "is littered with Maignot Lines." The Final Report of the Lincoln Summer Study, in which Drs. Wiesner, Killian, Kaysen and others were prominent, had a whole section on Maignot, replying to the offense enthusiasts of that time. Putting "all our eggs in one basket," they said, is the essence of "Maignot psychology," and it is exemplified by the "great emphasis placed in recent years on the development of an effective retaliatory force." Liberals have forgotten that the key substantive issue that was obscured by the tragic outcome of the Oppenheimer hearings had to do with whether a large enough part of our effort was being devoted to continental air defense. In fact, history tells us less about the relevance of Maignot (a dead Frenchman whose name is too often used to settle deep and complex issues) than it does about the pitiful inadequacy of all slogans about offense and defense. ("Maignot!" "There is a counter to every weapon!" "The offense always gets through!" Etc., etc.)

Indeed, many of these same scientists have turned 180 degrees at least twice since Hiroshima in their slogans about defense. Immediately after the war the American Federation of Scientists printed its "Creed" with the second point in bold face: There is no defense. It was, they said, One World or None. After the Russians turned down the Baruch plan for international control of atomic energy, and it soon became clear that we were not about to have one world, a majority of these articulate scientists looked a bit more closely at whether the alternative really was no world at all. Then it was an-

nounced (e.g., by Ralph Lapp) that the scientists were "rebellious against the military dictum that there is no defense." The rebels lobbied for civil defense and continental air defense; opposed the H-bomb on the grounds that it was infeasible; or if feasible, undeliverable; and in any case, usable only against cities rather than legitimate military targets; and finally clashed bitterly with a minority that favored going ahead with the H-bomb. I myself believe that the opposing factions of scientists tended to caricature each other. It was not really that one side wanted to depend exclusively on offense and the other solely on defense. The genuine differences concerned emphasis and allocation. But the ironic next 180 degree turn at the end of the 1950s saw the majority faction turn once more and adopt almost the caricature of the position it had been most recently opposing. It now calls for a nearly exclusive reliance on offense and the total rejection of defense of population against ballistic missiles. Cities, it seems, are now the only "legitimate" targets and defending cities is a provocation.

But even minimum deterrents who oppose defending population normally believe that we should protect our retaliatory force by concealment, shelter or active defense. The Safeguard ABM which aims to protect bombers and missiles is precisely the kind of thing that Minimum Deterrents would normally support. And in fact, many of them did, at least through March 6 of this year. In testimony before the Senate, Hans Bethe, for example, said quite unequivocally that while he was opposed to the Sentinel defense of cities there was another kind of ballistic missile defense, namely the defense of retaliatory hard points, and that was different; he favored that:

"A completely different concept of ABM is to deploy it around Minuteman silos, and at command and control centers. This application has gone in and out of Defense Department planning. I am in favor of such a scheme."

In fact, he said, the Sprint and MSR are good components for the purpose.

Then on March 14 the President announced the Safeguard program which was primarily directed at the defense of missiles, bombers and the national command authority. This apparently posed something of a dilemma. A tremendous effort had gone into lobbying against ABM when it had been intended mainly to provide a shield for population against light ballistic missile attack. Hundreds of scientists had signed indignant petitions; public interest groups had been mobilized; speeches had been written for now indignant senators; ABM had become a symbol. The push against it gained enormous momentum; Senate hearings were rolling; and, it seems, if you push hard enough against a symbol, you may find you are being pulled. At any rate, a good many of these scientists then said that, nonetheless, even even with the change, they were *still* against it; and some offered extremely hasty calculations to suggest that the missiles and the bombers really required no protection, that Sprints and MSRs wouldn't do it anyway, that it would be better simply to multiply offense forces, or launch them on warning or do almost anything other than defend them.

This sequence of events suggests the folly of transforming a complex substantive issue into a symbol in black and white. I would not turn the simple picture upside down, with the good guys supporting ABM and the bad guys in opposition. I do not represent the Safeguard issue as one that divides the forces of light from those of dark. And

* Mimeographed statement submitted on March 6. The printed version published at the end of the month, added the phrase "at the appropriate time" to the last sentence.

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neither do temperate opponents of starting deployment this year, like Senator Brooke. Senator Brooke has not been pushed to the rash extreme of calling for launching Minuteman at Russian cities on radar warning or doubling the offense or doing almost anything rather than support the scoundrels advocating ABM. He rejects the first as lunacy and deprecates the second.

Simply for the symbolism of taking Safe-guard out of the country, some Senators propose to build on distant Pacific atolls PAR and MSR radars that could be located in Montana and Dakota protect Minuteman. This would waste billions of dollars just to defeat the bad guys in the Administration. It is such bitter symbolic struggle with shadows that makes reflective choice hard to manage and delays the sober and rigorous examination required both for our defense and domestic needs.

MESSAGE FROM THE HOUSE

A message from the House of Representatives by Mr. Hackney, one of its reading clerks, announced that the House had agreed to the amendment of the Senate to the bill (H.R. 9951) to provide for the collection of the Federal unemployment tax in quarterly installments during each taxable year; to make status of employer depend on employment during preceding as well as current taxable year; to exclude from the computation of the excess the balance in the employment security administration account as of the close of fiscal years 1970 through 1972; to raise the limitation on the amount authorized to be made available for expenditure out of the employment security administration account by the amounts so excluded; and for other purposes.

The message also announced that the House had passed a bill (H.R. 13111) making appropriations for the Departments of Labor, and Health, Education, and Welfare, and related agencies, for the fiscal year ending June 30, 1970, and for other purposes, in which it requested the concurrence of the Senate.

HOUSE BILL REFERRED

The bill (H.R. 13111) making appropriations for the Departments of Labor, and Health, Education, and Welfare, and related agencies, for the fiscal year ending June 30, 1970, and for other purposes, was read twice by its title and referred to the Committee on Appropriations.

GAO STUDY OF B. F. GOODRICH PERFORMANCE ON CONTRACT FOR THE A-7D AIRCRAFT BRAKES

Mr. PROXMIRE. Mr. President, some weeks ago I was given information alleging that B. F. Goodrich delivered brakes that failed to meet specifications to Ling Temco Vought/Vought Aeronautics Division (LTV/VAD) in Dallas, Tex., to be installed on the \$1.2 million A-7D light attack aircraft.

Although the charges were difficult to believe, I was further informed that Goodrich's delivery of defective brakes to LTV for an airplane they are preparing for the Air Force involved highly questionable business practices on the

part of the Goodrich wheel and brake plant in Troy, Ohio.

I was told that in order to deliver brakes that appeared qualified according to military specifications Goodrich officials altered data on the test specification logs and deviated from standard industry and military testing procedures and standards to show that the defective brakes were a qualified component.

On the basis of the allegedly false qualification report the brakes were installed on production models of the A-7D for testing, and the safety of both LTV and Air Force test pilots were endangered.

B. F. GOODRICH EMPLOYEES KNEW OF ERROR

The allegations recited here were brought to my attention by two Goodrich employees: A design engineer, Cyril Lawson, who was involved in the research and design of the A-7D brake, and the Goodrich technical writer, Kermit Vanderveer, who contends he was instructed to write the false qualification report by his superiors at the Troy, Ohio, wheel and brake plant.

The engineer said that a design miscalculation on the brake was made and subsequently discovered during the design phase. But, he explained, by the time it was found out tooling had already begun for the brake and a delivery date had been set. The engineer said he advised his superiors at the plant of the error and assumed that production of the brake would stop immediately, while the Goodrich engineering department developed a new design that would meet the specifications.

Instead of starting a new design, my two informants at Goodrich said, the company ordered qualification tests on the brake continued in the hope that it would perform satisfactorily despite the design error. In the meantime the unqualified brakes were shipped to LTV with the technical writer's inaccurate qualification report.

BRAKES COULD NOT MEET MILITARY SPECIFICATIONS

The Goodrich employees who were responsible for bringing these remarkable accusations to my attention contend that fourteen separate attempts were made to nurse the brake through the required laboratory tests. All ended in complete failure they told me and it was then obvious to the Goodrich engineers working on the A-7D brake project that the brake had no chance of ever meeting the stringent military specifications.

Still, Goodrich neglected to recall the bad design nor did they give any hint that the technical writer's "concocted" qualification report contained erroneous material that showed the brake meeting the military specifications of quality and safety required before flight tests are allowed.

Customary procedure in the brake industry, I am told, is to provide this qualification certification, in writing, with all brakes. The report gives all the details of laboratory tests and supports these details with documentary evidence that all the requirements for the design, manufacture, and testing of the brakes have been met. According to the military specifications covering preproduc-

tion tests for aircraft wheels and brakes, the tests are supposed to be conducted on test articles that are representative of the production items.

TECHNICAL WRITER ADMITS WRITING FALSE REPORT

The technical writer who authored the qualification report has said in writing:

Since there was no evidence that would substantiate any of these claims (i.e. that all requirements for the design, manufacture and testing of the brakes have been met) the only alternative was to write a false qualification report.

Furthermore, he states:

I was ordered to concoct a report that would establish that the brakes had met all the necessary requirements, and to manufacture the documentary evidence to go with it.

The technical writer says:

I flatly refused, and for almost a month, a bitter argument raged between myself and various company officials. Finally, I was ordered to "write the thing" and shut up about it.

According to the technical writer, the brakes were actually never tested as his report claimed. Furthermore, he has presented evidence to my office that appears to show that additional components were added in his words, to "beef up" the brakes during laboratory tests—components that were not actually a part of the production brakes—so the brakes could successfully complete simulated aircraft landings.

ORIGINAL TEST LOGS SHOW FAILURE

In a last minute effort to exonerate himself from writing the false qualification report the technical writer says he noted in the report's conclusion that:

The B. F. Goodrich Part Number 2-1162-3 Brake Assembly does not meet the intent and requirements of the applicable specification documents and therefore is not qualified. When the report was sent to the Air Force the "nots" had been removed from the conclusion by the Technical Writer's superiors.

I have been told that the flight tests on the brake at Edwards Air Force Base, Calif., were a failure. The design engineer has said that on one occasion when the test pilot landed the plane and applied the brakes the wheels locked and the plane went into a skid. He released brake pressure, but the intense heat generated by the faulty brakes caused the brake discs to weld together. The plane continued its high-speed skid down the runway, stopping 1,500 feet later. The plane remained upright and the test pilot was uninjured, but after witnessing the near accident the design engineer said he determined to go to Government authorities before a pilot was killed or injured as a result of the design error that was being hidden from LTV and the Air Force by the false qualification report. Both the technical writer and the design engineer went to the FBI in Dayton, Ohio, with their evidence—the same evidence they later presented to me and which I am relating here today.

GOODRICH REFUSES AIR FORCE INSPECTION

The technical writer has said:

At this time, because of the numerous failures encountered during the flight tests at

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Mr. President, seldom has a trip abroad by an American President been so successful, seldom have the purposes been so well met and seldom have the American people been so well informed on a day-to-day basis about the results of such a trip.

For this we can all be grateful.

The President has termed his trip "a quest for peace, reflecting the spirit of Apollo."

And truly, there is an apt comparison.

During all man's time on earth he has reached out for the moon. Less than 2 weeks ago he was finally successful.

For equally as long a time man has yearned for peace. And just as surely he can reach that goal—if he will.

That goal is one the President is attempting with all his heart and all his skill to reach. He has charted new courses in two of the world's troubled areas—Southeast Asia and Eastern Europe—courses that give hope for eased tensions and international cooperation, but courses, also, that assure those who stand with us that we will continue to stand with them.

Mr. President, the success of the President's journey is a success that the entire world shares. I am certain my colleagues on both sides of the aisle join with me in congratulating the President for a task well done.

ABM

AUTHORIZATION OF APPROPRIATIONS FOR FISCAL YEAR 1970 FOR MILITARY PROCUREMENT, RESEARCH AND DEVELOPMENT, AND FOR THE CONSTRUCTION OF MISSILE TEST FACILITIES AT KWAJALEIN MISSILE RANGE, AND RESERVE COMPONENT STRENGTH

The Senate resumed the consideration of the bill (S. 2546) to authorize appropriations during the fiscal year 1970 for procurement of aircraft, missiles, naval vessels, and tracked combat vehicles, and research development, test, and evaluation for the Armed Forces, and to authorize the construction of test facilities at Kwajalein Missile Range, and to prescribe the authorized personnel strength of the Selected Reserve of each reserve component of the Armed Forces, and for other purposes.

ABM: THE MISBEGOTTEN MISSILE

Mr. McGOVERN. Mr. President, the decision the Senate will soon make regarding deployment of the antiballistic missile will be one of the most fateful in our national history. In economic, political, social and moral terms America will feel the weight of it for many years to come.

The significance of the ABM issue reaches far beyond the system itself; for it will signal the direction of the Nation in the next critical decade. At issue is the central question of whether we shall continue to pour increasing energy, brainpower and wealth into armaments, or into the urgent human needs of our society. Does the route to security and well-being lie in another costly new missile system, or should first priority go to reaching arms limitations among the great powers while we set about the reconstruction of our country and the protection of our environment? Beyond the

enormous financial cost of the ABM is the danger that it contributes to the militarization of our society and the neglect of urgent domestic problems. It may decrease our national security by increasing international tension and with it the possibility of nuclear war. Militarily, it is doubtful that it would contribute to the defense of our country.

At a time when the great powers seem to have reached an understanding that nuclear war means the end of much of mankind, one wonders why this current effort to add a new round of missile construction. Do we really believe that either Russia or China has gone so completely mad that they would invite their own certain destruction by launching a nuclear attack on the United States? Is there evidence that even a \$40 or \$50 billion ABM would add to our security if the adversary had such an act of madness in mind? Is it not more likely, as Senator Muskie has warned so convincingly, that the construction of yet another missile system will only heighten the anxiety and tension that could lead to a nuclear exchange?

It is frequently said of the ABM that it is "a missile in search of a mission." Certainly, the history of the ABM does not suggest that our military planners saw a particular national security need and developed a system to meet it. Rather, the constantly shifting rationalizations of the ABM lead one to wonder if Washington Star columnist Frank Getlein was not justified in observing:

The real point was to spend the money and in order to spend it, the military would cheerfully swear it was needed to save the swan boats on the lagoon at the Jefferson Memorial.

First was the proposal for a \$50 billion "heavy" system. This called for "thin" Spartan area defense of the entire country and for "thick" Sprint point defense of ICBM sites, SAC bomber bases, ABM radars, and 49 major population centers—plus the hometown of the chairman of the House Armed Services Committee, Charleston, S.C.—the 228th largest city in the United States.

The purpose of the heavy defense was to decrease the damage our country would suffer in a heavy Soviet attack. The Johnson administration rejected the heavy system on the grounds that the ABM as presently conceived would not perform this function; that is, there was no way to prevent the Soviet Union from destroying the United States if it were willing to see itself destroyed in return. This was valid reasoning at the time; it is still valid. Barring a fundamental technological breakthrough, which incidentally would make obsolete the system we are now considering, we would be foolish to think that any ABM can really prevent unacceptable devastation in an all-out nuclear war.

Since the heavy anti-Russian system seemed too implausible and too expensive, the ABM proponents turned next to a light ABM to defend against the Chinese. The Chinese, it was argued, would have 10 or 20 ICBM's in a few years and they might go berserk and launch these against our cities even though to do so would be to provoke the total destruction of their society.

We were told a thin Spartan area defense would be sufficient to protect the entire country against a small unsophisticated attack such as China might launch during the 1970's.

Oddly, it was said that this anti-Chinese system could serve as a bargaining counter in arms-reduction talks with the Russians, and abandonment of plans for the anti-Chinese system might be a result of these United States-Soviet talks. It was never clear to me why those who said we needed an ABM system against China were willing to abandon it if the Russians agreed not to build one.

In any event, the anti-Chinese rationale seems conspicuously invalid.

First, it relies entirely on the Spartan missile, which is easily penetrated. It assumes the Chinese will be clever enough to build an ICBM but not clever enough to incorporate simple penetration aids such as chaff. It also assumes they would be so foolish as to neglect to time their missile attack to take advantage of black-out effect.

Second, it assumes the Chinese will not try to circumvent the ABM by using cruise missiles, nuclear torpedoes, or other relatively simple devices. At this very moment, a disguised Chinese merchant ship could be sailing into New York harbor with a hydrogen bomb in its hold. If one is not concerned about size or weight, such a device is cheap and well within the reach of Chinese technology.

Any attempt to establish a dependable nuclear defense is an exercise in futility.

I think the events of the past year indicate that not even our military planners had much interest in a thin anti-Chinese system. If they had—if they had planned a thin national defense using long-range Spartan missiles—they would have purchased land for Sentinel sites in the unpopulated rural areas. Instead, last fall and winter we found that land was being purchased for Sentinel sites adjacent to our major cities. This indicated an intention to escalate Sentinel into a heavy anti-Russian city defense using short-range Sprint missiles.

But then the citizens of Boston, New York, Chicago, and Seattle made their feelings known. They were not pleased to be made links in this electronic maginot line. They did not want nuclear warheads in their backyards, and they began organizing political and legal action to prevent their communities from being used as ABM sites. Once publicized, the issue quickly became a hot political issue.

Conveniently, the ABM proponents then found it was not feasible to defend cities against a heavy attack. Even more conveniently, they suddenly found the Soviet Union was approaching the point where it would be able to destroy our ICBM and bomber forces on the ground. It also claimed the Russians would be able to detect and destroy our missile submarines, although it is not clear how this would be accomplished. Therefore, we were told that, by happy coincidence, military considerations required that the politically dangerous thick defense of the cities be withdrawn in favor of a politically safer thick defense of Minute-man ICBM sites in North Dakota and

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were also told that, within the Aeronautical Systems Division, the Project Engineer in the Landing Gear and Mechanical Equipment Division, Directorate of Airframe Subsystems Engineering, was responsible for reviewing and recommending approval of the design, development, and testing of the A-7D aircraft landing-gear equipment, including Goodrich's four- and five-rotor brakes.

The Project Engineer stated that he had reviewed and approved LTV/VAD's brake specifications which in his opinion were very good and exceeded the military specifications. The Project Engineer also stated that he had not witnessed any of the qualification tests of the four-rotor brake, and during August 1968 he recommended withholding approval of the qualification report, Q-6031. His recommendation was based on various specific irregularities noted during a review of the qualification report. This recommendation was forwarded by the Chief System Engineer to the Naval Air Systems Command, Washington, D.C.

The Project Engineer stated that he had requested Goodrich to furnish him with the raw data supporting its Q-6031 report during a meeting between Air Force, LTV/VAD, and Goodrich representatives in early October 1968. This request, he advised us, was not honored by Goodrich who claimed that the raw data was proprietary information.

Regarding proprietary information, attachment "E" to LTV/VAD purchase order P-237138 states that Goodrich reiterates it will provide all the data required by the prime contract pursuant to the provision of Armed Services Procurement Regulation 9-203(b). This provision sets forth the Government's "Rights in Technical Data" and provides, in part, for the Government's right of access to technical data resulting from the performance of an element of work specified in a Government contract or sub-contract.

The Project Engineer stated that, during the October 1968 meeting he had advised Goodrich that he would not approve the use of the four-rotor brake assembly on the A-7D aircraft. Subsequently, during another meeting, LTV/VAD informed the Air Force engineers that Goodrich was redesigning the brake assembly and would requalify the new design.

The Project Engineer stated that he closely monitored the qualification testing of the five-rotor brakes, was provided access to the applicable raw data, and reviewed Goodrich's qualification test report, Q-6046, which he found to be satisfactory. However, because of reported problems with brake adjusters the Project Engineer, in April 1969, recommended withholding approval of Q-6046 until satisfactory performance on the aircraft was demonstrated. On June 5, 1969, the Project Engineer stated that he had not yet recommended approval of Q-6046.

SCOPE OF REVIEW

We reviewed records and discussed the performance and qualification testing of the brakes for the A-7D aircraft with officials at contractor locations and military installations associated with the design and manufacture, administration, and testing of these brakes. These locations include The B. F. Goodrich Co., Troy, Ohio; LTV Aerospace Corporation, Vought Aeronautics Division, Dallas, Texas; Naval Air Systems Command, Washington, D.C.; Naval Plant Representative Office, located at LTV/VAD, Dallas, Texas; and the Aeronautical Systems Division of the Air Force Systems Command, located in Washington, D.C., and at Wright-Patterson Air Force Base, Ohio.

In addition, we discussed brake performance with a LTV/VAD test pilot at the contractor's plant and with military test pilots located at Edwards Air Force Base, California, and Patuxent River Naval Air Station, Maryland, and with officials of the Federal Aviation Administration.

EXHIBIT

DESCRIPTION OF THE DISCREPANCY	EXPLANATION BY GOODRICH'S REPRESENTATIVES
Reported data exceeded the basic recorded test results (analog data since digital data was not available).	Normally, digital recorded data exceeds analog readings. Therefore, using one's best judgment, a similar value from an earlier similar test would be used. In this instance, he felt, the reported value had been extrapolated from the preceding and subsequent stop test.
Do.	The basic recorded value was taken from the prior stop test since the stop times were identical. This constitutes a "rationalization of data" or exercise of professional judgment. Not discussed with Goodrich representatives due to the limited time for our review.
Reported data less than the basic recorded test results.	Do.
Data were reported; however, basic recorded tests results were not available.	Do.
Do.	Do.
Reported and digital data in agreement; however, digital data less than analog data.	Do.
Reported data less than basic recorded test results.	Do.
Reported data less than basic recorded test results. We also noted that the reported data were less, and the recorded test results were greater, than requirements of MIL-W-5013G, dated February 20, 1967, which was referenced by LTV/VAD specification number 204-16-37d.	Goodrich personnel could give no explanation.
Reported data less than basic recorded test results. Also, reported and recorded data exceed the requirements of MIL-W-5013BG, dated February 20, 1967.	Goodrich personnel could give no explanation.
Data were reported; however, basic recorded test results were not available.	No reading, due to the reaction of the thermocouple.
Do.	The recorder was not working properly.
Do.	Not discussed with Goodrich representatives due to the limited time for our review.
Reported data less than basic recorded test results.	Goodrich personnel could give no explanation.
Data were reported; however, basic recorded test results were not available.	Goodrich personnel expressed the opinion that the data had been rationalized from tests of another part on which the temperature had been monitored and which was considered comparable to the center stator.
Do.	Do.
Do.	Not discussed with Goodrich representatives due to the limited time for our review.

DATA DISCREPANCIES THAT MAY BE CONSIDERED SIGNIFICANT BETWEEN DATA SHOWN IN TEST REPORT AND DATA SHOWN BY GOODRICH'S TEST INSTRUMENTS

DATA IDENTIFIED IN TEST REPORT

Test description	Stop number	Parameter
Overload brake stops.....	49	Peak temperature of bead seat.
Do.....	49	Peak temperature of rotor.
Do.....	50	Peak temperature of bead seat.
Do.....	50	Peak temperature of tube wall.
Rejected takeoff brake stops.	1	Peak torque.
Do.....	2	Initial temperature of center stator.
Do.....	2	Peak temperature of center stator.
Do.....	2	Peak temperature of rotor. ¹

¹ The Goodrich project manager stated that the peak temperatures reached during rejected takeoff stop tests were academic since the brake is destroyed by heat as the result of the test.

Note: Reported data are the elements set forth in qualification test report Q-6031 on the 4-rotor brake. Basic recorded test results refer to digital data, which are digital printout tapes prepared only on brake pressure and torque parameters, and/or analog data, which are pen recorder strip charts prepared on all parameters.

ORDER FOR ADJOURNMENT FROM WEDNESDAY, AUGUST 6, 1969, TO THURSDAY, AUGUST 7, 1969, AT 11 A.M.

Mr. BYRD of West Virginia. Mr. President, I ask unanimous consent that when

the Senate completes its business on Wednesday next, it stand in adjournment until 11 a.m. Thursday morning next.

The PRESIDING OFFICER. Without objection, it is so ordered.

ORDER FOR RECOGNITION OF SENATOR HARTKE ON THURSDAY, AUGUST 7, 1969

Mr. BYRD of West Virginia. Mr. President, I ask unanimous consent that, upon the conclusion of the prayer and the disposition of the reading of the Journal on Thursday morning next, the able Senator from Indiana (Mr. HARTKE) be recognized for not to exceed 30 minutes.

The PRESIDING OFFICER. Without objection, it is so ordered.

PRESIDENT NIXON'S SUCCESSFUL TRIP ABROAD

Mr. DOLE. Mr. President, last night President Nixon returned from his trip to Southeast Asia and Romania.

Today, as a result of that trip the whole world breathes a little easier because war and destruction are perhaps a little further away and peace with honor is perhaps a little closer.

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Montana. These sites are located in relatively unpopulated western areas where the inhabitants have been introduced to nuclear sites years ago.

While politically safer than the earlier city defense, the new hard-point Safeguard defense is somewhat more expensive than the earlier system.

Mr. President, if a heavy city defense is now impossible, was it possible 2 years ago when its advocates tried to get us to spend \$50 billion on it? Was it possible this past winter, when military strategists tried to escalate Sentinel into a heavy city defense? If the proponents were wrong about city defense 6 months ago, why should one believe they are right about hard-point defense now?

Or is the question of whether or not any missile defense is possible of no concern to the ABM advocates? It may be that the convolutions the pro-ABM arguments have undergone result from honest technical reevaluations. Certainly, cities are less defensible than hardened missile sites. But it is hard to avoid the thought that Mr. Getlein may be right—that the main objective is to spend the money, and that rationales are changed purely as a function of what it is believed the public will swallow.

Currently, the public is being asked to accept three arguments for the Safeguard system. This system would consist of thin Spartan defense for the entire country, plus thick Sprint defense for 350 Minuteman ICBM's and about 10 ABM radars scattered around the country.

These are the three current rationales: First, Safeguard is alleged to protect our cities against an accidentally launched Russian missile. Second, it is alleged to protect our nuclear deterrent by guaranteeing the survival of at most 300 Minutemen in the event of a heavy Russian attack. Third, it is hoped that Safeguard can function as a bargaining counter in the coming United States-Soviet arms reduction talks.

In my view, none of these has much validity.

Safeguard would have little chance of protecting our cities against an accidental ICBM unless the latter conformed to highly unlikely restrictions. The ICBM would have to be devoid of all penetration aids, for even the simplest pen-aids render a Spartan umbrella useless. It is difficult to believe the Soviet Union would not respond to any American ABM by installing penetration aids on all or nearly all of its ICBMs and submarine-launched missiles. Furthermore, the more missiles we or the Soviets build—defensive or offensive—the greater is the danger of an accidental launch that could bring on war or the accidental destruction of millions of people.

The second, and most important, rationale is that Safeguard will protect our strategic deterrent.

The Secretary of Defense tells us our deterrent is in jeopardy. He tells us there is a serious possibility that within a few years the Soviet Union will have the power to destroy our Minuteman silos in a first strike, and to detect and destroy our missile submarines. These assumptions are sharply challenged by many of

our most respected scientific experts. Indeed, during his short period as Defense chief, Mr. Laird has shown a tendency to make doubtful assumptions as a basis for doubtful recommendations. For example, his description of the SS-9 as a first-strike weapon is challenged by competent authorities as a piece of guesswork or rationalization. Unless one assumes that Moscow has gone mad, a more likely assumption is that they see their nuclear weapons as a deterrent rather than as a first-strike instrument against the United States.

In May, Mr. Laird told reporters the manned orbiting laboratory was essential to national security; in June, he canceled it. I expect that whether or not the ABM is deployed, it will eventually be admitted by nearly everyone that it never was a very good idea.

There are two facts we must keep in mind as we consider the protection of our strategic deterrent.

First, it is impossible to destroy both our ICBM's and our manned bombers in a first strike. It is conceivable, although extremely unlikely, that the Soviet Union will develop the ICBM ability to take out our Minuteman ICBM's on the ground. But such an attack would give our bombers the 15-minute warning they need to become airborne and safely on their way to destroy the Soviet Union. It is possible, if extremely unlikely, that the Soviet Union will develop the ability to wipe out our bombers on the ground by using orbiting or submarine-launched missiles. These weapons may give us only a 3-minute warning, but lack the accuracy-payload combination necessary for an attack against hardened silos. Hence, such an attack would leave our ICBM's intact. On learning that our SAC bases had been taken out and that Soviet ICBM's had been launched and would strike out Minuteman bases in 10 minutes, the President would certainly launch the Minutemen immediately, thereby destroying the Soviet Union.

Thus, there is no way the Soviets could hope to strike the United States without incurring self-destruction.

Moreover, we have our submarine force, which is a full deterrent in itself. And Adm. Levering Smith, who commands it, tells us this deterrent is not in jeopardy, and will not be in the foreseeable future. I have been puzzled throughout the ABM debate that its advocates so seldom refer to the enormous deterrent we have in 41 submarines, each armed with 16 missile launchers, and each of those capable of devastating a large city.

So, a first strike seems highly unlikely. Second, the entire question of Soviet first strike capability is irrelevant to the ABM debate. It would be relevant only if we had reasonable confidence that ABM could neutralize this ability. We do not have that confidence.

Mr. President, militarily and technically, the crux of the matter is: Will the ABM do the job or will it not? Even if we restrict ourselves to consideration of defense of Minuteman sites, the overwhelming body of evidence suggests that it cannot offer meaningful protection.

I have heard it said "If we can put a man on the moon, then surely we can

build an ABM." But the analogy is not valid. The question is not "Can an effective defense be built against the present offense?" This might be possible, given enough time, although Safeguard does not appear to be such a system. But the real question is: "Can a missile defense be built that will be effective against the improved offense it will have to face by the time it is built?" For both the United States and the Soviet Union, the answer is most likely "No." The people working on offense are just as capable as those working on defense, and they have a very long headstart. In addition, their problems are inherently simpler.

There is no inherent principle that offense must always be stronger than defense. But the evidence is overwhelming that in modern nuclear weaponry, offense is stronger will remain so in the foreseeable future. Penetration aids, decoys, radar jammers, maneuverable warheads, and above all, multiple warheads give the offense an immense advantage.

If the Soviet Union builds up its offense to the point where it can threaten our hardened Minuteman silos, is it not likely that a modest further buildup would neutralize the Safeguard system? If the Russians have a first strike in mind, it is inconceivable that they would not take this further step.

From that point on, every time we built an additional ABM, the Soviets could counter by deploying a few additional MIRV warheads. Even if one assumes that a virtually impossible accuracy would enable each ABM to destroy an incoming attack missile, it would only be necessary to send one more offensive missile to a particular target than there were defensive missiles to defend it.

Of course, our offense enjoys the same advantage over the adversary's defense.

In short, we are being asked to build an ABM that would not work to protect a deterrent that is not threatened.

Mr. President, the antiballistic missile is not a question of national security; it is a question of national judgment. It is said the ABM presents the American people with a choice between butter and guns. It would be more accurate to say we have a choice between butter and a leaky maginot line that may well be obsolete before it can be constructed.

And as construction proceeds, the costs will mount. The ABM advocates would have us believe they will spend \$6 or \$7 billion for Safeguard. But defense contractors have a way of radically underestimating their costs, apparently with the tolerance of the Pentagon. If Safeguard follows the common pattern, it will cost several times the projected figure.

Already we are seeing private estimates of \$11 or \$12 billion. The official estimates went up \$1.2 billion overnight, when it was pointed out that one can't build an ABM system without warheads.

But more importantly, Mr. President, I want to go on record today saying that Safeguard is not an end but a beginning. If this hard-point defense is approved, the Pentagon will then remind us that it is hopeless to try to defend even a compact ICBM site without increasing the number of ABM missiles and radars many times; they will tell us national

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security demands we triple or quadruple the size of our system. Next will come hard-point defense for all ICBM sites and SAC bases, and finally heavy defense for the cities.

And when we have built all this, we will find ourselves with the complete heavy system the Pentagon has sought for years, we will find ourselves \$50 to \$100 billion poorer, and we will find ourselves less secure than ever.

Mr. President, I predict that if we approve this Safeguard system, we will see the Vietnam pattern repeated. In Vietnam the military strategists always told us they could not win the war unless they got so many thousand additional troops and were allowed to bomb such and such targets. When we gave them the troops and let them bomb the targets, and the war continued as before except for bigger casualty lists, their answer was always to come back with still bigger troop requests and longer target lists.

The fact is that a military solution to Vietnam's problems was never possible. This enabled the generals to claim correctly that their present forces were insufficient.

This is how it is likely to be with the ABM. No matter how much we appropriate, no matter how many ABMs we build, the Pentagon will tell us, quite correctly, that it is not enough. It will never be enough because, barring an unforeseen technological breakthrough, defense against heavy missile attack is and will remain impossible. Like Vietnam, missile defense is a bottomless pit. It will swallow as much as we pour into it with no dependable increase in our security.

And the ABM is like Vietnam in still another respect: its proponents argue that we owe the President as Commander in Chief the benefit of the doubt on such national security issues. But to approve the Safeguard on this basis would constitute a major abdication of congressional power and responsibility. We have had more than enough of that in recent years.

This is not the way to serve either the President or the Nation. For if the ABM is approved, over the years we shall see its cost increase and its ineffectiveness become more apparent. We shall see a bizarre and expensive new cycle of the arms race, and we shall see our neglected domestic needs and problems rise intolerably. And the administration will have to face the electorate encumbered by a costly blunder, just as the previous administration had to face the people encumbered by Vietnam.

As we approach the first major vote on the ABM, we would do well to remember the words of President Eisenhower's last state of the Union address:

Every dollar uselessly spent on military mechanisms decreases our total strength and therefore our security. We must not return to the "crash program" psychology of the past when each new feint by the Communists was responded to in panic. The "bomber gap" of several years ago was always a fiction, and the "missile gap" shows every sign of being the same.

Mr. Eisenhower was right about the "missile gap." The present "security gap" is equally fictitious. We have less cause

to fear what the Soviet Union can do to us than what our own fears may make us do to ourselves.

Mr. TOWER. Mr. President (Mr. Dole in the chair), unfortunately, too often in this debate, the analogy of the ABM with the maginot line has been made. I think it is a false analogy. It conveys an erroneous impression.

What the ABM is designed to do is to protect an offensive system. Everyone knows that when troops go out on offensive operations, when they bivouac at night they draw up a defense perimeter. That can hardly be considered an analogy to the maginot line.

What we propose to do here is to develop and ultimately to deploy a system that will defend an ability to mount an offense.

THE APOLLO 11 MISSION TO THE MOON

Mr. ALLOTT. Mr. President, Milford E. Shields, poet laureate of the State of Colorado, has written a poem with respect to the men on Apollo 11 and their great achievement in landing on the moon.

The poem has a rare quality which I believe commends itself to the attention of every Senator, and I therefore ask unanimous consent to have the poem, entitled "He Walks With God," printed in the Record.

There being no objection, the poem was ordered to be printed in the Record, as follows:

HE WALKS WITH GOD

He walked with God, his name was man,
He left his tracks upon the moon;
He walked in love and showed the plan
Where men could walk and move in tune.

He walked in joy, he walked in peace,
He walked in hope, he walked in truth;
His walk has made all men increase,
His walk has brought a buoyant youth.

His tracks are pointed for the stars
As he unfolds the greater plan
Where mankind walks on tranquil bars—
He walks with God, his name is Man.
MILFORD E. SHIELDS.

JOSEPH McCAFFREY'S 25TH ANNIVERSARY

Mr. MATHIAS. Mr. President, what is the measure of the passage of time in a man's life?

We mark the passing of time with clocks, calendars, and anniversaries, but they do not truly measure what effect time has on a man and his contributions to the world.

Not long ago, someone reminded me that "time is life itself." Thus, it seems, it is not the passage of years that is worth commemorating but, rather, what those years have continued in the way of effort, aspiration, and achievement.

For some man, a silver anniversary may represent only a wastebasket full of old calendars. But this year, we are fortunate in celebrating a 25th anniversary which has meaning in the finest and fullest sense.

I am referring, of course, to Joe McCaffrey's 25th year of broadcasting, of broadcasting news from Washington to the American people.

During that quarter of a century, Joe McCaffrey has won the greatest reward that any profession can offer; namely, the confidence of the people.

When Joe McCaffrey reports it, the people know that it is so.

This is more than a personal reward. As we know in the Senate, the news media are a vital and integral part of modern, representative, democratic government.

Without reporters of Government affairs in whom the people have confidence, our American Republic would not be what it is today.

Thus, in joining many others who have congratulated Joe McCaffrey on his 25 years of service, I also want to thank him for the important part that he plays every day in the successful operation of his Government, and of the institutions which support it.

ORDER OF BUSINESS

Mr. BYRD of West Virginia. Mr. President, I suggest the absence of a quorum.

The PRESIDING OFFICER. The clerk will call the roll.

The bill clerk proceeded to call the roll.

Mr. BYRD of West Virginia. Mr. President, I ask unanimous consent that the order for the quorum call be rescinded.

The PRESIDING OFFICER (Mr. MATHIAS in the chair). Without objection, it is so ordered.

MESSAGE FROM THE HOUSE

A message from the House of Representatives by Mr. Bartlett, one of its reading clerks, announced that the House had passed the bill (S. 912) to provide for the establishment of the Florissant Fossil Beds National Monument in the State of Colorado, with an amendment, in which it requested the concurrence of the Senate.

ENROLLED BILL SIGNED

The message also announced that the Speaker had affixed his signature to the enrolled bill (H.R. 9951) to provide for the collection of the Federal unemployment tax in quarterly installments during each taxable year; to make status of employer depend on employment during preceding as well as current taxable year; to exclude from the computation of the excess the balance in the employment security administration account as of the close of fiscal years 1970 through 1972; to raise the limitation on the amount authorized to be made administration account by the amounts so excluded; and for other purposes, and it was signed by the President pro tempore.

AUTHORIZATION OF APPROPRIATIONS FOR FISCAL YEAR 1970 FOR MILITARY PROCUREMENT, RESEARCH AND DEVELOPMENT, AND FOR THE CONSTRUCTION OF MISSILE TEST FACILITIES AT KWAJALEIN MISSILE RANGE, AND RESERVE COMPONENT STRENGTH

The Senate resumed the consideration of the bill (S. 2546) to authorize appro-

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priations during the fiscal year 1970 for procurement of aircraft, missiles, naval vessels, and tracked combat vehicles, and research, development, test, and evaluation for the Armed Forces, and to authorize the construction of test facilities at Kwajalein Missile Range, and to prescribe the authorized personnel strength of the Selected Reserve of each Reserve component of the Armed Forces, and for other purposes.

NEED FOR CONTINUED ABM RESEARCH BEFORE
DEPLOYMENT

Mr. ELLENDER. Mr. President, I have for months made it publicly known that I oppose congressional authorization for deployment of the Safeguard ABM system which has been recommended by the administration.

I wish to make it crystal clear at the outset that I do not oppose more research into the feasibility and workability of Safeguard or of any other ABM concepts. I intend to support either the so-called Cooper-Hart amendment or some provision similar to it which authorizes continued research and development of the Safeguard system.

Mr. President, before proceeding to outline the demerits of the ABM, I thought I would ask the indulgence of the Senate to say a few words about the various deterrents that we now have to protect our country against a surprise nuclear attack. To hear some persons talk, it would seem that without the ABM we will be defenseless against the world.

I can well remember when, 13 or 14 years ago, we built the DEW line. That line was established notwithstanding the fact that at the time there was evidence to indicate that the Russians were more or less giving up the manufacture of long-range bombers.

The DEW line cost us \$1.6 billion. Although it is obsolescent, it is still being used. In order to operate this facility, in order to protect against bombers, we spend \$38.9 million yearly on the DEW line alone.

It is operated, of course, by the Air Force. Outside of civilian employees, it requires 34 officers and 19 enlisted men.

In addition to the so-called DEW line, we have the ballistic missile early warning system, known as BMEWS. The cost of operating that warning system is \$55.3 million a year. Over the years, it has cost the taxpayers \$1.6 billion. That system is operated by the Air Force. Aside from the civilian employees, 134 officers and 734 enlisted men are used.

Aside from these, Mr. President, we have a variety of other facilities in what is called the SAGE system, costing 220.2 million annually. That system includes five types of facilities: combat centers, direction centers, BUIC centers, surveillance radars, and communications to integrate the above facilities.

To operate the combat centers, that I previously described, requires 67 officers and 340 enlisted men.

The second phase—that is, the direction centers—requires 859 officers and 3,040 enlisted men. That does not include the civilians who are employed at those centers.

The third system, the BUIC—the backup interceptor control—requires 260 officers and 818 enlisted men.

The surveillance radars require 616 officers and 10,988 enlisted men. They are aside from the civilians who are employed at the various areas.

To operate the communications which integrate these facilities—part of the NORAD system—we spend each year \$30.3 million.

In addition, we have the NORAD Operations Center, which connects all of the facilities I have just mentioned to a central command post located somewhere in the Rocky Mountains near Denver. To connect and coordinate these various facilities, we have spent a total of \$191.6 million, with an additional \$36.6 million budgeted for fiscal 1970.

I am not quarreling at all about the amounts of money or the number of people who are employed to administer the various facilities; I simply want to show that the Department of Defense has been for many years doing a thorough job of looking into and testing a multitude of warning systems which enable our offensive deterrent forces to maintain their credibility.

In addition to that, Mr. President, we have the over-the-horizon radar system, by which we are able to detect immediately a missile launch from Russia.

We also have several other warning devices which I am not privileged to mention.

The cost of the facilities I have mentioned aggregates almost \$8.6 billion, with an additional \$371 million budgeted for fiscal 1970.

So, Mr. President, we have not been timid. The Defense Department has not been timid in providing us with all that it desired for protection by warning.

In the event that these warning systems ever give advance notice that we are under bomber or missile attack, we have the awesome power of our Minuteman and Polaris missiles, together with the SAC bombers to retaliate against any aggressor.

Mr. President, there seems to be no end to the research that we are capable of doing to improve these systems and to develop new ones. I am for that. I am very hopeful that some day we shall be able to find some one kind of instrumentality that will take the place of all these we now have. It is possible. Serving on the committee that passes on the research money, I can say that, aside from the ABM research funds that are being provided in the pending measure, we have approved, in another appropriation bill, a small sum, not too large—only \$50 million—to carry on further research on one aspect of the ABM.

Mr. President, we have in another portion of the bill a sum which is not very large, only \$60 million, in order to find ways and means of hardening the silos into which we put our Minuteman.

Mr. President, aside from the land-based and the sub-launched missiles and all of the warning systems, we have 528 bombers, 78 of which are medium, and 450 of which are heavy bombers. In addition,

there are hundreds of carrier-based fighter bombers capable of carrying nuclear payloads against anyone who might attack us.

I point this out so as to dispel the notion that to delay deployment of Safeguard will leave us defenseless against nuclear attack. On the contrary, we have a variety of deadly systems spread around the world and representing an investment of hundreds of billions of dollars which, in my opinion, give us the advantage of not having to take the desperate and extravagant risk of deploying an unproven ABM system.

The vast amount of "overkill" represented by all of these systems which have been built up over the past two decades should serve to give us breathing room for further testing and research into the concept of Safeguard before we talk in terms of actual deployment.

Mr. President, before I turn to my prepared statement, I should like to read from the 1970 defense budget and defense program which was issued just before Secretary of Defense Clark M. Clifford was succeeded by Mr. Laird. On page 50 of that document, after reciting things that had been done along the same lines I have been speaking of, Mr. Clifford states:

Thus, by any definition of the term, our "Assured Destruction" capability now and over the next several years should be fully adequate even against the highest expected threat projected in the most recent NIE (National Intelligence Estimate).

Mr. Clifford indicated that we were well protected. And there is no doubt in my mind, from what I have heard, that with the weapons we now have at hand, we could destroy every city in Russia. In fact, I do not doubt that we could destroy the whole world if we were to use all the nuclear warheads in our arsenal.

With this background in mind, I would therefore like to discuss some of my reasons for opposing immediate deployment of the Safeguard system in the hope that my observations will have some constructive effect on the great debate which has evolved, not only in the Congress, but also throughout the land, regarding the fiscal, the strategic, the military, the psychological, the political, and the scientific aspects of this most complex issue.

As a further prelude to my remarks, may I point out that my observations as to fiscal aspects of the ABM program are made from the viewpoint of a fiscal conservative.

I have long carried on a campaign—sometimes a one-man campaign—to cut nonessential Federal spending wherever possible. I am sorry to observe that many of my fellow fiscal conservatives who, like me, are appalled at waste and non-essential spending in the broad spectrum of bureaucratic social programs, refuse now to apply their fiscal conservatism to the Military Establishment in evaluating the benefit-cost ratio of Safeguard.

I, for one, do not intend to exempt the Military Establishment from my motion that the wild spiral of Federal spending must be curbed where it involves nonessential and wasteful programs. I would suggest, therefore, that opposition

to this ABM proposal is a noble cause for those on both sides of the aisle who, like me, have for years been fighting against nonessential Federal spending, against waste, against the resultant unbalanced Federal budget, and against an ever-increasing national debt.

May I point out further that my observations as to the military aspects of this debate are not those of a casual onlooker, but are those of a long-time member of the Senate's Subcommittee on Defense Appropriations who has attempted for years to be a conscientious student of our Nation's military operation.

Nor are my comments the remarks of a "dove" insofar as that term has been used vis-a-vis the Vietnam conflict, for I believe that we must see that conflict through to the sort of honorable and meaningful conclusion which will deny the North Vietnamese the intended fruits of their aggression upon neighboring countries.

Neither are my words those of one who ascribes to the unrealistic arguments that some propose for massive unilateral disarmament. Unfortunately, the kind of world we live in demands that we remain, as President Nixon said in his inaugural address, "as strong as we need to be for as long as we need to be."

With these basic considerations in mind, I shall now list several points which seem, to me, to argue against deployment of the ABM system which has been proposed by Mr. Nixon.

First, there is a very substantial doubt within our scientific community that Safeguard will function properly once its seven component parts are put together and are called on to interreact as a system. This evaluation seems to be based in part on suspected inadequacies of the system itself, which is fantastically complicated and which cannot be fully tested except in the event of nuclear war.

Each of the major components presents a very difficult engineering and development project in itself. The Spartan missile, the Sprint missile, the Parimeter Acquisition Radar, the Missile Site Radar, the Master Computer, the Command and Control system, and the atomic warheads—all are at varying stages of development, and none have been perfected or tried out in conjunction with all of the other parts.

As an example of the technical problems involved in deploying and keeping such a system in working order, capable of firing many missiles at a minute's notice any time of any day or night, I cite the rather embarrassing experience we have had recently with one of our supposedly well tested, highly reliable Minuteman missiles.

The Minuteman case involved a test scheduled for October 1966, which failed and had to be rescheduled for later that same year, only to fail again. It was attempted again—and failed again—late last year, and only a few weeks ago failed for the fourth consecutive time. First, there was trouble with a resistor, then with a capacitor, then with a pin in a connector, and finally with some other faulty component. In a way, each

of these was a minor malfunction, but each was quite enough to disable the missile and prevent its launch—even after lengthy and highly elaborate preparations had been made in each case to insure a successful launch. I am speaking of the Minuteman.

I cite this incident not to embarrass the military or to belittle our ICBM program but to stress the point that in such a fantastically complex operation, involving literally millions of electronic components, we are foolishly optimistic to presume that even a relatively simple, fully proven offensive missile such as Minuteman will work reliably on a moment's notice.

The Safeguard system presents problems which are far more staggering than those of the Minuteman system, particularly when we consider that, unlike our Minuteman, Polaris, and other offensive missiles, it will have to operate on a "hair" trigger for weeks, months, and years at a time.

I contend that with such a complicated system, we should, by all means, be sure of what we are doing, rather than take a chance. That is exactly what we will be doing if we deploy the present system. It was known as the Nike-Zeus at one time, then as the Nike X, and then the Sentinel—all the same system.

I can well remember that President Eisenhower refused to go along with the Nike-Zeus. There has been very little added to that system since that time.

As the minority report of the Armed Services Committee so ably explains:

Safeguard is the most complicated technological development ever planned for operation by man. The system consists of three major component parts: (1) missiles (2) radars (3) computers.

Although we have had a long and therefore disturbing series of failures in missile testing, including another Minuteman failure only last week, there is no reason to conclude that the two Safeguard missiles, the Spartan and the Sprint, will not work. But there is reason to doubt that the long-range radar (PAR) and the short-range radar (MSR) parts of which have not been built, let alone tested, will operate successfully together in that almost instantaneous manner which would be necessary in case of sudden attack; and there is even more reason to doubt that the computer, which has been neither built nor tested, and which is admittedly far more complicated than any computer ever yet attempted, will operate properly when called upon to do so.

Finally, it is logical to consider whether, even if these three separate components would operate properly as separate units, would they so operate when combined? For obvious reasons, the testing of any joint operation has not been possible.

Second, and also on the technical question, is the contention by many experts that it is relatively easy to take counter-ABM measures, either by disrupting the radar and guidance components of the system, by flooding the system with the decoy missiles, or by sending in a very heavy overkill of actual warheads.

In other words, even if the Safeguard system does not fail of its own innate disabilities—as the Minuteman missile did on four successive occasions as reported by me earlier—then there are a multitude of tactics that the enemy can take

to overwhelm and bypass its capacity to handle incoming missiles.

In this regard, I know that our own Department of Defense and our own ICBM experts are entirely confident that they can penetrate the ABM system which the U.S.S.R. has deployed in a limited fashion around Moscow. There are apparently five or six offensive maneuvers or tactics available to us, any one of which will probably foil the Soviet ABM and the combination of which will surely do so.

Basically, what I am contending in this second argument is that offensive missile technology has a fundamental and perhaps insurmountable advantage over defensive missile technology. If that is, indeed, the case we should all want to see a system fully proven and fully tested before we go forward on the bold assumption that it can overcome the built-in handicap it faces in trying to knock down a swarm of incoming warheads.

As defensive technology advances, so will offensive weapons technology and so will the sheer force of numbers of deliverable warheads. All of this, I feel, is certain to result in continued confidence on both sides in our respective offensive nuclear forces and continued doubt as to the reliability of the present generation—and indeed the present concept—of ABM forces.

On this point, I have just this week viewed a classified film produced by the General Electric Co. before the ABM question became such a heated national issue and while GE was promoting the notion that we should expand our offensive rather than our defensive missile systems. The film makes a very convincing demonstration of obvious, fundamental, and perhaps insurmountable advantage which offensive missile technology has over defensive missile technology. I stress the word "missile" because in a later point I will suggest that there may be alternatives to the very concept of missile versus missile.

Third, there is a closely related point which is perhaps technical in nature but which really involves nothing more than a bit of simple grade-school arithmetic. It has to do with the number of ABM missiles our system would have, compared to the number of ICBM missiles it would be guarding against.

As now proposed, by 1974, the Safeguard system would have 100 missiles at most, ready to be launched at incoming warheads. As I understand it, about half of these would be the long-range Spartan and half the short-range Sprint missiles.

For the sake of demonstrating my point, let us use this round figure of 100 ABM missiles deployed in 1974. We could use any number, as far as that is concerned. We could use 1,000 or 2,000.

The scientists—both opponents and proponents of Safeguard—seem to agree that an 80 percent reliability factor in such a set of missiles would be the very upper limit of what could be expected. In other words—assuming that there is no catastrophic failure with the whole system in which case no missiles would fire at all—everyone would be highly pleased if 80 of these 100 missiles got off the

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ground when the proverbial red button is pressed.

Judging from the recent record of the Minuteman tests, this is being extremely generous; but for the sake of the argument, let us assume an 80-percent reliability.

The next step is to estimate the degree of effectiveness of each of these missiles which does succeed in getting off the ground. In this regard, the experts seem to agree that it would be highly satisfactory if half of these were to find their target. This would mean that one out of every two Safeguard missiles would destroy an incoming warhead—and effectiveness factor of 50 percent.

When we apply this generous figure to the 80 Safeguard missiles which get off the ground, we find that they are able to knock out a maximum of 40 incoming warheads. By the proponents' own standards of performance, this is the result which could be expected in 1975 if the system works. My question is: Even if Safeguard works, does it give us anything really worth having and, if not, should not we be looking elsewhere for the kind of protection that is worth having.

As I read the figures which have been offered by the proponents, the U.S.S.R. will have about 2,500 ICBM's by 1975. I think that is the precise figure used by Secretary Laird on April 25 of this year. In addition, the proponents estimate that the Soviets will have at least 1,000 sub-launched missiles by 1975. This is a grand total of 3,500 missiles. Judging from "scare" statements to which we were subjected in the executive session on July 17, those estimates may now be substantially higher.

If we then assume that by 1975 a respectable number of these have MIRV potential, the number of warheads may well be 5,000, 6,000, or 7,000. And how many will we be able to knock down? Forty at most—and even this pittance assumes many excellent performance characteristics for Safeguard which the system might not have and probably does not have.

What we will have is a 1- or 2- or 3-percent return on an investment in which a 95 percent return would still leave us devastated. Of course the long-range plan is that we will then have to deploy more and more Spartan and Sprint missiles so as to get a better return, but I say that no matter how many we deploy, the same basic arithmetic will apply.

If, for instance, we spend \$50 or \$100 billion to expand Safeguard 10 times over to deploy not 100 but 1,000 missiles by 1980, the Soviets by that time will probably have in excess of 5,000 missiles with perhaps 15,000 warheads. We would be at even greater disadvantage than in 1975. If 800 of our 1,000 ABM missiles get off the ground and if half of these were effective, we would knock down only 400 incoming warheads among a possible 10, 12, or 15 thousand. The exact number is really unimportant because all it would take to devastate this country is about 100 well-placed warheads.

In my judgment, it is for this very reason that the Soviets have stopped deploying ABM sites around Moscow.

Their system, which is probably less sophisticated than Safeguard and similar to our 1960 Nike-Zeus system, is subject to the arithmetic I described above. The Russians have apparently done their homework and have seen the pointlessness of trying to defend Moscow from the kind of attack which we are capable of launching.

It is basic logic that the more big-bad-wolf stories the proponents tell about how rapidly the U.S.S.R. is deploying ICBM's and launching missile submarines, the more useless and preposterous becomes the plan to defend against them by means of the Safeguard system—even one that has 10 or 20 times the number of sites and missiles now envisioned.

It is this undeniable ability to overwhelm the enemy's ABM system, to kill him and to devastate his cities and his industry several times over which we refer to as "overkill." In considering this subject we should remind ourselves that a one megaton bomb is 50 times the power of the Hiroshima bomb and that by the time the Safeguard system is proposed to be operational as a deterrent to a Soviet attack, our varied offensive systems could conceivably deliver as much as 5,000 megatons on the Soviet Union in a total nuclear exchange.

That would be the equivalent of 250 thousand times the destructive force of the Hiroshima bomb. If we related that awful power to the 100,000 casualties at Hiroshima, this amount of megatonnage would inflict 25 billion casualties—seven times the population of the earth.

To anticipate all of the contingencies which might be raised by the proponents, let me put it in ultra-conservative terms. If only one-tenth of our megatonnage got through and if that megatonnage caused only one-tenth the relative number of casualties inflicted at Hiroshima, they would still result in 250 million casualties—equal to the entire population of the U.S.S.R.

By the same token, the Soviets could dump and would dump enough megatonnage on this country and do just as thorough a job of extermination on us. If the nuclear blasts did not do the job instantaneously, the radiation, the long-term fallout and the chemical and germ warfare which would follow would certainly complete the job.

Fourth. As a logical extension of my observations relative to "overkill," I wish to challenge and to discredit the line of reasoning engaged in by the proponents of Safeguard that the Soviet Union is scrambling to achieve a nuclear superiority with the view of attacking the United States as soon as it can inflict substantially more damage on us than we can on them.

In essence, this is the fear tactic which is being exploited when the proponents of Safeguard raise the first-strike argument. They seem to preach the notion, and indeed the presumption, that if the U.S.S.R. ever attains nuclear superiority, she will attack us on the theory that we will get the worst of a nuclear exchange and that nuclear war would, therefore, be in the Soviet's best interests. Their presumption is ill founded.

In the most basic and most frightful of terms, there are three great presumptions—each of them highly unlikely, if not impossible—which the U.S.S.R. would have to make in order to attack us first with the expectation of being able to survive our counterattack.

First. They would have to presume that as a result of their attack and as a result of whatever ABM defense they might have, not enough of our nuclear warheads would get through to cause them an unacceptable level of immediate physical damage.

Second. Along with the first highly unlikely condition they would also have to presume that the plant, animal, and human life in their country and indeed in the Northern Hemisphere could survive the fallout and radiation effects of the several thousand nuclear explosions which would occur in an all-out war—no matter over whose territory the most bursts occurred.

Third, they would finally have to presume that we would not resort to bacteriological and chemical warfare of a sort that can and probably would exterminate mankind from this planet. They would even have to be sure that whatever germ or chemical they released on us would not eventually drift around to their side of the world and exterminate them too.

The "first-strike" argument of the proponents is so short-sighted, so uneducated and so narrow-minded that it casts the Soviets in the role of a raving madman who has neither any intelligence nor any will to survive. A sane man could not and would not stake his life on any of these presumptions, much less on all three.

Believe what else you care about the Soviets—they are intelligent, they do want to survive, and they do not want the kind of war about which I have been talking.

In addition, the very concept of "first strike" and its attendant risks of complete devastation and annihilation are at total variance with the Communist view of history. A basic tenet of the Communist "religion" is the fundamental belief that communism will prevail over capitalism as a matter of fate, as a matter of history. They are woefully wrong in this belief, but they do most deeply believe it; and to risk their own nuclear extermination for a goal which they firmly believe can be won merely by waiting and by pursuing tactics of less catastrophic potential.

In this regard, let me quote one of the most respected military leaders in our country's history to support my belief that the Soviets fear us just as much as we fear them and that neither has the intention of picking a nuclear war with the other.

Gen. Douglas MacArthur once said that world tensions were kept at a fever pitch by two great illusions:

The one a complete belief on the part of the Soviet world that the capitalistic countries are preparing to attack them, and the other, a complete belief on the part of the capitalistic countries that the Soviets are preparing to attack us; both are wrong.

In so far as nuclear warfare is concerned, General MacArthur was absolutely right; and when they speak of "first-strike," proponents are resorting to fear rather than to reason in a desperate attempt to promote the cause of the Safeguard system.

Fifth, there is the convincing and ironic argument offered by many of the experts that such an ABM system will actually backfire by causing the U.S.S.R. to multiply its offensive nuclear weaponry far beyond what it would if we had no ABM.

I respect that argument because I know that is precisely what we are doing in response to the alleged deployment of a Soviet ABM system around Moscow. To counter the effect of an enemy's ABM system, the military strategists simply program two or three or 10 times the number of warheads that would otherwise be required to do the job on a given target. The result is obvious. If ABM fails of its own disabilities or is out-manuevered by the enemy, the supposedly protected target suffers two or three or 10 times the destruction it might otherwise have received.

As one of the experts on the subject has explained in very mild, reasoned and restrained language—almost to the point of understatement:

If our potential enemy takes no steps to compensate for the deployment of ABM, some damage and casualty reduction could be expected. But the assumption that such steps would not be taken appears highly improbable if the adversary is the Soviet Union which has the means to take them and will feel compelled to do so to preserve its secure deterrence posture. In fact, over-reaction as judged by the past, would be the norm, particularly when the uncertainties about performance are as great as with the ABM system. The probable responses include increases in the numbers of offensive missiles and the deployment of MIRV's with their destabilizing effect. The development of the latter we ourselves decided to undertake upon learning of the start of the deployment of the Soviet ABM. These steps induce obvious counteractions by the other super-power and the net result could easily be another major expansion of offensive missile forces and an accompanying uncertainty about the security of our deterrent.

Under this sort of logic—and I think it is eminently sound logic—this ABM system could be less than useless. It could be highly counterproductive, and at a cost of untold billions of dollars.

To those who contend that the Soviets will continue to manufacture and to deploy missiles at a rapid pace regardless of what we do on the Safeguard question, I say, "It ain't necessarily so."

From my many travels to the U.S.S.R. and my hundreds of conversations with officials at all levels of their government, I know that they, too, are constantly engaged in an internal tug-of-war over military policy and military priorities.

I say that there is a group within the Soviet Government which would like to cool down the arms race, free their country of the back-breaking burdens of an uncontrolled missile race. They would prefer to put the country's emphasis on agriculture, on consumer goods, on housing, and on modernization of Russian industry at all levels. They know that these are the areas which, if neglected

for too long, can bring the Russian people terrible hardship and could even result in civil unrest.

But what happens when these moderate elements attempt to steer the U.S.S.R. away from the arms race by leveling off missile systems development and deployment? I will tell you what happens:

The super hawks and the militarists plow them under with scare stories about Safeguard, Poseidon, Minuteman III, MIRV, AMSA, and so forth. They point out how the combination of all of these mighty American systems will give the "friendship militarists" of the Pentagon a "first-strike" capability by 1975, unless the Soviet military effort is redoubled, unless hundreds more of the SS-9 missiles are deployed, unless 50 more missile subs are launched—unless, unless, unless.

It seems to me that we have an opportunity to strike a blow for the growth of this moderate element within the Soviet leadership by delaying deployment of what is really an unworkable ABM system anyway, and giving them the elbow room to point out that in the absence of an American ABM system, Russia does not really need quite as many SS-9's, MIRV's and missile subs and that the resources of the country ought to be diverted elsewhere.

This sort of change of pace would not occur overnight in the U.S.S.R. I am not so unrealistic as to think that. But I do know that heavy Soviet expenditures on these expensive weapons programs are seriously retarding the Russian economy. In the long run, their natural tendency would be to put more emphasis there, rather than on limitless expansion of missile forces. All that I am saying is that we should hasten this process by avoiding deployment of a system that is really useless to us but whose mere existence can easily be used by the super-hawk group within the U.S.S.R. as a pretense for further escalating the arms race.

Here is our chance, perhaps, to break the action-reaction cycle on which the arms race feeds itself. Even if it is an outside chance we should take it, particularly, since we can do so without endangering our own security. All we would have to do, for the present at least, is to limit ourselves to testing a system which in the final analysis we may find does not work well enough to deploy anyway.

Sixth, I wish to raise the issue of the fiscal and budgetary impact of the Safeguard ABM proposal. As a longtime member of the Defense Appropriations Subcommittee, I know from experience that the "six or seven billion dollars" estimate of the cost of the "thin" ABM system will, in my opinion, escalate to a sum several times that amount.

Once deployed, this system's substantial and obvious inadequacy will almost certainly result in the gradual evolution of a "thick" system whose cost could run from \$60 or \$80 billion to the \$400 billion which has been projected by Senator STUART SYMINGTON, a former Secretary of the Air Force.

As one who has always tried to be a watchdog against excessive, unwise and nonessential spending, I see the Safeguard ABM as a bottomless pit for my

constituents' hard-earned tax dollars. As such, I view it as an incurable sore on the efforts that some of us are making to balance our budget, reduce the tax load and return to fiscal responsibility.

As I stated in my introductory remarks, I find it disappointing that most of my fellow fiscal conservatives who, like me, are constantly using the paring knife on wasteful social programs refuse now to apply their fiscal conservatism and good sense to the military establishment.

We are now spending \$80 billion a year—\$220 million a day—on military programs, and in my opinion, the Safeguard system could very quickly expand this sum beyond the \$100-billion-a-year level. As a fiscal conservative, I fear that when combined with ever-increasing demands for medical, welfare, and "social" programs in general, this level of military spending will eventually wreck our economy.

This is the sort of development which might well bear out the prediction of one of the founders of the Soviet Communist State who predicted that the capitalist nations would eventually "spend themselves to death." Once the system is deployed, it will serve as a bottomless pit for countless billions of dollars which our over-burdened budget, and our over-burdened taxpayers, cannot afford.

In this regard, I know that once Safeguard is deployed, it will be increasingly difficult for this body to pass objective judgment on its workability. In such a heated legislative battle as this—in which the President, the Pentagon, and so many proponents are putting their reputations and their sacred honor on the line, insisting that Safeguard will work—there will be a great, politically-inspired reluctance on the part of many to admit at some time in the future that they were wrong and that Safeguard is, indeed, an Edsel.

The tendency, I fear, will be to pyramid a mountain of fundamentally unworkable, unproductive, and extremely expensive ABM hardware rather than admit error and waste. In face of such a possibility, we must take a "go-slow" attitude about deployment—until we know for certain that we do want to deploy this particular system.

Another example, in which I made unheeded recommendations to "go slow," involves our Polaris submarine fleet which has been expanded at a maximum rate over the several years and which is now having to be converted to handle the larger Poseidon missile rather than the Polaris missile. We have known for several years that Poseidon was on its way and that Polaris would soon be "obsolescent" by today's standards.

Of course, it would have been a mistake to build no Polaris subs at all while waiting for the perfection and deployment of Poseidon; but by the same token, a great savings to the economy and to military spending could have been realized by going slow on the Polaris-type subs and waiting to put our money into the Poseidon-type sub which we knew was coming.

Instead, we went full speed ahead with the Polaris subs and we are now having to spend \$50 to \$60 million apiece to con-

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vert 31 Polaris submarines to the Poseidon system. This conversion plan alone will cost \$2 billion—a huge sum which could be spent instead to purchase a number of new Poseidon-type subs.

I can easily visualize "secret" memorandums floating around the Pentagon in 1979 which suggest that the best thing to do with Safeguard is to sink it in the ocean—the solution proposed in 1969 for our older Polaris submarines—rather than be saddled with its huge and pointless costs of operation and maintenance.

It is the old question of "haste makes waste" and in my opinion we must not make that mistake vis-a-vis the gigantic Safeguard program. If we do, we are likely to find ourselves with an outrageously expensive white elephant on our hands which is not convertible to anything at all—at a great and damaging cost to our economy.

Seventh. In discussing research and development, I find a most disturbing aspect to the manner in which the Safeguard system is being handled vis-a-vis the normal procedure of developing, testing, procuring, and deploying major weapons systems.

As a member of the Defense Appropriations Subcommittee, I learned long ago that there is a set procedure by which a weapons system must grow from the status of an obscure scientific concept to the status of deployment. Experience has proven that the more complicated the system, the more vital it is not to skip or not to violate any of these successive steps.

In a nutshell, these stages of R. & D. are: Basic research, exploratory development, advanced development, engineering development, operational systems development, and management and support.

With all its priority, costing, and rushing ahead, even the Manhattan project followed the five R. & D. steps with the rather special exception that there was only the one Alamogordo Trinity Testing. If this test had not been near fully successful, the two flights from Tinian would almost certainly not have left as they did.

The nuclear sub project of Admiral Rickover, and the Polaris missile project of Admiral Raborn similarly followed the five R. & D. steps carefully. The dangers involved made it natural that none of the five steps were omitted, although clearly the project work was rushed. An untried reactor would never have been considered by Admiral Rickover for procurement and deployment. An untested Polaris missile would never have been approved for massive procurement by Admiral Raborn. Yet, this is just the sort of hop-skip-jump procedure which the Defense Department is following with regard to the infinitely more complex Safeguard system.

The only cases of which I have been aware of successful attempts to by-pass any of the normal five R. & D. steps involve the B-29 program, the Russian T-34 tank development program in the early 1940's, and the British "Mark I Star" radar system.

All other systems which have attempted to violate the five R. & D. steps

in one or more ways, instead of saving time, have become grossly expensive or completely unworkable, or both. Some celebrated cases today involve the M-16 rifle and the TFX aircraft. But the worst current example is probably the combustible casing for the Sheridan tank. As a result of faulty R. & D. procedures, we now have a billion-dollar tank without an artillery shell that can safely be fired from its gun.

In the case of the Safeguard system, my observations are that the system has proceeded only to the third stage of development, which, according to armed services procurement regulations is called advanced development, a stage which is not far enough along the line to permit procurement or deployment of hardware for service use.

Mr. President, I ask that certain excerpts from part 2, title 4, section 201 of the Armed Forces procurement regulations be printed in the RECORD at this point in my remarks so that I might then refer to some of the language contained therein.

There being no objection, the excerpts were ordered to be printed in the RECORD, as follows:

4-201 DEFINITIONS

(a) The following definitions of the term "research and development" are those set forth by the Department of Defense for the reporting of research, development, and engineering program information, and are primarily designed for program control. To enable procurement personnel to understand the meaning of these words as used by research and development personnel, the definitions are set forth here for information purposes. As the term "research and development" is used in this Regulation, it ordinarily encompasses only the first four of the categories set forth below. The definition set forth in (5) and (6) are not likely to coincide with the meaning of "research and development" as that term is used for procurement purposes. For example, "military construction of a general nature unrelated to specific programs", as included in (6) below would not be within "research and development" for procurement purposes in the case of construction of recreation facilities at an installation used exclusively for research and development. The facts of a particular case, however, may be such that (5) and (6) below would include a procurement which satisfies the procurement meaning of the term research and development.

(1) *Research*—Includes all effort directed toward increased knowledge of natural phenomena and environment and efforts directed toward the solution of problems in the physical, behavioral and social sciences that have no clear direct military application. It would thus, by definition, include all basic research and, in addition, that applied research directed toward the expansion of knowledge in various scientific areas. It does not include efforts directed to prove the feasibility of solutions of problems of immediate military importance or time-oriented investigations and developments.

(2) *Exploratory Development*—Includes all effort directed toward the solution of specific military problems, short of major development projects. This type of effort may vary from fairly fundamental applied research to quite sophisticated bread-board hardware, study, programming and planning efforts. It would thus include studies, investigations and minor development effort. The dominant characteristic of this category of effort is that it be pointed toward specific military problem areas with a view toward

developing and evaluating the feasibility and practicability of proposed solutions and determining their parameters.

(3) *Advanced Development*—Includes all effort directed toward projects which have moved into the development of hardware for experimental or operational test. It is characterized by line item projects and program control is exercised on a project basis. A further descriptive characteristic lies in the design of such items being directed toward hardware for test or experimentation as opposed to items designed and engineered for eventual Service use.

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(4) *Engineering Development*—Includes all effort directed toward those development programs being engineered for Service use but which have not yet been approved for procurement or operation. This area is characterized by major line item projects and program control will be exercised by review of individual projects.

(5) *Operational System Development*—Includes all effort directed toward development, engineering and test of systems, support programs, vehicles and weapons that have been approved for production and Service deployment. This area is included for convenience in considering all RDT&E projects. All items in this area are major line item projects which appear as RDT&E Costs of Weapons Systems Elements in other Program control will thus be exercised by review of the individual research and development effort in each Weapon System Element.

(6) *Management and Support*—Includes all effort directed toward support of installations or operations required for general research and development use. Included would be military construction of a general nature unrelated to specific programs, maintenance support of laboratories, operation and maintenance of test ranges, and maintenance of test aircraft and ships. Costs of laboratory personnel, either in-house or contract-operated, would be assigned to appropriate projects or as a line item in the Research Exploratory Development, or Advanced Development Program areas, as appropriate. Military construction costs directly related to a major development program will be included in the appropriate element.

Mr. ELLENDER. Mr. President, I note that according to the DOD's own standards and regulations, under point No. 3, known as advanced development:

A further descriptive characteristic lies in the design of such items being directed toward hardware for test or experimentation as opposed to items designed and engineered for eventual service use.

Since in the case of Safeguard, many of the parts of the various component systems have not even been built in prototype form, much less tested in conjunction with the other major components, it is basic logic to conclude that Safeguard as a weapons system is certainly not beyond stage 3. In some regards, it has not even reached stage 3 and should, therefore, be considered far removed from stage 5, which is the first point at which the regulations speak of "deployment" in any sense of the word.

Although I am no expert in the matter, it seems that we might be able to give some sort of rating, between Nos. 1 and 6, to each of the major components of Safeguard. Then we might reason from these the relative stage of development of the system as a whole.

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Since this is too technical an issue to explore in detail at this moment, I shall merely express my interpretation of the matter and check the RECORD in the days to come to see if proponents can prove by facts and figures that the various major components of Safeguard have, in fact, advanced farther than the levels of R.D.T. & E. which I attribute to them. If a component is in the early stage of a certain step I will use the term "minus" and if in the late stage the term "plus."

First. The Spartan missile—Step 4.

Second. The Spartan guidance and control system—Step 3 plus.

Third. The Sprint missile—Step 3 plus.

Fourth. The Sprint guidance and control system—Step 3 minus.

Fifth. The PAR—long-range radar—Step 4.

Sixth. The MSR—short-range radar—Step 3.

Seventh. The master computer—Step 3 minus.

Eighth. The master command and control system—Step 3 minus.

Ninth. The warheads—Step 4.

For the simplest reasons of logic, the workability of such a complex system cannot be glibly presumed. Without bringing each of the component parts through the whole R.D.T. & E. procedure we would be deploying Safeguard on little more than a fanciful presumption. The burden of proof of Safeguard's workability has not been satisfactorily borne by proponents who recommend the expenditure of billions for deployment of an unproven system.

Eighth, and in the same vein, I feel that deployment of the Safeguard ABM system could have a highly counterproductive effect of diverting research and resources away from programs which might someday produce a truly workable ABM system. Such a system might be based on laser beams, on other high-intensity sources of sound or light or on force fields of some sort that are unknown to us at present. Who knows what system or what concept is waiting to be discovered which does not suffer from the foibles which so many of our scientists feel are inherent to a projectile system such as the Safeguard.

In this regard, I wish to make it very plain that I am not an opponent of ABM per se, for I would be the first to want a protective shield over this great country that I knew would work. Though I do not feel that the U.S.S.R. intends to risk nuclear war with us now or in the foreseeable future, no one knows what the threat might be 5 or 10 or 20 years from now—either Russia, or more likely China or even from some other nation not now a nuclear power.

I actively support efforts to continue ABM research and view deployment of Safeguard as a threat to this research and a waste of precious resources on a system that will bog down of its own weight. A striking parallel can be seen in the history of the Nike-Zeus program for which many of Safeguard's proponents were clamouring a decade ago.

As one expert told the story so clearly:

It is interesting to contemplate that, had the deployment of Nike-Zeus been authorized in 1960-61, we would have just about now had the full system in operational readiness, after spending what was then estimated as \$20 billion and could have been, judging by analogy with other large weapon systems, twice as much. Considering the current numbers and sophistication of offensive missiles now being deployed by the super-powers it is technically certain that the Nike-Zeus ABM system would now be of little value.

Full deployment of Nike-Zeus would certainly have been a stumbling block to the improved—but still inadequate and obsolescent—Safeguard ABM system. And if Safeguard is deployed now, it will have serious and perhaps deadly effect on development and eventual deployment of a truly effective ABM system, if indeed such a device can ever be created.

Ninth, and in connection with this matter of ABM research, let me raise the spectre of a frightful possibility that has not yet been considered by the Senate. Since there has been a great deal of "fright peddling" by the proponents, I feel at liberty to put the shoe on the other foot and peddle a bit of fear and uncertainty on behalf of the opponents. Maybe as a result of what I am going to say, some of my colleagues will benefit by a balance of fear within their analytical processes and will then be able to look at the Safeguard more objectively than if their appetite for fear is being whetted only by proponents' frightful hypotheses of what the Russians might do to us if we do not install an ABM umbrella over our heads.

My countercharge is this: What if, while we are deploying expanding and pyramiding a system which—for the many reasons I have stated—will not work, the Soviets are in the meantime putting all of their resources into research and development of a new concept which 10, 12, or 15 years from now does work.

Visualize, if you can, the situation in 1985 when we might have 10,000 improved Spartan and Sprint missiles blanketing the country, feebly facing perhaps 30,000 Soviet warheads. The arithmetic of the situation will still carry the inescapable conclusion that this is no defense at all against the U.S.S.R. if she should decide like a mad dog to attack us. This would be true even if our missiles are 100 percent reliable and 100 percent effective, which they would not be, of course.

But what if, by contrast, the Russians have spent the time and the resources between 1969 and 1985 not in burdening themselves with a white elephant but rather in finding and perfecting a system which really does work.

As I indicated earlier, there are already indications that they have stopped deploying their Golash ABM system around Moscow and are looking for something that will work. They have, no doubt, done their arithmetic and realize that—similar to the figures which apply to our Safeguard—even a 50-percent effectiveness from a system that is 80 percent reliable will still do them no good at all in the event of nuclear war.

So, apparently, they have found the good sense to stop kicking their dead

horse and to go out looking for a better one. If by their commonsense efforts in this regard they jump ahead of us during the next decade—while massive deployment of Safeguard detracts from realistic R. & D. efforts into other concepts of ABM—then it is the proponents of Safeguard who will have deprived us of whatever ABM protection we might need in years to come.

I am one who wants to see this country spend whatever money is necessary in research either to prove or, more likely, to disprove the feasibility of Safeguard and then to get on to looking for something better, if such a thing exists.

Tenth, as a further matter of military strategy and programming, I fear that deployment of a hugely expensive ABM system could very easily squeeze out or seriously undermine other important military programs and place our total military posture out of balance.

If, as I have contended, nuclear war will not be chanced by the nuclear powers, then I am sorry to say that there will likely be other types of wars and conflicts of various descriptions which fall short of nuclear holocaust. I personally shall oppose such involvement wherever possible, but I am practical enough to realize that they will most probably occur from time to time.

The type of war we are fighting in Vietnam, the one we are constantly in danger of having to fight again in Korea, the ones we are "secretly" fighting in Laos and Thailand, the conflict that is festering in the Middle East, the unsettled situation throughout Latin America—all give evidence that for a long time to come we shall have to be spending large sums on "brushfire" wars. And, too, it is a well-accepted principle that the best way to avoid such conflicts is to be eminently well prepared for them. The fiscal impact of Safeguard will certainly detract from our ability to maintain preparedness in this respect.

With the growing sentiment in Congress and in the country for a ceiling or a basic reduction in military spending, the deployment of a very expensive ABM system of very doubtful reliability would seem to me to gobble up a topheavy share of total military spending.

My educated guess is that there are many military men who would like to speak out against ABM on the grounds that it presents a clear and present danger to all military programs that are designed to assure preparedness for conventional warfare and for the necessary maintenance, modernization, and perfection of our offensive deterrent forces.

As a practical military man, I think I would be more interested, for example, in spending the necessary time, effort, and money in making sure our Minute-man system as a whole is not in the inoperative condition of the missile that failed to launch on four successive occasions. What we need here is a bit more horsensense thinking, more first things first in terms of military priorities.

Eleventh, I have come to feel a certain cynicism and disgust for the whole controversy surrounding the Safeguard proposal, because I find that it was in the beginning—and is becoming more

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and more—oriented toward politics than toward considerations of national security. Frankly, I feel that the Nixon administration made its initial recommendation for deployment because it was politically afraid not to do so. I think it was afraid to approach either the 1970 congressional elections or the 1972 national elections subject to charges of having allowed an "ABM gap" to develop.

I am sure that President Nixon has vivid memories of the "missile gap" psychosis employed so effectively by President John Kennedy to defeat him for the Presidency in 1960. President Nixon needed political insurance against any similar occurrence in 1970 and 1972 and in my opinion rested his decision heavily on political grounds.

To use a modern phrase, this sort of self-serving political motivation "turns me off." I frankly do not want to vote for a program that will cost billions, that is of dubious reliability, and that may hurt rather than promote our national security, when my careful observations tell me that this program is being proposed for reasons which are basically political.

In making this point, I do not mean to be totally critical of the President and the administration. Mr. Nixon and his advisers are victims of a situation which has built up over a period of years, and in a very real sense I feel sorry for them that they find themselves locked into a position of having to propose deployment of an ABM system which they know is defective and ineffective by its very nature. I know the President wishes he had the political breathing room to do otherwise.

Twelfth, I wish to challenge the argument offered by proponents that they must test the Safeguard system on the site on which it will eventually be deployed—rather than out in the Pacific Ocean—in order, first, to obtain a realistic idea of its performance at that location and, second, in order to save money by having it already installed on the proper site if it does prove to be workable.

I shall try to demonstrate, Mr. President, that these are hollow and faulty arguments. They actually constitute a "nonthink" position for the proponents in view of the real-life situation to be faced when we talk about testing such a system and proving that it will work.

In the first place, I take the position that before we make a final judgment on an ABM system we should see all of its component parts function as a unit under conditions which simulate as closely as possible the attack against which it is designed to protect.

In the case of Safeguard, this "final judgement" of which I speak would be the foundation upon which this country might proceed to invest tens or even hundreds of billions of dollars in ABM sites and hardware in the years to come. So, it should be a realistic test which leads us to the final decision. Otherwise, we run the risk of total waste.

The charge I make is that we cannot stage such tests in Montana and North Dakota. To be certain of whether we do

not have a white elephant on our hands, we would have to deploy a number of Spartan and Sprint missiles at a site, hook them into both the long-range and short-range radar systems, tie those systems into the master computers and the command apparatus and then tell the Safeguard operators something like this:

"At any time during the next 6 months, day or night, you must be prepared to defend against surprise attack from Minuteman, Polaris, Poseidon, and whatever other missiles we see fit to launch, including MIRV. The direction from which the attacks are launched, the time of attack, the decoy techniques and the numbers of missiles will constitute an attempt to stimulate a Soviet 'first-strike' attack. Only the nuclear warheads will be lacking."

Then, on some unannounced day or night, within the confines of an hour or two, we would then actually have to launch at least two dozen ICBM's and SLM's from varying distances at targets within the guarded area to see how many of those could be "killed" by a similar number of Spartan and Sprint missiles actually launched at the incoming dummy warheads. The "kills" would, of course, have to be judged on the basis of the distance by which each unarmed ABM missile missed its target. Since simulation would be at a maximum, the results of the test would contain enough realistic data on which to base a valid judgement.

This would not be true of the sort of testing that could or would be done in North Dakota or Montana. ICBM's and SLM's would not actually be fired at the sites under protection, and ABM missiles would not be fired at the incoming dummy warheads. The reason is obvious; political risk and public opinion would not allow it; there would be too much danger of stray missiles falling into towns, cities, or other populated areas.

Instead, the whole routine of "testing" would be to run tapes through the computers to simulate incoming warheads and other tapes to simulate Safeguard and Sprint launching—with the result that we would still not know whether the system really works under stress.

In effect, proponents want us to adopt a plan which by its very nature would preclude realistic testing. They will then come back next year and in succeeding years, ad infinitum, asking for additional authorization and money to deploy additional sites—always without any hard proof that the many component parts of Safeguard will work as a system under battle-like conditions.

Under these circumstances, we might be victimized by Safeguard in the same way as we were in the infamous case of the torpedoes the Navy tried to use against the Japanese in the early stages of World War II. After launching these torpedoes against Japanese ships, our submarine crews could hear them thump against the sides of the target vessels; but no explosions and no sinking of enemy tonnage ever occurred.

The fact is that a simple torpedo, which had been fully "lab tested" by the experts, regularly failed to detonate.

These experts, in their haste to deploy a torpedo, had felt that if they could make their weapon work on the drawing board and if the bench-model prototype seemed to work as designed, then the real weapon would work, too.

But it did not work, and under different circumstances this result of fuzzy R. & D. thinking and hasty deployment might have cost us the war.

So, I implore my colleagues, let us not chance the same mistake. Let us not allow proponents to argue unchallenged the faulty proposition that paper testing and simulated prototype testing in Montana is an acceptable substitute for realistic testing at the Kwajalein test site in the Pacific—where real Spartan and Sprint missiles can be launched against a surprise attack of ICBM's and SLM's, lacking only the nuclear warheads which we hope will never have to be used. Let us bear in mind that Safeguard is a supercomplex interconnection of at least seven major components, not one of which—as I explained in point No. 7 of these remarks—has yet been proven acceptable for deployment under the normal rules of R.D.T. & E.

To me, these commonsense observations relative to testing make short shrift of the "economy" argument which proponents offer for deploying prototypes on the spot where eventual permanent deployment is anticipated. As explained, proper and realistic testing cannot and will not be conducted at those sites. This kills any argument for economy because it allows for the strong possibility that the entire system will be totally unworkable and thus total uneconomic.

Thirteenth, I would like briefly to take issue with those who argue that "Because we were able to put men on the moon, we can certainly build the Safeguard ABM system in a way that will work."

As I have explained in previous arguments, this may well be so; but we should test and prove it out as a technological fact before deploying. Also, as I have said, even if it "works" in the technical sense, Safeguard may not be capable of doing the job in terms of the numbers of warheads potentially involved in a nuclear exchange. Furthermore, as stated, the Safeguard program may be the very factor that diverts our scientists from developing a system that will work.

Be that as it may, it is a fallacy to presume that Safeguard will work because we are as capable of making it work as we are of putting men on the moon.

The manned missions which NASA has handled so masterfully involve only one missile launch at a time. Each of these rockets is specially prepared and individually installed on the launch pad several weeks before blastoff. Each then receives the almost undivided attention of the entire multibillion-dollar worldwide NASA complex, with its tens of thousands of scientists and technicians. Finally, each rocket is subject to a highly elaborate countdown of 190 hours—with several built-in "hold" periods—before it is launched.

I say that it is not good thinking to draw general comparisons and hold presumptions from the admittedly spectac-

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lar successes of the NASA manned space programs and apply them to a system which, by contrast, would involve literally hundreds of highly sophisticated rockets, each one attuned to a hair-trigger where the mere concepts of "count-down" and a "hold" is totally self-defeating.

Fourteenth. I take issue with the argument of those who suggest that although Safeguard may be useless against a Soviet first strike, it is nonetheless a good investment against the possibility of a Red Chinese first strike.

The military and strategic facts of life do not support this sort of logic. In the first place a Chinese attack would be a "madman" attack, conducted with the knowledge that massive retaliation on China would result. In such a situation, the Chinese would not have the capacity to diminish our retaliatory capacity to any significant extent, if at all, and would instead try to devastate as much of our population, our industry and our commerce as possible.

That kind of attack would be launched at our coastal areas where most of our large cities are situated and where huge amounts of our industry and commerce is to be found. The attack would come not from a handful of ICBM's that are projected for the Chinese arsenal in the mid-1970's but from a handful of submarines or even freighters or fishing vessels—or a combination of all three—stationed right off our coasts in international waters.

In such a situation, even obsolete or obsolescent subsonic, short-ranged missiles could be used with virtually no warning at all. Under these conditions, Safeguard would be totally useless. There might be some other defense against such a sea-based coastal attack; but whatever that may be, it has nothing to do with Safeguard. Since this system cannot be linked realistically to the kind of attack that we might logically expect from the Red Chinese, proponents should not be allowed to justify it on that basis.

May I point out, parenthetically, that one of the factors which originally caused me to question the feasibility of the Safeguard system was the apparent inability of its proponents to state clearly the kind of attack against which it is supposed to protect and by precisely whom this attack is to be launched. The illogic of linking Safeguard to a Red Chinese attack describes eloquently the illogic of Safeguard itself.

Finally, I want to comment on the cold war aspects of the ABM program. I make these observations in view of the urgent need I see for slowing down the arms race and for cooling down world tensions, the alternative to which is an intensification of the cold war and a further polarization of the peoples of the world into hostile camps bent on mutual destruction.

As I have tried to indicate at several points in this address, I feel that both we and the U.S.S.R. have developed nuclear forces of such fearful potential that neither of us will now or in the foreseeable future risk atomic war.

If this is a correct conclusion, then the contest between the free world and

the Communist world will be won—or lost—in the battle for men's minds—on the battlefields of ideas, of economics, of internal progress, and of fiscal stability.

As I see it, we cannot hope to defeat communism militarily because to do so would be to invite our own destruction as well. That being the case, we should look for nonmilitary means of winning this competition.

On five different occasions in recent years, I have visited Russia and have seen in the Russian people the best bet for our success over the Soviet system. Despite the fact that the U.S.S.R. remains a dictatorship, it is not and cannot be completely unresponsive to the thinking of the Russian people. They are the only ones who can—and will, if we help them—change the face of the Soviet communism and help make the world a safer place in which to live.

I am not one of those who believes that communism will never change and that the U.S.S.R. will forever be the same society over which Stalin presided. My five visits to Russia since 1955 have proved to me that there has indeed been great change.

I know, too, that there is potential for much more change among a people only 5 percent of whom are members of the Communism Party, almost all of whom are educated, and most of whom—(like their restless neighbors in Eastern Europe—are enough like us in their human characteristics and aspirations to be our potential allies—if we will only find some way to bring them into the mainstream of Western civilization and show them the superior system we have in comparison to the one under which they now exist.

In these circumstances, the real battle against communism will not be won by ABM systems or by how much more "overkill" we can develop. It will be won or lost—on the battlefield of ideas, of economics, of internal progress, and development and of fiscal stability. If in the process of chasing the dream—the perhaps impossible dream of nuclear invulnerability—we wreck our economy, unbalance our overall military posture, and distract ourselves from the true nature of the competition, then communism may well win by default over the forces of individual liberty, of free enterprise, and of self-determination.

In conclusion, the argument I am making is that there is a point at which the proliferation of nuclear weaponry becomes useless at best and counterproductive at worst. I explained earlier how ABM systems will have a tendency to multiply offensive weapons deployment beyond all reason, thus adding to the dilemma rather than detracting from it. I would, therefore, like to see more of our attention directed toward the non-military aspects of the competition with the U.S.S.R., for that is where our real strength lies—and where the real Soviet weakness lies.

As strong as Russia is militarily, her Communist government could probably not survive the effects of a few weeks or months of a free press or freedom of speech as we know it; yet we are spending no money, no time, and no effort

on strategy aimed at promoting the growth of a free press or of free speech in Russia. Perhaps such an effort would not be fruitful; but in terms of the potential benefits, it would be at least worth an effort. At least it would point us in the right direction in our efforts to undo communism, rather than up the blind alley which is being suggested by proponents of Safeguard.

As many nuclear bombs as the Soviets have, their whole economic system could be transformed by increased demands by their people for a broad system of work incentives; yet we are doing next to nothing, either in terms of brain power or money, to encourage this movement within the U.S.S.R. What is happening there in the line of economic transformation seems almost to occur despite us rather than as a result of our encouragement.

As challenging as the U.S.S.R. has become politically, scientifically, and economically, we fail to recognize and to act on the one major flaw by which the whole system might be made to crumble. That flaw is the flaw of communism itself; namely, its incapacity to offer freedom, civil liberties, and the rights of self-determination to the people without bringing about its own destruction.

If, indeed, there is such a vulnerable spot in the Soviet armor, we must direct our efforts, our talents, and our energies toward that spot. We must somehow create an atmosphere in which we can show the Russian people the benefits of our free-world institutions—material, spiritual, social, economic, and governmental and they in turn will defeat communism for us, not by revolution, but by the constant pressure of gradual demands which, when answered, will cause Russia to outgrow her Communist system and diminish her threat to our way of life.

Contrary to popular notions of the professional anti-Communists, I picture such a development as not only possible but almost inevitable in a basically wealthy and educated nation such as Russia, if we will only stoke the fires of freedom and human rights that already reside in the hearts of the people.

Mr. President, I should like to add at this point that in my visits to Russia on 5 different occasions, I could note the differences that have accrued from year to year.

When Stalin grew to power, he grew in the midst of ignorance, want, and poverty; but that situation no longer exists in Russia. Today I would say that 95 percent, or perhaps more, of Russian adults can read and write; and they are becoming curious. They want to know what we are doing, and why it is that they do not prosper as much as we do.

As I have stated, that situation is going to continue to evolve to our advantage, and all we need to do is encourage it. I sincerely believe that the Russian people, on the whole, do not want war any more than we do. I heard on the radio awhile ago that President Nixon used almost the identical words I have been using now for the past 10 or 12 years as to the possibilities of our

living side by side with the Russians, without in any manner embracing any part of their system.

It should be clear from what I have said here that my opposition to deployment of Safeguard is not intended as an appeasement of communism. I abhor it and want to see it extinguished from this planet. Actually, what I am searching for is a more effective and more realistic sort of anticommunism than "ABM-ism" or "overkill-ism."

My complaint is that the narrow, unimaginative, type of anticommunism we practice today fails even to take into account the essential nature of the cold war; namely, the fact that it is a "battle for men's minds." We not only lack a positive policy for winning the minds and the sentiments of the Russian people, but we seem to follow policies at times which deliberately and needlessly tend to drive them into the arms of their Soviet masters by isolating them and alienating them from the influences of Western civilization and current events.

As long as we limit ourselves to a narrow policy of military confrontation and arms competition with the U.S.S.R., the best we can hope for is a frustrating, costly, and highly dangerous "coexistence" with communism. At a cost of \$80 to \$100 billion a year this sort of perpetual coexistence with communism will mean the eventual downfall of the American economy and the American morale.

In the 25 years since the end of World War II, we have spent approximately a trillion dollars to build up our military might and to protect our territory and the territory of our allies from attack by the Communists. I feel that the tremendous overkill we now possess in the form of more than 10,000 nuclear warheads which can be delivered from submarines, aircraft carriers, underground ICBM missile silos, mobile missile carriers, and by supersonic bombers and rocket bases scattered all around the world is sufficient to insure us against a first-strike attack by anyone but an absolute madman.

Since the Safeguard ABM system is no deterrent to a madman, it does not, in my opinion, add meaningfully to the deterrent effect of the vast array of armaments I mentioned above. We should not upset our economy to set up an imaginary defense against a madman who probably does not exist—and who, if he does exist, cannot be defended against by present concepts of ABM.

THE H-BOMB CONTROVERSY AND THE ABM CONTROVERSY: AN ANALOGY AND THE LESSONS

Mr. DODD. Mr. President, more than one observer has made the point that there is a remarkable analogy between the debate surrounding the ABM decision today and the debate that raged inside the administration around the decision to build the hydrogen bomb in 1949-50.

For example, columnist Joseph Alsop has pointed out that in the debate over the development of the H-bomb in the late forties:

The prime arguments against the H-bomb that were used by Dr. J. Robert Oppenheimer were precisely the arguments now being used by the ABM's scientist-opponents. Oppen-

heimer said: (a) that the H-bomb would not work; (b) that it would be inordinately expensive to develop; (c) that development would only increase the instability of the world balance of power. . . . As anyone can now see, he was nonetheless dead wrong on all three points. Later he admitted as much.

Alsop later asked Oppenheimer why he has been so wrong in saying that the H-bomb would not work, and Oppenheimer replied:

I guess I concluded it wouldn't work because I wanted it so much not to work.

In the recent ABM book which they edited and to which they contributed, Dr. Jerome Wiesner and Mr. Abram Chayes denied that there was any basic analogy between the ABM controversy and the H-bomb controversy. This is what they said:

It is necessary to be clear about the kind of question here involved. Some people have thought it analogous to the technical issues surrounding the decision to go forward with the development of the hydrogen bomb. In that instance, it is pointed out, a substantial and respected portion of the scientific community opposed a high-priority effort to develop the H-bomb. But in the hydrogen bomb controversy the scientific issue was whether a specific design concept could in principle ever be developed into a workable weapon. That question could be and was resolved by additional theoretical calculations; and, in fact, though this is not generally appreciated, the original concept was demonstrated to be unworkable.

Because I thought it important to determine whether there is a valid analogy between the ABM and H-bomb controversies, I wrote parallel letters to Dr. Wiesner and Mr. Chayes, in which I posed the following question:

Could you give me the source or sources for your statement that there was little scientific controversy over the program for production and deployment of hydrogen weapons, and that the real issue in the controversy was "whether a specific design concept could in principle ever be developed into a workable weapon"?

In addition to writing to Messrs. Wiesner and Chayes, I also wrote letters to Dr. Edward Teller and Adm. Lewis Strauss, former Chairman of the Atomic Energy Commission, asking them for their comments on the statement made by Chayes and Wiesner, on the question of whether or not there exists an analogy, in their judgment, between the ABM debate and the H-bomb debate.

I also checked back through the record of the Atomic Energy Commission and through the literature dealing with the story of the H-bomb.

My research and the replies I received convinced me that the parallel between the arguments offered against the H-bomb in the late forties and the arguments today being advanced against the deployment of the Safeguard ABM system is even more marked than Mr. Alsop indicated in his column.

Among other things, it was argued:

First, that our development of the H-bomb would escalate the arms race by encouraging the Soviets to match our development;

Second, that it would make it more difficult to achieve any meaningful agreement with the Russians on arms control;

Third, that it would make nuclear war more likely rather than less likely;

Fourth, that we should delay embarking on the H-bomb program while we sounded out the Russians on arms control; and

Fifth, that, in any case, 1 or 2 years' delay would not make any serious difference.

One need only substitute the word ABM for H-bomb to realize the amazing and frightening similarity between today's catalog of anti-ABM arguments and the 1949 catalog of anti-H-bomb arguments.

The five-page joint letter which I received from Messrs. Wiesner and Chayes in my reply to my query made no concessions, however, to the existence of an analogy between the H-bomb controversy and the ABM controversy.

Instead, they repeated their statement that "in the hydrogen bomb controversy the scientific issue was whether a specific design concept could ever be developed into a workable weapon."

They further stated that the October 29, 1949, report of the General Advisory Committee on the Atomic Energy Commission "only opposed—partly on extra-scientific grounds—a crash program for the development of the 'super,' based on the design concept then available."

The statement by Dr. Wiesner and Mr. Chayes that the central issue in the hydrogen bomb controversy had to do with the feasibility of the design concept originally proposed, is in such flagrant contradiction with the public record that it is hard to believe their error was a product of simple ignorance.

I leave it to others to draw their own conclusions from the facts and the documents I shall here set forth.

One can only hope that they were somewhat less reckless with their facts where the facts are not a matter of unchallengeable public record.

THE REAL HISTORY OF THE H-BOMB CONTROVERSY

In his reply to my letter, Admiral Strauss asserted:

There are striking parallels between the debate on the ABM and the debate on the fusion bomb ten years ago.

Recapitulating, point by point, the arguments that were made against the H-bomb program by the General Advisory Committee scientists, Admiral Strauss added:

These points are not in accord with the emphasis in the book [the Wiesner-Chayes book] that "the scientific issue" concerns only the feasibility of an initial design concept. Another design concept proved feasible, but it would not have been found or, if found, would not have been developed, had the opponents of the hydrogen bomb succeeded in persuading the President to declare against it as a weapon. The principle which clearly guided him—that the United States could not afford to be less well armed than a potential enemy—has a modern corollary. We cannot afford to be less well defended than a potential enemy.

Dr. Teller in his reply to me confirmed that there had been some differences over design. He said that, while it was correct that a new concept had been proposed and was eventually demon-

strated to be workable, it was "an oversimplification to state, as the Wiesner-Chayes report does, that "the original concept was demonstrated to be unworkable."

Dr. Teller's letter made it clear, however, that the vigorous debate in the nuclear community during the latter part of 1949, had to do essentially with the question of whether or not we should make an effort to produce the H-bomb.

That the accounts given by Admiral Strauss and Dr. Teller are basically accurate is established by the now-public record of the historic meeting of the General Advisory Committee of the Atomic Energy Commission on October 29, 1949.

The report adopted unanimously at this meeting—Dr. Seaborg was absent—agreed that "an imaginative and concerted attack on the problem has a better than even chance of producing the weapons." The GAC members, however, opposed the effort to develop the H-bomb on essentially moral grounds.

We all hope—

Read the report—

that by one means or another, the development of these weapons can be avoided. We are all reluctant to see the United States take the initiative in precipitating this development. We are all agreed that it would be wrong at the present moment to commit ourselves to an all-out effort toward its development.

That the members of the General Advisory Committee were moved far more by moral and ethical considerations than by any scientific considerations, was further emphasized in two supplementary statements to the main report, one signed by five of the members of the Committee and the other one by two of them.

The majority supplement said in part:

In determining not to proceed to develop the Super-bomb, we see a unique opportunity of providing by example some limitation on the totality of war and thus eliminating the fear and arousing the hopes of mankind.

The language of the minority supplement was even more imperative. Let me quote one paragraph from it:

The fact that no limits exist to the destructiveness of this weapon makes its very existence and the knowledge of its construction a danger to humanity as a whole. It is necessarily an evil thing considered in any light. For these reasons, we believe it important for the President of the U.S. to tell the American public and the world we think it wrong on fundamental ethical principles to initiate the development of such a weapon.

Fortunately, for the free world, the attitude of the General Advisory Committee was not shared by Dr. Edward Teller, Dr. Ernest Lawrence, and a handful of other scientists. They carried their arguments to the Atomic Energy Commission and to Joint Committee on Atomic Energy and to President Truman himself.

Their viewpoint was supported in the Atomic Energy Commission initially only by Adm. Lewis Strauss and by Gordon Dean. It was only toward the very end that they were able to enlist the support of David Lilienthal, the chairman of the Commission.

Senator Brian McMahon, of Connecticut, the Chairman of the Joint Committee on Atomic Energy, was one of the first to accept the imperative logic of the argument that we could not afford to let the Russians beat us to the H-bomb without gravely imperiling our own security. In this view, he was joined by other members of the Joint Committee.

I might say parenthetically at this point that my knowledge of the H-bomb conflict is not based entirely on the historical documentation. Both Brian McMahon and Gordon Dean were old personal friends: McMahon and I had served together in the Department of Justice, while Dean had been with me at the Nuremberg trials. And on more than one occasion when I came to Washington in 1949, McMahon and Dean discussed the matter with me and told me of their concern and of the problems they were having.

Even at the Pentagon, Secretary of Defense Louis Johnson was still disposed to question whether the Soviet Union had really exploded an A-bomb in September 1949; and Johnson, too, until the last minute, argued against the effort to make the H-bomb.

Within the State Department a battle also raged.

George Kennan, director of the policy planning staff, led the forces opposed to the H-bomb project. In a 128-page memorandum which he submitted to the Secretary of State on December 15, 1949, he argued that the Soviet Union would not deliberately initiate atomic war, and he thought the Soviet Union would not proceed with thermonuclear weapons program if we did not.

It is interesting to note, parenthetically, that Kennan had offered a quite different estimate of the Soviets in 1945, when he opposed sharing atomic energy knowledge with them. According to his memoirs, he wrote the following dispatch in December of 1945:

There is nothing—I repeat nothing—in the history of the Soviet regime which would justify us in assuming that the men who are now in power in Russia . . . would hesitate for a moment to apply this power against us if by so doing they thought that they would materially improve their own power position in the world.

Kennan's appraisal and that of the General Advisory Committee of the Atomic Energy Commission was opposed within the Department by Secretary of State Dean Acheson, Paul Nitze, and several other key officials.

At Acheson's request, a report was prepared which concluded that we should proceed to test the feasibility of developing an H-bomb because our national security would be gravely imperiled if we did not do so. The report called for a continued effort to achieve agreement on the international control of atomic energy. But it warned:

The necessary negotiations probably could not be completed in less than a year and a half to two years. . . . to delay an accelerated program of development for such a period in the absence of adequate assurance that work in the Soviet Union has been similarly delayed, would measurably increase the prospect of prior Soviet possession of thermonuclear weapons.

On January 27, 1950, the counselor of the British Embassy asked for an urgent meeting with Undersecretary Robert Murphy, and informed him that Dr. Klaus Fuchs, who had worked at Los Alamos from 1942 to 1946, and who possessed complete knowledge of all our thermonuclear research during that time, had admitted that he had for many years been a Soviet spy.

Against this background, on January 31, Acheson, now joined by Johnson and, reluctantly, by Lilienthal, presented to President Truman a recommendation that the United States proceed with work on the H-bomb.

This report culminated the work of a special committee of the National Security Council created nearly a year earlier under Acheson's chairmanship to consider nuclear policy.

Mr. TOWER. Mr. President, will the Senator yield for an observation?

Mr. DODD. Yes; I am happy to yield to the distinguished Senator from Texas.

Mr. TOWER. I commend the distinguished Senator from Connecticut for his historical recitation. I think it is vitally pertinent to this debate. I express, with him, the hope that all Senators will read these remarks in the Record. I think they give us cause for serious reflection.

Mr. DODD. I thank the Senator from Texas for his remarks. They please me very much. I have noticed that he has been listening carefully to what I have said. In my limited way, I have tried to spread on the Record some facts which I think ought to be called to the attention of every Senator.

There is no Member of this body who is more capable of handling facts than the Senator from Texas (Mr. TOWER). I am pleased that he has taken note of what I have said.

To come back to my historical recitation, it was fortunate that President Truman was a leader who was singularly free of fuzzy thinking about Communist intentions. Rejecting the unanimous advice of the General Advisory Committee, and knowing that his decision would be opposed by a majority of the scientific community, Truman decided to accept the recommendation of the final Acheson-Lilienthal-Johnson paper, and to proceed immediately with the effort to produce the H-bomb.

In retrospect it is frightening to think of what might have happened if the opinion of the General Advisory Committee of the Atomic Energy Commission and of the majority of the scientific community had prevailed. For then the Soviets might have beat us to the H-bomb by as much as 3 or 4 years.

Even with President Truman's fearless and timely decision to proceed, our H-bomb was perfected and added to our deterrent arsenal only in the nick of time.

The common impression is that the United States got the H-bomb before the Soviet Union. Actually, this is not entirely accurate.

The United States exploded its first hydrogen test device on November 1, 1952, in Operation Ivy. But this was not a deliverable device.

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Our first deliverable weapon was not exploded until March 1, 1954, in Operation Castle.

Meanwhile, in early August 1953, the Soviets had staged their first thermonuclear explosion, which, according to our intelligence, did involve a weapon capable of delivery.

It was thanks only to a massive effort and to the inherent superiority of American technology that we were able to pull ahead of the Soviets in thermonuclear weapons over the following years.

It is also frightening to think of what might have happened had the decision to build the H-bomb been subjected to the prolonged emotional discussion in Congress and in public that has characterized the debate of the decision to deploy Safeguard.

Hundreds of thousands of letters, I am certain, would have descended on Congress urging them not to escalate the arms race and not to squander our national resources on additional weapons of mass destruction.

Many an honorable Member of Congress, unquestionably, would have been impressed by the arguments of the distinguished scientists who composed the General Advisory Committee and would have taken the floor to argue that we should heed the advice of the majority of our scientific community.

And no one can say for certain what the outcome of such an emotionally charged debate would have been.

I do not argue against public debate. I am all in favor of it.

But I do believe that the public debate we are today conducting would be enormously enhanced in quality if, in making our decisions for the future, we stopped to examine the lessons of the past.

That is why I have considered it important to recount the H-bomb history, with a view to determining just how much analogy there is between today's debate on the ABM and the debate that took place almost exactly 20 years ago over the decision to build the hydrogen bomb.

I believe that this review of the essential issues in the H-bomb controversy has more than passing significance in the controversy over the ABM system.

What the H-bomb controversy established is that many of the most distinguished members of our scientific community, out of the most laudable ethical motivations, are disposed to close their eyes to the harsh realities of the cold war, to credit the Soviets with a far greater degree of good faith than any reading of the record would warrant, and to persist in the dogma that restraint on our side will inevitably result in parallel restraint on the Soviet side.

The dogmatic nature of this trustfulness vis-a-vis the Soviets is amply illustrated by a statement made by Dr. Hans Bethe in an Atlantic Monthly article dealing with the Geneva test ban negotiations. Dr. Bethe said:

I had the doubtful honor of presenting the theory of the big hole to the Russians at Geneva in November, 1959. I felt deeply embarrassed in so doing, because it implied that we considered the Russians capable of cheating on a massive scale. I think that they

would have been quite justified if they had considered this an insult and had walked out of the negotiations in disgust.

This statement came from a man whose credentials include a Nobel Prize for physics and the position of chief scientific adviser to the President, a man who was a vocal opponent of the H-bomb project and who has in recent years been just as vocal in his opposition to the ABM.

To justify their naive political and ethical dogmas, scientists like Oppenheimer and Bethe frequently invoked scientific rationalizations which, in retrospect, certainly did not reflect credit on their judgment.

About the H-bomb, for example, it is reported that Hans Bethe once said:

It cannot be made and should not be made.

It appears that, having decided that the H-bomb "should not be made," he deduced from this moral proposition the scientific conclusion that it "could not be made."

America has every reason to be proud of the accomplishments of its scientific community and of the countless benefits their collective efforts have conferred on mankind. But when scientists assume that their expertise in their own field of specialization automatically qualifies them as experts in the field of politics, they more often than not wind up by making themselves look ridiculous or, worse still, by damaging the cause they honestly desire to serve.

At the height of the debate over the H-bomb, my good friend, Senator Brian McMahon, once said to me that in his opinion Oppenheimer and his associates had gone far beyond their area of scientific competence in opposing the H-bomb on moral and political grounds. For this transgression, he said, they would suffer in the judgment of history.

McMahon's opinion turned out to be prophetic.

One of the chief lessons to be learned from the H-bomb controversy is encompassed in the two rules to which I referred in my statement of last Friday.

These are the rules:

Rule No. 1: In assessing the potential of any important new field of technology involving new processes or systems—*half the scientists, or at least a large fraction, are usually wrong.*

Rule No. 2: If a significant percentage of scientists agree, or sometimes if only one or two agree, that something new can be done—*it can be.*

In my statement on the ABM controversy Friday and today, I have not engaged in any numbers games or presumed to make technological evaluations. I do not feel competent to do so. But based on past experience, I believe that if 50 percent of the experts say that the ABM will not work, and the other 50 percent say it will work, then the odds are heavily in favor of the group of experts who say it will work.

With this, I rest my case.

Mr. President, I ask unanimous consent to insert in the Record at this point my exchange of correspondence with Messrs. Wiesner and Chayes, Adm. Lewis Strauss, and Dr. Edward Teller.

I also ask unanimous consent to insert

in the Record the complete text of an article which appeared in Life magazine for September 6, 1954, under the caption, "Dr. Edward Teller's Magnificent Obession."

There being no objection, the material was ordered to be printed in the Record, as follows:

MAY 20, 1969.

Dr. JEROME B. WIESNER,
*Massachusetts Institute of Technology,
Cambridge, Mass.*

DEAR DR. WIESNER: In the study of the ABM which you and Mr. Abram Chayes prepared at the request of Senator Kennedy, the opening overview makes the point that there is no real analogy between the ABM debate and the H-bomb controversy of the late forties. This point is made in the following passage of your study, which appears on page 14:

"It is necessary to be clear about the kind of question here involved. Some people have thought it analogous to the technical issues surrounding the decision to go forward with the development of the hydrogen bomb. In that instance, it is pointed out, a substantial and respected portion of the scientific community opposed a high-priority effort to develop the H-bomb. But in the hydrogen bomb controversy the scientific issue was whether a specific design concept could in principle ever be developed into a workable weapon. That question could be and was resolved by additional theoretical calculations; and in fact, though this is not generally appreciated, the original concept was demonstrated to be unworkable. As a result of this subsequent analysis, a new approach was developed which was found to be feasible, first by theoretical and laboratory studies and ultimately by test explosions. The program for production and deployment of hydrogen weapons, about which there was little scientific controversy, did not go forward until these theoretical issues had been resolved."

Because I think it is important to determine whether or not there is a valid analogy between the ABM controversy and the H-bomb controversy, I had planned to ask certain questions of you and Dr. Teller during the course of last week's hearing. As matters turned out, there was not time for these questions.

I am now, therefore, taking the liberty of addressing to you by letter the basic question which I planned to ask of you at the hearing: "Could you give me the source or sources for your statement that there was little scientific controversy over the program for production and deployment of hydrogen weapons, and that the real issue in the controversy was 'whether a specific design concept could in principle ever be developed into a workable weapon?'"

I would be grateful if you could let me have your reply to this question by immediate return mail.

Sincerely yours,

THOMAS J. DODD.

(NOTE.—Parallel letter sent to Mr. Abram Chayes.)

LAW SCHOOL OF HARVARD UNIVERSITY,
Cambridge, Mass., May 26, 1969.

Senator THOMAS J. DODD,
*Senate Office Building,
Washington, D.C.*

DEAR SENATOR DODD: This is in reply to your letters of May 20, 1969 to both of us. You ask for the sources of the remarks on the hydrogen bomb controversy in our recent study of the ABM. We are glad to learn of your interest in this matter, and will reply in this joint letter.

One source for our remarks was our own general information. Also, the contrast between the present controversy with respect

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to the Safeguard deployment and that concerning the H-bomb 20 years ago was illuminated for us by Dr. I. I. Rabi. He drew our attention to his testimony, as published in the A.E.C. publication "In the Matter of J. Robert Oppenheimer," transcript of hearing before the Personnel Security Board, April 12 through May 6, 1954, [Referred to below as JRO]. These hearings, together with the article "Thermonuclear Devices" by S. M. Ulam, in "Perspectives in Modern Physics" (John Wiley, Inc., New York, 1966), provide the necessary technical background for our remarks. To be specific,

(1) With regard to our statement in the hydrogen bomb controversy the scientific issue was whether a specific design concept could ever be developed into a workable weapon: Gordon Dean testifies at p. 302 of JRO that "The only thing which we knew about in this field at that time [autumn 1949] was one method of approach, which unfortunately if it is to remain classified, I cannot describe . . ." Oppenheimer testifies at p. 78 of JRO that "We had in mind, but I don't think we had clearly enough in mind, that we were talking about a single design, which was in its essence frozen, and that the possibility did not occur to us very strongly that there might be quite other ways of going about it. Our report [the A.E.C. General Advisory Committee report of October 29, 1949] had a single structure in mind—or almost a single structure. . . ." For further background, see the testimony of Rabi, Norris Bradbury, and Oppenheimer on pages 454-455, 487, and 952 of JRO. It must be noted here that the GAC report only opposed (partly on extra-scientific grounds) a crash program for the development of the "super", based on the design concept then available. It did not predict that no hydrogen bomb could ever be produced; quite the reverse, it said that "an imaginative and concerted attack on the problem has a better than even chance of producing the weapon within 5 years."

(2) With regard to our statement that the original concept was demonstrated to be unworkable; Ulam's article states at p. 596 that even before the directive of President Truman in January 1950 to proceed with the planning and construction of an H-bomb, "certain doubts had arisen about the practicability of the schemes outlined during the war and elaborated in subsequent work. A very detailed and comprehensive calculation was planned to be performed on the newly available electronic computing machines of the whole course of the ignition process of the thermonuclear reaction and its subsequent course. . . . Quite independently, however, the present writer, in collaboration with C. J. Everett, had undertaken the calculation of the ignition process and the following course of the thermonuclear reaction by using numerous simplifications and guesses as to the values of certain multidimensional integrals defining the distribution of neutrons, and the products of reaction during the changing geometry of the mass of the active material. These calculations were performed with the aid of computers working by hand (i.e., with tables and desk computers). The results of this work (which are described in several reports—still classified) showed a very "weak" process. The mechanism of ignition, as considered in the existing schemata, was submarginal and led to disappointingly weak initial conditions, and, after a time, to decreasing rates of reactions. Shortly after that time, a calculation was similarly performed by Fermi and the present writer; we considered the 'next' problem: Assuming that in some way an ignition of the mass of deuterium—perhaps supplemented by quantities of tritium, how would the subsequent reaction proceed in a volume of deuterium? . . . The result of this work was again quite negative in the sense of showing that, most likely, even if the initial reac-

tions were established, as in the scheme proposed, it would not continue and go anywhere near to completion or even sizable burning of the remaining material. Shortly afterward, the calculations which were proceeding in the meantime on the electronic computing machines, and in which some of our intuitive arguments were replaced by a full numerical work, were completed; and the results confirmed those of the above work."

Also, Rabi testifies at p. 456 of JRO that "The subject we discussed in the 1949 meeting, that particular thing has never been made and probably never will be made, and we still don't know to this day whether something like that will function." For further background, see Oppenheimer's letter, and the testimony of Oppenheimer, Dean, and Hans Bethe, on pages 20, 251, 305, and 330 of JRO.

(3) With regard to our statement that there was little scientific controversy about the program for production and deployment that went forward after the theoretical issues were resolved: Ulam's article describes the resolution of these issues at p. 597:

"Some new combinations of ideas had to appear before the successful thermonuclear device could be designed. A Los Alamos report by Teller and the present writer outlined a new approach. The theoretical estimates and the subsequent calculations based on this scheme were far more promising; and, as is well known, successful H-bomb designs were produced and tested quite soon after the appearance of these new ideas, thanks to energetic and imaginative teamwork of a whole group of Los Alamos physicists. Subsequently, numerous technical improvements in sizes, weights, etc., were made by scientists at both Los Alamos and at Livermore."

We do not know of anyone who, after these developments, doubted on scientific grounds that a workable thermonuclear weapon could be produced and deployed. Indeed, Oppenheimer testifies at p. 248 of JRO that even before the Eniwetok test, he had informed the President that "although you could not be certain of the performance of any one design, it was virtually assured that this (a thermonuclear explosion based on the Ulam-Teller concept) could be done." For further background, see the Oppenheimer letter and testimony by T. K. Glennan and Dean on page 19, 255, and 304-305 of JRO.

We should perhaps emphasize that by "scientific controversy" we mean controversy on technical scientific issues. Scientists, like other citizens, have had and expressed a wide range of opinions on the political, ethical, economical, and strategic implications of the hydrogen bomb and other military systems. We do not think it is fruitful to speculate on possible analogies among the positions that scientists have taken on such non-scientific issues.

It may be useful if we state again our views on why there is no real analogy between the scientific or technical aspects of the H-bomb and the ABM controversies. There was a fundamental uncertainty about the H-bomb in 1949 and 1950. Oppenheimer expressed these doubts in a letter to J. B. Conant on October 21, 1949 (printed at p. 242-3 of JRO) as follows: "I am not sure that the miserable thing will work, nor that it can be gotten to a target except by ox-cart." And Rabi testifies at p. 454 of JRO that "We didn't even know (in October 1949) whether this thing contradicted the laws of physics. . . . It could have been altogether impossible." However, once calculations showed that an H-bomb could be made to work and could be carried in an airplane, there was no doubt of its military effectiveness.

In contrast, there is no fundamental scientific uncertainty about the individual components of the Safeguard system. We know that an ABM missile can intercept and de-

stroy a single re-entry vehicle fired under test conditions. As far as workability is concerned, the technical issues that the Congress must consider in its deliberations is of a far more practical nature: Can an ABM system, consisting of large numbers of missiles, radars, and advanced computers, and manned by military personnel, protect us with high reliability against a surprise attack of many ballistic missiles, using unforeseeable penetration tactics, in an environment complicated by offensive and defensive nuclear explosions? As our report shows, there is very grave doubt that it can.

We would be happy to discuss these matters further with you in Washington, at your convenience.

Very truly yours,

ABRAM CHAYES
JEROME B. WIESNER.

MAY 20, 1969.

DR. EDWARD TELLER,
Livermore Laboratory,
Livermore, Calif.

DEAR DR. TELLER: Because I think it is important to know whether or not a valid analogy can be made between the ABM controversy today and the H-bomb controversy of the late forties, I had planned to ask questions on this point of you and Dr. Wiesner during the course of last week's hearings. As matters turned out, there was no time for these questions.

I am now, therefore, talking the liberty of addressing to you by letter the basic questions which I planned to ask of you at the hearing.

In the study of the ABM which Dr. Jerome Wiesner and Mr. Abram Chayes prepared at the request of Senator Kennedy, the opening overview makes the point that there is no real analogy between the ABM debate and the H-bomb controversy of the late forties. This point is made in the following passage of the study, which appears on page 14:

"It is necessary to be clear about the kind of question here involved. Some people have thought it analogous to the technical issues surrounding the decision to go forward with the development of the hydrogen bomb. In that instance, it is pointed out, a substantial and respected portion of the scientific community opposed a high-priority effort to develop the H-bomb. But in the hydrogen bomb controversy the scientific issue was whether a specific design concept could in principle ever be developed into a workable weapon. That question could be and was resolved by additional theoretical calculations; and in fact, though this is not generally appreciated, the original concept was demonstrated to be unworkable. As a result of this subsequent analysis, a new approach was developed which was found to be feasible, first by theoretical and laboratory studies and ultimately by test explosions. The program for production and deployment of hydrogen weapons, about which there was little scientific controversy, did not go forward until these theoretical issues had been resolved."

Does the above quotation in your opinion constitute an accurate description of what was involved in the H-bomb controversy? If it does not, I would be grateful if you could provide me with your own account of the H-bomb controversy.

I would also like to ask whether you see any analogies between the current debate over the ABM in the scientific community and the previous controversy over the H-bomb within the scientific community in the late forties.

I would be grateful if you could let me have your reply to these questions by immediate return mail.

Sincerely yours,

THOMAS J. DODD.
(NOTE.—Parallel letter sent to Admiral Lewis L. Strauss.)

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UNIVERSITY OF CALIFORNIA,
Livermore, Calif., May 22, 1969.

Hon. THOMAS J. DODD,
U.S. Senate,
Washington, D.C.

DEAR SENATOR DODD: Thank you for your letter of May 20. Your questions are put in that kind of clear language which makes it relatively easy to give an answer, even though the subject is somewhat involved and even though secrecy restrictions still prevail.

The statement which Wiesner and Chayes make concerning the development of the hydrogen bomb on the 14th page of their ABM study, is much too short to bring out all relevant points of that story. A somewhat more complete description is the following.

At the end of 1949, after the first successful Russian test of an atomic explosion, a question was raised in the General Advisory Committee of the Atomic Energy Commission whether or not great emphasis should be placed on the development of a thermonuclear explosive. The General Advisory Committee, whose members at that time were familiar with the plans for the hydrogen bomb, made a negative recommendation based on the argument that there was no need for further increase of the explosive power of our nuclear weapons, and also based on the argument that decision of an accelerated development on our part would have the effect of stimulating a corresponding Russian development. In the fall of 1949 the General Advisory Committee did not express any clear doubt concerning the feasibility of the hydrogen bomb.

In early 1950 President Truman decided in a manner contrary to the recommendation of the AEC, which in turn was based on the recommendation of the General Advisory Committee. President Truman issued the instruction to proceed with the completion of the work on the hydrogen bomb. Unfortunately, this instruction gave the erroneous impression that all basic problems concerning the hydrogen bomb had been resolved at that time.

After President Truman's decision, members of the General Advisory Committee, together with many other scientists, started to raise questions concerning the feasibility of the hydrogen bomb. These questions were justified insofar as serious doubts indeed remained as to the possible functioning of the original design.

In the course of the next year confidence in the original design continued to decline. Security does not permit me to give you a complete story but I may state that the words used in the Wiesner and Chayes report "the original concept was demonstrated to be unworkable" is an oversimplification.

It is correct to state that a new concept was proposed and was eventually demonstrated to be workable.

It is of some interest to state that a short period before the actual test in 1952 some of the most influential opponents of the hydrogen bomb, who had agreed that the new concept was probably feasible, proposed that the test be cancelled. They hoped for an agreement with Russia to renounce a test of the thermonuclear bomb. It should be also recalled that the first Russian big thermonuclear explosion occurred in 1953, less than one year after our own test.

Finally, it must be remembered that the success of the hydrogen bomb contributed to the interest in the development of the intercontinental ballistic missile since it became possible to expect that such missiles could become effective even if they were not very accurate. I understand that in the considerations of the von Neumann Committee which led to our first effective plans on ICBM development, Dr. Wiesner participated. I believe that Dr. Wiesner is correct in stating that there was little controversy concerning the production and deployment of hydrogen bombs.

With this historical review in mind I can now turn to the second question, whether I see any analogy between the current debate over the ABM in the scientific community and the previous controversy over the hydrogen bomb.

Analogies are always incomplete. However, it appears to me that some analogies do exist. In the first place, the original recommendation of the General Advisory Committee which stressed that a U.S. development may trigger a Russian effort, appears to be analogous to present claims that our ABM deployment would stimulate the arms race. This analogous approach on the part of some scientists is reinforced by the proposal of 1952 to abstain from the testing of hydrogen explosives by mutual agreement.

The analogy is less clear as far as the objective situation is concerned. In the hydrogen controversy the Russian development lagged behind the U.S. work by so short a period that one can hardly claim that the Russians would have abstained from the development had we withheld our own effort. In the case of the ABM debate it is known that the Russians have already deployed some ABM defenses. A claim made by Drs. Wiesner and Chayes that the Russian deployment is imitative can hardly be maintained, since so far we have not deployed a defensive system. The analogy therefore holds insofar as in both cases the assertion that American abstention would have prevented a Russian effort is incorrect. The analogy is incomplete, however, since in the case of the hydrogen controversy the Russians followed us in a short time period, while in the ABM deployment they appear to be ahead of us.

Wiesner and Chayes are correct in claiming that the analogy is far from complete, in that during the hydrogen bomb controversy the question could be answered on the basis of calculations followed by a test, while in the ABM case the functioning of a much more complicated system is in question. This circumstance emphasizes the point that the ABM debate may indeed be less easily resolved on the basis of conclusive evidence.

On the other hand, I seem to notice some analogy in the fact that in the ABM case a major portion of the scientific community is assuming that a technical development is not feasible, while a smaller number of scientists who are more closely connected with the actual problems have a more positive view of future technical possibilities. Whether or not the negative judgment of numerous scientists is connected with their wishes to limit the competitive development of arms is a question where any statement will probably be based on opinion rather than on proof.

I hope that you will find the discussion given above responsive.

I also should like to express my sincere gratitude for having created the opportunity for me to appear before Senator Gore's Committee. I share your regret that the discussion before this committee was cut short.

Sincerely yours,

EDWARD TELLER.

WASHINGTON, D.C.,
June 3, 1969.

Hon. THOMAS J. DODD,
U.S. Senate,
Washington, D.C.

DEAR SENATOR DODD: This is in reply to your letter of May 22nd concerning the ABM hearings and, more particularly, the book by Professors Wiesner and Chayes, written at the suggestion of Senator Edward Kennedy. The book attacks the proposal to deploy a specific system designed to afford a measure of defense against ballistic missiles.

In their preface, the authors state their conclusion that there is no need to deploy the system "at this time". For what could be the fatal significance of these three words, see sub-paragraph (j) below.

There are striking parallels between the current debate on the ABM and the debate on the fusion bomb ten years ago. The authors state that "For far too long they [presumably decisions in such matters] have been made largely behind closed doors." Most certainly, this was not true of the fusion bomb issue which was vigorously debated in the press as well as before the President. The argument by the opponents of the fusion bomb development was heavily weighted, in numbers of speakers and writers and was well organized, just as in the case of the opposition to the ABM today. The debate continued into the period after President Truman's decision on January 31, 1950, with the effect of persuading some men not to work on the project.

Professors Wiesner and Chayes contend that "... in the hydrogen bomb controversy the scientific issue was whether, a specific design concept could *in principle* ever be developed into a workable weapon."

Thus stated, they have speciously narrowed the issue to design. In fact, the arguments advanced by scientists opposed included "workability" (i.e., the design concept) and other scientific issues as well as military and political differences of opinion in the scientific community.

In preparing this letter, I have reviewed the Report made by the General Advisory Committee to the Atomic Energy Commission and statements of its members as individuals plus the views of other prominent scientists of the day. As you know, the Report of the General Advisory Committee was not unanimous in opposing the development, although the Commission was informed that it was. An absent member had expressed his opinion in a letter written in 1949 which remained unknown to the Commission until revealed five years later.

The reports and statements have not been declassified although participants have publicly discussed them with some freedom over the years so that it is possible to say that the following issues concerning the fusion bomb, in opposition to its development, were presented by a number of members of the scientific community:

(a) The statement above-mentioned by Professors Wiesner and Chayes that the original concept was unworkable.

(b) The strategic military value of such a weapon was questioned.

(c) The economical alternative to fission weapons was questioned.

(d) The "ethical principle" that a fusion bomb was morally worse than a fission bomb was asserted. [On the moral issue, the late Senator Brien McMahon of Connecticut, then Chairman of the Joint Congressional Committee on Atomic Energy, stated that he could see no moral dividing line between a big explosion causing heavy damage and many smaller explosions causing equal or greater damage.]

(e) It was stated that there was no foreseeable non-military applications of fusion. [Beneficial spin-off is frequently cited today as a result of research into unexplored areas, e.g., our Space program. Our new ability to make harbors, canals, reservoirs, and other engineering works with little or no objectionable radioactivity is due to the development of fusion explosives.]

(f) The danger of global pollution was cited. Some opponents of the fusion bomb asserted that the detonation of a small number, "perhaps 10", might pollute the earth's atmosphere. [The estimate was subsequently raised to 500 to 50,000.]

(g) Doubt was expressed that the Russians could produce an H-bomb within a decade, which was to say, not before 1959. [We now know from Kurchatov's biography that the Soviets were at work on the fusion bomb at least as early as we were. They had their own very competent scientists and the advantage of espionage by Fuchs and other

traitors in our laboratories. The best evidence is that they tested an H-bomb in August of 1953.]

(h) The pseudo-military judgment was expressed that if the Soviets should ever make and use the fusion bomb against us, our large stock of fission bombs would be adequate reprisal.

(i) The statement that it was quite likely that through leaks, our own research and development would stimulate and materially assist a corresponding Russian development.

(j) And finally, that our overall national position would be weakened, not strengthened, by committing ourselves to such a program "at this time." This phrase, which also appears in the Wiesner-Chayes preface, is worthy of note for, as matters turned out, there was no time left in 1949-50. Had the President not made the decision to proceed with the development of the H-bomb, the Soviets, being well on their way to it, would have had it ahead of us. Had they then, relying on our unilateral renunciation, decided not to reveal their hand (as has been their custom with other developments) by refraining from testing or by testing only to prove a small hydrogen component, we would have known nothing of their success and their qualitative superiority until a possible collision. By that time, it would have been too late for us. "At this time" would have been a policy of fatal procrastination.

These points are not in accord with the emphasis in the book that "the scientific issue" concerns only the feasibility of an initial design concept. Another design concept proved feasible, but it would not have been found or, if found, would not have been developed had the opponents of the hydrogen bomb succeeded in persuading the President to declare against it as a weapon. The principle which clearly guided him—that the United States could not afford to be less well armed than a potential enemy—has a modern corollary. We cannot afford to be less well defended than a potential enemy.

Faithfully yours,

LEWIS L. STRAUSS.

[From Life magazine, Sept. 6, 1964]

DR. EDWARD TELLER'S MAGNIFICENT OBSESSION; STORY BEHIND THE H-BOMB IS ONE OF A DEDICATED, PATRIOTIC MAN OVERCOMING HIGH-LEVEL OPPOSITION

(By Robert Coughlan)

From the testimony in *The Matter of J. Robert Oppenheimer* and the miles of comment on it in the press, it is well known that at the end of 1949 a great secret debate occurred in the government and among the atomic scientists about whether this country should try to build the hydrogen, or "super" bomb; that Dr. Oppenheimer and the strong faction he led opposed and temporarily prevented it; and that another, smaller faction defeated them with the result that the H-bomb was achieved in 1952—barely nine months before the Russians fired a hydrogen device of their own.

Yet throughout these critical events, with the world balance of power and perhaps the political fate of mankind hinging on the outcome, the leading protagonist remained mostly invisible. Lately, it is true, Dr. Edward Teller's name has been in the papers; he is even recognized, although perhaps still not very widely, as "the father of the H-bomb." But as to who he is, where he came from and how he happened to achieve this extraordinary paternity—few even of the other actors in the drama could give a very full answer.

There have been good reasons for this. National security has required that his work be surrounded by secrecy. For reasons of his own Teller has welcomed anonymity. He still would very much prefer it. But now that the H-bomb is an accomplished fact, and now that the Oppenheimer affair has dragged

Teller from the wings to a share of the spotlight, neither set of reasons is as valid as before. He has therefore given his cooperation during the preparation of this article—with the request that he not be given too much credit.

Very well: it can be said at once that many people at Los Alamos and Washington deserve a substantial share of it. Teller's role nevertheless was unique, indispensable and decisive. Without it the chances are quite strong that the U.S. would not have the H-bomb in deliverable form today. In that event, in the well-informed judgment of President Eisenhower, "Soviet power would today be on the march in every quarter of the globe." Teller not only produced the brilliant idea which converted the H-bomb from a monstrous "gadget" to a versatile weapon. He also, by an almost fanatic determination, kept the idea of an H-bomb from dying of pure neglect.

And among all the improbable events that led to this improbable creation, Teller's obsessiveness has struck some people as the most farfetched. An old friend said a few weeks ago, "I still don't understand it. Edward's monomania about the H-bomb simply leaves me mystified—it was so out of character with everything he had been. He was always so interested in everything. His trouble was lack of concentration on any one problem. Then this thing hit him and he seemingly couldn't let loose of it."

Teller's obsession, as it became fully developed, was fed from many sources: by his childhood and youth in Europe, by his personal philosophy, his political beliefs and by innate traits of character. A different mixture would have produced a different result: The key ingredient of the H-bomb is not, therefore, a certain unmentionable combination of ingredients. It is, instead, the even more complex compound comprising Edward Teller. He cannot be defined, but at least he can be described.

Physically and temperamentally he has little in common with the popular image of the calm, detached, essentially impersonal Great Scientist. His angular face is animated and his large blue eyes, under massive and expressive eyebrows, are alert, intent and often twinkling with humor. He is cheerfully pragmatic and eloquently witty, with an unabashed appreciation of his own jokes. His laughter begins from deep inside, shaking him as if he were in an incipient fit, and rises in a series of choking, half-shattered yelps until everyone within a hundred yards is made aware that Teller has just said or heard something entertaining. He is also a pianist, a poker player, a rhymer, a raconteur, a mathematician, and an avid ping-pong player and mountain hiker despite the loss of his right foot. This occurred when he was 20 and, as a student in Munich, was competing in the local sport of jumping off moving streetcars; he slipped under a wheel, and the foot had to be amputated. His limp is on the order of his accent—only enough to add novelty—and is no impediment as he lopes along with his air of purposeful energy, his dark hair and eclectic clothing always a little disarranged, emanating a diffused human warmth and an attentive interest in whomever he meets.

By common agreement among his colleagues he is a genius. He not only knows a tremendous amount, seeming to remember everything he has ever learned, but is able to correlate his information on the run. Dr. Maria Mayer, a physicist and a personal friend of long standing, recalls the first time she was ever really awed by Teller's mind. She had joined the Manhattan District and was asked to calculate the chemical properties of a certain substance. But this required knowing the mechanical properties of its molecules. "They could be measured, but that would have taken several months. So someone said, 'Let's get Teller in and make him guess the data.' We got him into a room and

locked the door, so no one else could get at him, and he asked questions and did some figuring at the blackboard. He got the answer in about two hours, not entirely accurately, of course, but—as we found out when we got around to verifying them—close enough for the purpose." "There is no one who equals him for sheer speed of thought," Dr. James Arnold of Chicago says. "There may be better scientists, but none more brilliant. You always find him a thousand feet ahead of you."

Teller's mental atheletism, although the flashiest part of his equipment as a practicing genius, is far from being the most important part. Most of his calculations are not quite accurate—not because he lacks respect for accuracy but because he lacks the patience to spend his own time rounding off the figures. A friend says, "What Edward can't carry in his head and solve in his head, he doesn't want to bother with." He dislikes routine and method whether they affect him personally or professionally. He is unhappy and ill at ease under any imposed disciplines. This maverick streak, combined with intense gregariousness and even more intense intellectual curiosity, has given his genius some striking twists and some extra dimensions.

For instance, although Teller is one of the world's greatest theoretical physicists, he has published nearly all of his many scientific papers with collaborators. Dr. Frederic de Hoffmann, who has been his deputy and closest associate at Los Alamos, has described how this works: "Edward isn't the cloistered kind of scientist. He gets his ideas in conversation and develops them by trying them out on people. We were coming back from Europe on the *Ile de France* and I was standing in the ship's nightclub when he came up and said, 'Freddie, I think I have an idea.' It was something he'd just thought of about magnetohydrodynamics. I was a bachelor then and I'd located several good-looking girls on the ship, but I knew what I had to do, so I disappeared and started working on the calculations. I'd get something finished and start prowling on the deck again when Edward would turn up out of the night and we'd walk the deck together while he talked and I was the brick wall he was bouncing these things off of. By the end of the trip we had a paper. He'd had the ideas, and I'd done some solving of equations. But he insisted that we sign in alphabetical order, which put my name first."

De Hoffmann's account is overly modest—he is a brilliant physicist in his own right—but the episode illustrates Teller's general method. He is a conceptual thinker, or, as Dr. Luis Alvarez of the University of California says, "an 'order of magnitude' man. That's his language. He's like the architect who likes to make the big drawing, the broad sketch, and not worry himself about the plumbing details."

This kind of thinking almost defines the traditional and proper role of theoretical physics, as distinguished from experimental and applied physics. The theoreticians, a small aristocracy of dealing purely in ideas, tend to regard the toilers in the latter fields as exceptionally well-educated engineers; or sometimes as mere "gadgetsers." Teller is by trade and at heart a theoretician and takes the universe for his province. But at the same time he has strong gadgeteering instincts. The result is that he is interested in everything. He has a faculty for entertaining many ideas, consequential and otherwise, at the same time, and for being almost equally fascinated by all of them. He is intellectually insatiable: as a friend has said, "All anybody has to say to Edward is, 'We've got a problem here, we need you,' and—zip! he's into it. It's helpfulness, plus maybe vanity, but mostly just curiosity."

Not all—in fact, not even most—of Teller's ideas are good, and he is often the first to recognize their flaws, interrupting himself in mid-flight to strike himself on the forehead

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and exclaim, "No! No! I'm an idiot!" But mistakes do not inhibit him. He likes to quote the dictum of Niels Bohr, the great Danish physicist, that, "An expert is a person who has found out by his own painful experience all the mistakes that one can make in a very narrow field." Teller succeeds, not only by the high average level of his ideas, but by producing them in unparalleled volume, thereby making his mistakes rapidly and becoming more and more expert. But until he or someone else can demonstrate that an idea is wrong he is infatuated with it. He is, moreover, intellectually aggressive, stubborn, and competitive. An idea is, for him, a personal antagonist which he conquers with an almost physical satisfaction.

His personal absorption in a problem or idea has a way of enveloping everyone with whom he happens to be, carrying them along, sometimes reluctantly, in the torrent of his enthusiasm. At the University of Chicago, where he taught for several years, his fellow physicists now measure enthusiasm in "Tellers," with Teller himself, of course, being the basic criterion comparable to the velocity of light. Degrees of enthusiasm are measured in millionths of "Tellers," called "micro-Tellers."

Teller is at the same time a philosopher, a moral and thoughtful man all of whose characteristics are subordinated ultimately to an attempt to understand the universe and man's position on the speck of it he occupies. But as a philosopher, as well as a scientist, he is an activist. As a human being faced with a moral or political choice, he not only makes the choice but reinforces it, if he can, with concrete effort. More than once this habit of acting on conviction has involved him in struggles with his colleagues and has made him unpopular.

All of these aspects of Teller's nature were important in making him "the father of the H-bomb." But the crucial ingredient was his attachment to the concepts of Western democracy, specifically those of the U.S., and conversely a fear that they would be destroyed; together with, perhaps, an inner, deeper and unarticulated fear of a more personal nature. His childhood and youth in Budapest, where he was born in 1908, were lived under several varieties of political tyranny, including the Communism of Bela Kun and the facism and Admiral Horthy. The sight of dead men, the insecurity of life from week to week, became an accepted part of existence. Being Jewish, the Teller family had to bear the complex malice of anti-Semitism as well. Edward Teller remembers that, by the time he was 10, he fully understood from family conversations that someday he would have to emigrate from Hungary and make his life in a politically different climate. He understood also that "the only way I'd be able to get along would be that I should be smarter than somebody else."

It was easy for him to be smarter than somebody else in mathematics, for which he showed a precocious gift. He remembers, at the age of about 6, lying awake in bed amusing himself before sleep by such exercises as calculating the number of seconds in a year. His father, a prosperous lawyer, and his mother, the daughter of a leading banker of a nearby smaller city, were part of a polished and intellectually eager upper middle class society in which one's position reflected mental and artistic attainment. So they applauded him when, for instance, at dinner one evening his father mentioned the figure "10,000," and young Edward piped, "That's 100 times 100, isn't it?" However, pleased though he was with this sign of talent, his father felt that mathematics was not practical as a life's work and urged him to compromise on something useful such as chemistry. Consequently Edward went in 1926 to the Institute of Technology at Karlsruhe and took a degree in chemical engineering, keeping mathematics as an avo-

cation. Meantime, also in 1926, had come the discovery known as quantum mechanics, a system of mathematically formulated principles which can be used to calculate the behavior of atomic particles. This, Teller says, "suddenly explained almost everything—in physics, chemistry, almost everything in the world that we had wondered about could be interpreted." He began applying it to the problems of chemistry, from which he was led naturally (the two sciences being inseparable) into physics. He became hybridized: a specialist in physical chemistry. He went on to Munich and thence to Leipzig for his Ph. D., to Copenhagen for further study under Niels Bohr and to Göttingen to teach. At this point the Nazis took power in Germany.

A STRATEGIC TIME

In the ironic way that evil sometimes begets good, the tyranny of Hitlerism was indirectly responsible for strengthening democracy, for it drove many of Germany's leading physicists to the West. Teller went to England and from there, with a U.S. Rockefeller grant—and newly married to his childhood sweetheart, Maria Augusta ("Mici") Harkanyi, the younger sister of his best boyhood friend in Budapest—back to Denmark to work again under Bohr. Meantime he had become friends with Dr. George Gamow, the Russian-born physicist, and when Gamow went to George Washington University at Washington, D.C., he got Teller the offer of a job as visiting professor there. Thus it happened that the Tellers arrived in this country in 1935: a strategic time in the history of physics. It was only three years later that atomic fission was discovered in Germany, and only four years before the famous "Einstein letter" to President Roosevelt which launched this country on the development of the atom bomb.

Teller, then 27, had already developed many of the characteristics that were to amaze, charm and sometimes dismay his friends in later years. Maria Mayer, who had known him in Germany, was struck even then by his "intuitive" grasp of complex problems. He was facile, gay ("pure fun," she remembers), inquisitive and restless. Instead of settling sensibly into his chair, Teller at once began to seek out other physicists for companionable argument, trained minds against which to test his teeming ideas. And it is from these years—1935 to 1941—that the earliest origins of the conceptions that went into the H-bomb can be dated. Gamow was interested in the energy production of stars, a phenomenon thermonuclear in character. He discussed it with his brilliant young friend, and together they worked out formulas for these stellar reactions. As soon as the explosive possibilities of the atom were realized, Teller's mind took a "quantum jump" to the stars: for the heat that could be released by atomic fission would be comparable to the heat in the interior of the sun itself, and conceivably this heat might be concentrated long enough to bring about the fusion of some of the very light elements, just as hydrogen is fused in the sun to form helium and in the process gives off tremendous energy. There would be no theoretical limit to the size of such an explosion.

In simplest terms this is the theory that led to the hydrogen bomb. It was not original with Teller. As a theoretical possibility it was obvious and occurred to many physicists. But for some reason no more explicable than an unusual taste in food, it aroused an intense, specific curiosity in Teller and he never stopped thinking about it. He discussed it with Gamow and his other friends in Washington, and with Enrico Fermi, the great Italian physicist—"The Pope," as he is known—who was teaching at Columbia. The monomania of the following years had begun to take root.

Yet when he was asked to join the A-bomb project—the success of which was essential to any future H-bomb development—he hesitated for a long time. Was weaponizing the proper business of science? He thought not. Was it morally right to help create such a monster? He did not know.

On May 10, 1940, the day the Nazis invaded the Low Countries, President Roosevelt spoke before the American Scientific Congress in Washington. Teller had never heard him in person and attended out of curiosity. The President said, in part, "You who are scientists may have been told that you are, in part, responsible for the debacle of today . . . but I assure you that it is not the scientists . . . who are responsible. . . . Surely it is time for our republics . . . to use every knowledge, every science that we possess . . . You and I . . . will act together to protect and defend by every means . . . our science, our culture, our American freedom and our civilization." As the President talked, Teller began to feel that Roosevelt was speaking directly to him, answering all the questions that had been troubling him. He left George Washington the following year to join Fermi at Columbia and, when the uranium pile project that Fermi supervised was moved to Chicago, he moved with it. Later on he went to the University of California at Berkeley, where a well-known physicist of about his own age, Dr. J. Robert Oppenheimer, was assembling a group to do theoretical studies on the A-bomb. He returned to Chicago briefly and then, when Oppenheimer had established the central laboratory at Los Alamos, was among the first to join him there.

During his first conversations with Oppenheimer they had talked about the possibilities of a thermonuclear weapon, and Oppenheimer had seemed as interested by the idea as Teller himself. At Berkeley the theoretical group did preliminary studies on fusion and, as Oppenheimer has testified, "it excited us, and it seemed to make even more necessary that we understand what this was all about." Accordingly Teller went into the Manhattan District with the impression that the "super bomb," as it soon was called, would be given a high priority. And actually some of the first installations at Los Alamos were for the benefit of further studies on it. However, as Oppenheimer has said, there was "the very immediate job of getting some weapons into the places where they [were] needed," and until the A-bomb problem could be solved, few but Teller were inclined to give much attention to the more formidable problem of the super. Teller at first tried to suppress his impatience but could not. The result was the first of what became a series of fission-fusion reactions between him and his colleagues.

He had been assigned to Los Alamos' theoretical division, headed by his friend Dr. Hans Bethe, Cornell's great physicist, as Bethe has testified, ". . . I hoped to rely very heavily on him to help our work in theoretical physics. It turned out that he did not want to cooperate. He did not want to work on the agreed line of research. . . . He always suggested new things, new deviations. So that in the end there was no choice but to relieve him of any work in the general line of the development of Los Alamos, and to permit him to pursue his own ideas entirely unrelated to the World War II work. . . ."

Teller was transferred to the F Division where Enrico Fermi presided over "advanced development." There, with Dr. Emil Konopinski and a few others, he devoted himself during the rest of the war to the super—to "my baby," as he had begun to call it. And by the end of the war he and his group had succeeded in working out some of its most intricate problems. He believed—as he was to testify later—that a concerted effort on the part of the other senior scientists could

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dispose of the rest by 1947. He had been led to suppose that this would occur: that once the A-bomb had been tested successfully, the great human and technical facilities of Los Alamos would converge on the super.

Instead, to his great dismay, after Hiroshima he found the laboratory disintegrating. One Los Alamos scientist remembers, "I was away for several months and got back after Hiroshima. There was a terrible sense of shock. I didn't recognize anybody. Everyone was wrapped up in petitions for world government, disarmament, internationalizing of the atom, and so forth." To this emotion, which Teller to some degree shared, there was, of course, added the normal reaction that affected scientists as well as GIs: the feeling that the war was over and it was time to get back home and pick up the threads of old lives. Teller appealed to Oppenheimer for help, but he was among the most eager to leave. At last, with great reluctance, Teller decided to join the exodus himself.

THIS FABULOUS MONSTER, RUSSIA

Early in 1946 he called a meeting of the leading members of the Los Alamos staff to summarize for them all that he and his associates had learned—a meeting known as "The Final Conference on the Super." Then, with Miel and their young son Paul, he drove to the University of Chicago, where he had been offered a job at the new Institute for Nuclear Studies. Fermi and many of his other old friends were there. The atmosphere was personally and scientifically congenial, and Teller tried hard to adapt himself to the peaceable pursuits of teaching and pure science.

For a while he succeeded. Additional "new things, new devotions" kept him embroiled in a self-renewing welter of projects, each requiring a collaborator or two, so that he was always enormously busy. With equal energy he plunged into the extracurricular aim of all the scientists who had contributed to the A-bomb; to make the atom peaceable and productive and—it was still possible then to hope—to use it as a foundation on which to raise a supernational authority, the beginnings of a real world government. Teller was a leading member of Union Now and Atlantic Union and a prolific contributor to the *Bulletin of the Atomic Scientists*, published in a basement room at the university. He endorsed the Acheson-Lilienthal report (written largely by Oppenheimer) who, became the basis of the so-called "Baruch Plan" by which this country attempted to bring the atom under international control. And in mid-1948 he wrote, "I believe that we should cease to be infatuated with the menace of this fabulous monster, Russia. . . . We must work for something. We must work for world government. . . . [and] concentrate for the time being on establishing common government with our friends and potential allies."

Nevertheless, the optimism he professed was qualified with private fears. Even during the war he had mistrusted the Russians. There were stories his parents told of oceans of men sweeping across the frontier during World War I, dying and endlessly replaced. The native prejudice faded when he grew up and traveled in the world, and, he recalls, he regarded Soviet Communism as "an experiment of interest and possibly of some merit." But the purge trials disillusioned him.

He believed in the ideals that were occupying so many of his colleagues, but he saw their attainment becoming increasingly unlikely while war became increasingly likely. It seemed to him that the way to prevent war was to arm this country beyond challenges with A-bombs and, if possible, with the H-bomb. The latter would deprive the Communist nations of their only advantage, their huge manpower, by making it impossible for them to mass their troops for "hu-

man sea" breakthroughs. Possibly it would mean the end of all mass armies, conceivably even the end of major wars. The result of this introspection led him to return to Los Alamos—"to do something I knew about"—at first for short periods as a consultant and finally on a leave of absence. This was 1949.

The same intuitive, synthesizing grasp of complexities that made Teller a genius in his profession seems to have been operating this time in his comprehension of world affairs. For 1949 was a decisive point in modern times. That summer the Russians exploded an atomic bomb, shattering the U.S. monopoly on which the security of the Western world was largely built.

"THE REASONS MADE ME MAD"

President Truman, reporting the Russian achievement—which had not been expected for years—to the National Security Council, finished with the simple but comprehensive question, "What do we do now?" The answer in part, was to junk the "economic budget" and put the nation "in situations of strength" throughout the world. But another part of the answer lay in the super. Could it be built? If so, should it be? And at this point the sense which had haunted the atomic scientists ever since Hiroshima asserted itself in one of the most startling decisions ever made by a sovereign and threatened government. The AEC's General Advisory Committee, made up mostly of leading physicists and chaired by Dr. Oppenheimer, recommended that then and during an indefinite future there should be no program on the super; partly because of technical difficulties but chiefly because they felt that the super would be an immoral weapon. And as for the Russians? Their atomic science "imitated" ours, so the reasoning went, and if we did not develop it, neither would they. The AEC commissioner supported these views of their Advisory Committee: not once, but twice they rejected the super.

The decision was, of course, a very heavy blow to Teller. Then his disappointment turned to pugnacity. "The reasons they gave just made me mad," he says. The technical difficulties seemed to him to be no different in kind or much different in degree from the normal routine of scientific effort. "A scientific invention," he says, "consists of six (or some number) ideas, five of which are absurd but which, with the addition of the sixth and enough rearrangement of the combinations, results in something no one has thought of before." He felt that the way to solve the technical problems of the super was to work on them, that sooner or later the missing "sixth idea" would emerge. As for the moral argument, Teller was as deeply conscious as anyone of the terrible possibilities of the H-bomb, but he felt that moral and political judgements were not properly the concern of science. "The important thing in any science," he has said, "is to do the things that can be done. Scientists naturally have a right and a duty to have opinions. But their science gives them no special insight into public affairs. There is a time for scientists and movie stars and people who have flown the Atlantic to restrain their opinions lest they be taken more seriously than they should be." However, Teller could do very little to make his own opinions effective. The decision had been made in Washington and it would have to be unmade there.

Lewis Strauss, who had been the only dissenter from the decision in the AEC, and Senator Brien McMahon, chairman of the Joint Committee on Atomic Energy, together set about unmaking it. McMahon wrote to the President outlining fully the case for the super and called on him for personal argument. Among some members of McMahon's committee there was talk of bringing impeachment proceedings if the final decision

was negative. The President appointed a special subcommittee of the National Security Council, made up of Secretaries Acheson and Johnson and AEC Chairman Lilienthal, to advise him what to do. Strauss, who had been equally busy, became so discouraged at one point that he went to a bungalow his mother-in-law leased at the Beverly Hills Hotel and amidst the incongruous glitter of this Hollywood showpiece searched his conscience during the Christmas season. One night he received a call from the hotel lobby. It was Senator McMahon, who had come to assure him that he was right. Strauss had laboriously reached the same conclusion: they made plans to carry on the fight in Washington with even more vigor.

Their battle came to an abrupt end a few weeks later, but from a sickeningly unexpected cause. On Jan. 27, 1950 Dr. Klaus Fuchs confessed that he had been spying on behalf of the Russians since 1942. Fuchs had been a member of the British scientific mission to Los Alamos toward the end of the war. Moreover he had attended the "Final Conference on the Super" called by Teller in 1946. It thus could be assumed that the Russians not only knew all the wartime A-bomb "secrets," but also knew most of the progress that had been made by this country on the H-bomb.

The President's special subcommittee met and voted two to one for a crash program on the super, with Lilienthal in dissent. They took their decision to the White House, where President Truman concurred and released the announcement that afternoon.

Thus "Edward's monomania" found official sanction. Yet, at this stage, his and his allies' triumph was mainly theoretical. The work itself still had to be done, and Teller set out to enlist other physicists to help. He had already asked Oppenheimer once and been refused; now again he asked him, and was again refused, although one time Oppenheimer volunteered the names of people at Princeton who he thought could be useful. Teller tried them; all turned him down. Almost everywhere he encountered either indifference or active hostility. Early in February, at a meeting of the American Physical Society in New York, 12 of the most distinguished members issued a joint statement: "We believe that no nation has the right to use such a bomb, no matter how righteous its use. . . . Its use would be a betrayal of all standards of morality and of Christian civilization itself. . . . we urge that the United States, through its elected government, make a solemn declaration that we shall never use this bomb first. This denunciation was soon followed by one from Dr. Einstein who warned that ". . . annihilation of any life on earth has been brought within the range of technical possibilities. . . . In the end there beckons more and more clearly general annihilation." Hans Bethe wrote in the *Bulletin* that use of the H-bomb could be "compared to the warfare of Genghis Khan who ruthlessly killed every last inhabitant of Persia."

In an article called "Back to the Laboratories" in the March 1950 issue of the *Bulletin*, Teller pleaded with his colleagues: ". . . To my mind we are in a situation not less dangerous than the one we were facing in 1939, and it is of the greatest importance that we realize it. . . . we must realize that democracy will not be saved by ideals alone. . . . The primary responsibility for action lies with the groups directing the policy and foreign relations of our country. To the scientist, at least, it should be clear that he can make a contribution by making the country strong. . . ."

Actually only three leading men joined him, John Wheeler of Princeton, John von Neumann of the Institute for Advanced Study, and Lothar Nordheim of Duke University. (Later, after Korea, Bethe and others turned up.) For the rest of his team he

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relied mainly on talented younger men. There were technical discouragements too: some of the earlier calculations were repeated more thoroughly and put the whole project in doubt. Even a year later, when the first "thermonuclear device" was approaching the test stage and someone asked Teller, "Will it work?" he had to admit that he didn't know. "But you didn't know that five years ago," the questioner pointed out. "True," Teller answered, "but now we don't know on much better grounds."

Moreover, even if this "device" worked, there was no way in sight of developing it into a really practicable weapon. Ordinary hydrogen atoms, although they fuse in the sun, cannot be made to do so under any conditions attainable on earth. Teller's calculations involved the use of special "heavy" forms of hydrogen called deuterium and tritium, and these had to be kept liquefied by means of cumbersome refrigeration equipment. The result was less a bomb than a "contraption," as Oppenheimer has called it, which could be carried in a ship's hold and thus conceivably be used against enemy ports, but which was too big to be carried in any airplane built or planned.

During the latter part of 1950 Dr. Stan Ulam, a Los Alamos mathematical physicist, was working on a paper on certain theories indirectly related to this problem. Teller got into a conversation with Ulam about it. Not long afterward something they had discussed touched a spark. That evening, as he and Frederic de Hoffmann were leaving the office, Teller said absently, "I think I have an idea." De Hoffmann recalls that he thought nothing of this at the time, "because, after all, Edward is always having an idea. But the next morning he came in to me and said, 'Fred, I think I really have something. Stick some figures into it.' He told me about it and I started to work with my desk calculator. The answer came out right."

What Teller had thus casually and undramatically thought of was the missing "sixth idea" for his invention: an idea which disposed of all the technical and manufacturing difficulties and converted the "contraption" into a deliverable bomb as versatile as the A-bomb.

For technical reasons it was still desirable to go ahead with the test of the original device and this was done in May 1951. The next month the AEC called a meeting at Princeton, at which Oppenheimer presided, to examine Teller's "new concept." The result was general enthusiasm in which Oppenheimer joined, and it was decided to push ahead with a full-scale test as soon as possible.

Therein, however, as it turned out, lay an ambiguity which led to a fresh crisis in Teller's relations with his colleagues. Dr. Norris Bradbury, director of Los Alamos, and his division heads adopted a production schedule for "Mike," as the new device was code-named, which to them seemed efficient but to Teller seemed much too conservative. In the ensuing and growing disagreement, tempers were rubbed raw. Finally there was a definitive showdown in which Teller demanded that the target date for the test be moved ahead. Bradbury refused, and Teller thereupon resigned, "This is not a crash program," he commented bitterly to a friend. "They don't need me—I'm leaving."

Not only did he leave but, with the backing of his Washington allies, he persuaded the AEC to set up a new weapons laboratory especially designed for thermonuclear research. This was established the following year at Livermore, Calif., as an adjunct to the University of California Radiation Laboratory, which was under the direction of Teller's friend, Dr. E. O. Lawrence. The new lab contributed nothing to Mike, which was completed at Los Alamos and tested successfully at Elugelab in November 1952—by then the place barely existed as a going concern. However, to Teller that fact was unimpor-

tant. "There are three ways to encourage initiative," he has said. "One is to cut off people's heads as they do in Russia. Another is to subject people to public criticism which is impossible in such secret work as this. A third way is to set up competition. This is Livermore's most valuable function: simply to be a competitor."

At the time of the Mike blast, Teller was too busy helping at the birth of the new laboratory to attend in person, and he "saw" the explosion instead on the seismograph of the University of California. (His comment was, "That's very nice.") As for his being "the father of the H-bomb," he has said, "It is true that I am the father in the biological sense that I performed a necessary function and let nature take its course. After that a child had to be born. It might be robust or it might be stillborn, but something had to be born. The process of conception was by no means a pleasure: it was filled with difficulty and anxiety for both parties. My act—and my leaving—aroused the emotions usually associated with such behavior."

Teller's fission from Los Alamos was not final or complete. He made himself available for advice when it was wanted and returned from time to time for consultations, as he still does. Relations between the two laboratories are good, and there is full exchange of information and considerable visiting back and forth by staff members. Following the success of Mike, there was an effort mainly at Los Alamos, to simplify its construction still more and to develop it into a family of weapons comparable to the A-bomb family. This has been entirely successful.

Teller's work was complete. He had added in a fantastic measure to the power and security of the U.S. It had been for him a process filled with discouragements, anxieties and many painful experiences, but which at the same time stimulated his mind and emotions fully and carried with it, in the end, a deep personal satisfaction. But the story was to have a sequel which would bring him no satisfaction at all and disturb him more than almost any experience of his life. He was called upon to testify in the Gray board hearings "In the Matter of J. Robert Oppenheimer."

His emotions were extremely complex. He did not believe, in the first place, that the questions that had arisen about Oppenheimer were properly a matter for a "security" hearing which would carry with it connotations of disloyalty. On the other hand he had been increasingly disturbed by decisions and advice which Oppenheimer had given in his official capacities, which were so widely distributed as to give him a dominating position in atomic matters and U.S. physics generally. Again and again, and not merely on the H-bomb development, he had thought Oppenheimer wrong, until at last he had begun to have very grave doubts about his judgment, not his motives. If asked, it would be his duty to say as much; but the idea was repellent to him. He knew that his own prestige was now so great that his testimony would be given much weight. To contribute to Oppenheimer's possible ruin was antipathetic to his nature, a nature which, where other human beings are concerned, is extremely compassionate.

Last April 28, in the small room at the Atomic Energy Commission building where the hearings were being held, Teller took his place as witness. Behind him, sitting on a leather davenport, was Oppenheimer, his old antagonist, a man he now deeply pitied. Teller paid tribute to Oppenheimer's talents, especially his "very outstanding achievement" as the wartime organizer and director of Los Alamos. He said moreover, "I have always assumed, and I now assume, that he is loyal to the United States. I believe this, and I shall believe it until I see very conclusive proof to the opposite." But he added in reply

to the next question, ". . . I thoroughly disagreed with him in numerous issues and his actions frankly appeared to me confused and complicated. To this extent I feel that I would like to see the vital interests of this country in hands which I understand better, and therefore trust more." He also recounted the history of the H-bomb and gave his opinion that if Oppenheimer had thrown his prestige behind it the success could have been achieved years earlier. He went on to say, most damagingly, that ". . . if it is a question of wisdom and judgment, as demonstrated by actions since 1945, then I would say one would be wiser not to grant clearance."

At the close of his testimony he rose and turned to meet Oppenheimer's eyes. He stepped forward and said, "I'm sorry."

Oppenheimer answered, "You only did your duty."

They shook hands, and Teller said, "Good luck."

Oppenheimer looked at him oddly and answered, "After what you've just said, I don't know what you mean."

"And the terrible thing," Teller says in remembrance, "was that I don't think he did know what I meant." He turned away, his shoulders heavy, and limped slowly from the room.

Teller today, in the summer of 1954, is a man physically and emotionally depleted. He has worked beyond the limits of common sense, and his resiliency, although still exceptional, shows its diminution in the effortful, almost dragging quality with which he forces himself on. The emotional drain of nearly a dozen years' conflict was capped by the Oppenheimer case; only to be capped again by its aftermath. Nearly the whole community of physical scientists rallied behind Oppenheimer, attacked the recommendations made by the Gray board and the AEC, and inferentially and sometimes directly denounced those who, as Teller did, had denounced him. Some of Teller's old friends are charitably puzzled; others are bitter.

Teller, who has spent a gregarious life among the physical scientists and who has always cherished his friendships with them, has found this animosity very hard to bear. But what is more serious is the pressure of his own conscience; was he being morally and intellectually honest when he in effect condemned Oppenheimer because, he said, "his actions . . . appeared to me confused and complicated"? Had he inadvertently been guilty of endorsing what he himself feared most: intolerance, the limitation of debate, the punishment of a man for what was an honest mistake? Teller was immensely relieved when the AEC commissioners, in their review of the Gray board recommendation against reinstating Oppenheimer's security clearance, dismissed Oppenheimer's lack of "enthusiasm" for the H-bomb as immaterial. But Teller's own role in the case has continued to trouble him.

Tired of controversy, duty and anxiety, Teller is perhaps most of all tired of weaponizing. At 46, long past the age when most men make their important contributions to physics if they have any to make, he realizes that he has been away from "basic physics" almost since he first became qualified to enter it. Sitting in his room recently at Los Alamos, where he was spending a fortnight helping on still more and newer weapons problems, he discussed what he hoped could be his future. "Everybody now wants to discover universal laws which will explain the structure and behavior of the nucleus of the atom. But actually our knowledge of the elementary particles that make up the nucleus is tiny. The situation calls for more modesty. We should first try to discover more about these elementary particles and about their laws. Then it will be the time for the major synthesis of what we really know, and the formulation of the universal law."

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"It is like the difference between a specialist and a philosopher. A specialist is someone who knows more and more about less and less until at last he knows everything about nothing. A philosopher is someone who knows less and less about more and more until at last he knows nothing about everything. Physics is now too philosophical. In my work I would like to reverse the process, and to try to limit the things to be found out and to make some discoveries which may later be useful."

"This unpretentious ambition is consistent with Teller's personal philosophy. He has no religious convictions; regarding the comprehension of God which is equally the goal of philosophy and physics, he has said, 'I try to make a point not to talk about things I don't understand—at least the things I do not understand at all.' But he is guided in ethics by the same pragmatism he brings to science: 'We know a lot because we as a species have lived and behaved a lot.' He finds himself most in tune with that very modest philosopher, Lao-tse. 'He is not dogmatic, and he does not go in for big, universal ideas. For instance, I like what he says about failure and success, 'Failure is the foundation of success and the means by which it is achieved. Success is the lurking place of failure; but who can tell when the turning point will come!'"

ABM

THE ANTI-BALLISTIC-MISSILE SYSTEM AND THE DEFENSE OF THE AMERICAN PEOPLE

Mr. BYRD of West Virginia. Mr. President, whatever the outcome of the vote on the ABM in the Senate, it must be recognized that both the proponents and the opponents have made valuable contributions to the overall illumination of the critical problems of defense in the nuclear-missile age.

THE IMPORTANCE OF THE ABM DEBATE IN THE SENATE

The importance of extensive debate on national problems, both pro and con, was long ago recognized by the Founding Fathers of this country. In the *Federalist* No. 62, for example, which deals with the role of the Senate in our form of government, it is pointed out:

A good government implies two things: first, fidelity to the object of government, which is the happiness of the people; secondly, a knowledge of the means by which that object can be best obtained.

It is here, in this extended debate on the deployment of an anti-ballistic-missile system, that men of good will, Senators who both defend and who oppose the ABM, seek to carry out the promise of the *Federalist*, by searching for "a knowledge of the means by which" the object of good government, "the happiness of the people," may be served.

The authors of the *Federalist* were also well aware that in world politics we Americans might have to deal with nations which had rising aspirations of world power. Wisely they understood that only power can check power. Their grasp of this basic and unchanged fact was stated clearly in the *Federalist* No. 4:

We are not to expect that they [i.e., other nations] should regard our advancement in union, in power and consequence by land and by sea, with an eye of indifference and composure. The people of America are aware that inducements to war may arise out of these circumstances, as well as from others not so obvious at present, and that whenever such inducements may find fit time and op-

portunity for operation, pretences to color and justify them will not be found wanting.

How, then, should the United States "provide for the common defense" as mentioned in the Constitution's preamble, and avoid war? Again, the authors of the *Federalist* in paper No. 4 had an answer which seems, with a prophetic prevision, to apply to the complicated problems of defense in these, our own times. Their answer as to how best to prevent the scourge of war from reaching into the homeland of America was for the Congress to provide a situation that "consists in the best possible state of defence."

So, Mr. President, we come to the question before the Senate. What action will promote the "best possible state of defense"? I believe the answer lies in supporting the President's proposed Safeguard ABM system.

COMPARATIVE UNITED STATES-SOVIET STRATEGIC MILITARY STRENGTH

Former Secretary of Defense Clark Clifford stated in his January 15, 1969, posture statement that the United States had 1,054 intercontinental ballistic missiles—ICBM's—and the Soviets had 900 ICBM's on September 1, 1968.

On March 19, Secretary of Defense Laird testified to the Senate Committee on Armed Services:

As of today, the Soviets have in being and under construction more ICBM launchers than the 1,048 possessed by the United States.

On April 25, 1969, Secretary Laird reported the Soviet ICBM total was 1,140. This includes 1,000 ICBM's in hardened sites and 140 ICBM's on launching pads. He also said that the Soviets could have 2,500 ICBM's by 1975.

The *New York Times*, in an analysis of Soviet weaponry, April 14, 1969, said:

Qualified sources say that the new evidence gathered by high-flying satellites shows that the Soviet Union has about 1,200 intercontinental ballistic missiles in place or rapidly going into place, roughly 150 more land-based ICBM's than the United States.

On April 10, 1969, the Institute for Strategic Studies, London, released a study which concluded:

The Soviet Union must now be treated as a full equal in terms both of strategic power and of her ability to control conflict in the developing world.

Deputy Secretary of Defense David Packard, in testimony before the Senate Armed Services Committee March 20, 1969, stated:

One of the things that impressed me very much in the studies that I have made is that we have a good deal of evidence, quite hard evidence, that the Soviet ICBM deployment and development is continuing. It was this that caused us to take another hard look as to what we should do about this ABM capability.

Fundamental to the understanding of this dramatic increase in Soviet missile is the erroneous assumption of U.S. policymakers in recent years that the Soviet Union would not seek a superior offensive capability but would only seek parity. This error imposed American assumptions on our vision of Soviet strategy. As a result the Soviets now

enjoy a widening advantage. This was underlined by Deputy Secretary Packard on March 20 when he told the Senate Armed Services Committee, in analyzing charts of Soviet missile strength:

As you can see, parity has been reached. The smaller Soviet missiles represented in this area of the chart make up the larger part of the totals. Those large missiles that have the accuracy and yield to be a threat to our Minuteman forces are projected on the larger part of the figure. They became operational in 1966 and their inventory has grown. . . . These are the large missiles on which the Soviets have flown multiple warheads. Thus, the force potentially represents a severe threat to our Minuteman.

Of special concern is the Soviet development and deployment of a very heavy intercontinental ballistic missile, the SS-9, which was unknown to the U.S. public until it was disclosed by Secretary Laird in his initial appearance this spring before the Senate Armed Services Committee. This missile carries a warhead in the range of 20 to 25 megatons, far larger than anything in the U.S. inventory. Because of its size and its accuracy, the SS-9 is regarded as a weapon designed to knock out American Minuteman ICBM's.

The present Soviet ICBM force now includes well over 200 SS-9s, and this deployment is progressing at a fairly rapid rate—particularly since December 1968. This is the missile which is projected by the Defense Department to reach possibly 500 by 1975. This missile booster can also be adapted to fire an orbital bombardment warhead. It can also be adapted to carry a multiple warhead, which the Soviets are known to have been testing.

With reference to Soviet testing, it is noteworthy that one such Soviet test into the Pacific Ocean was made public by Secretary of State Rogers on April 12, 1969. He stated that the Soviet Union had tested the multiple warhead before but that this recent test was a "longer shot."

In addition to the SS-9, the Soviets are continuing to deploy the SS-11 and the newer SS-13 model ICBM's. These carry smaller warheads than the SS-9, but the SS-13 is the first solid-fueled Soviet ICBM, and it can be developed and deployed in large numbers.

This surge in Soviet ICBM's is one of the most direct reasons for the Nixon administration's decision to proceed with the Safeguard ABM.

Then, too, the Soviets presently enjoy a clear lead in space orbital weapons. Mr. McNamara released information in 1967 that the U.S.S.R. was developing a fractional orbital bombardment system. Mr. Laird confirmed that the Soviets were very likely deploying this system. He said:

They are also working hard on FOBS . . . also designed to reduce warning time to our bombers so that they will not have sufficient time to become airborne. (testimony March 20)

I am told that, if these vehicles were launched into near-earth orbit on approximately 70 to 75 degrees inclination, they would bracket the United States periodically. They would then be known as orbital bombardment systems rather

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than FOBS. Properly deployed, a significant number, for example 100, could be in a position to attack the United States in a matter of seconds after the button was pushed in the Kremlin. This would add enormously to a credible Soviet capability to deliver a first strike against the United States.

Furthermore, in his testimony before the Senate Armed Services Committee on March 19, Deputy Defense Secretary Packard commented on Soviet submarine launched missiles:

We know that the Soviets have been moving ahead with a rather active program in producing Polaris-type submarines. They are now in production. They are not yet deployed as far as we know. But this gives the Soviets the possibility of launching missiles from locations close to our shores, and we are very much concerned about this threat which could reduce the ability of our bombing force to get off.

The submarine referred to here is the "Y" class, which went into production in 1968. Seven were commissioned in that year. This sub carries 16 underwater-launched, 1,500-mile range missiles. Secretary of the Navy Chafee, in his testimony to the Senate committee, referred to it when he declared:

The Soviets are modernizing their submarine force, the world's largest. Following a period of large-scale shipyard expansion, new classes of ballistic missile submarine and nuclear attack boats are becoming operational. More of these new types have been launched than foreseen a year ago.

The Institute for Strategic Studies, London, recently pointed out that the Soviet undersea fleet now exceeds in numbers all the submarines in the fleets of the United States and other NATO nations.

The situation regarding attack submarines is critical and rapidly deteriorating. The Soviet Navy has more than a 2-to-1 numerical advantage over the U.S. Navy in this area of sea warfare, and this is a matter of concern since the attack submarine is considered to be the most effective weapon against a nuclear submarine.

The U.S. position is worsened by the age of many of the attack boats. Forty-five of the 105 attack submarines in the U.S. Navy are of World War II construction. On the other hand, I am advised that almost all of the Soviet attack submarines have been built within the last 14 years. It is these submarines that pose a direct threat to the U.S. ballistic missile-firing submarines.

Moreover, former Secretary of Defense Clark M. Clifford did not include the medium and intermediate range Soviet ballistic missiles in his 1969 posture statement assessment of the U.S.S.R. strategic inventory. The United States has no such weapons deployed against Soviet targets, whereas the Soviets have their missiles targeted against our NATO allies. Clifford credited the U.S.S.R. with 700 operational MRBM/IRBM launchers, some in hardened sites. He said:

Evidence is accumulating that the Soviets have embarked on the development of solid-fuel missiles for medium and intermediate as well as intercontinental ranges.

British Defense Minister Dennis Healy recently estimated that the So-

viet MRBM/IRBM force now approximates 1,000 missiles.

As to bomber strength, the United States continues to lead the Soviet Union in heavy bombers—B-52's and B-58's versus Soviet Bisons and Bears—but Department of Defense figures show the United States ahead overall in bomber strength only because the Soviet Badger and Blinder medium range bombers are not credited with a strategic role. Both their threat to Western Europe and their threat to the continental United States—they are air refuelable—makes them strategic bombers.

Hence, Mr. President, not only has the military power of the Soviet Union grown more rapidly than that of the United States, but it has also rapidly overtaken the forces of the United States in new concepts and new weapons systems.

The U.S.S.R. now, for example, has whole families of military—and naval—weapons systems that the United States does not have in its inventory. Let us consider the following:

First. The large IRBM and MRBM force—1,000—is such a family of weapon systems. This force is primarily aimed at Europe and now completely pins Europe down. Generals of the U.S.S.R. have stated "we now hold Europe as a hostage."

Second. Very large—50 to 100 megaton—nuclear weapons which were tested in 1961-62 and which, it is generally conceded in unclassified literature, have been adapted for missile delivery. The United States not only has no such weapons in its inventory it has not even tested them and can only speculate as to the unique effects they may produce.

In this connection, it should be noted that the Proton satellite, according to Soviet releases, weighed some 40,000 pounds. The Proton booster, therefore, could launch very large ICBM warheads—50 megaton—or large warhead orbital bombardment systems.

Third. The Bear bomber is unique. It is the world's longest range, highest endurance bomber. It is an effective anti-shiping and antisubmarine attack aircraft with air-to-surface attack missiles on board.

Fourth. The ABM development and deployment in Russia is an innovation.

Fifth. The orbital bombardment system, of which the United States has no counterpart. The United States respects the treaty forbidding the use of space for weapons of mass destruction.

So, Mr. President, it is apparent that the Soviets have jumped into the lead in overall strategic missile strength. They have made optimum use of a much smaller economic base than the United States—in effect, they have been and are operating on a war economy basis.

The combined total of ICBM's, IR/MRBM's and SLM's is now estimated as 2,750 for the U.S.S.R., to 1,710 for the United States.

Meanwhile, the four-to-one U.S. lead in individually targeted warheads, which was long used by the Defense Department as a source of reassurance to the American public, was discarded by Air Force Secretary, Dr. Robert C. Seamans, Jr., in his testimony to the Senate Armed Services Committee on April 16, 1969:

The much-quoted figure of a 4-to-1 U.S. advantage in individually targetable warheads may not be too reassuring. The 4-to-1 figure stems mainly from the bomber portion of the forces, since missile forces are rapidly approaching a 1-to-1 relationship. It was arrived at by omitting the Soviet medium bomber force from the calculations, while counting several bombs on each of our own bombers. The inclusion of Soviet medium bombers, medium-range missiles, and cruise missile submarines would bring the ratio of individually targeted warheads close to 1-to-1 with a payload advantage somewhat in favor of the Soviets.

I might add that it is not enough to argue that these ratios involve relatively higher numbers—about 4,000 weapons on each side at the present time—and that only a few hundred weapons would be needed to destroy the Soviet Union. The critical factor here is not how many total weapons we have, but how many would survive a Soviet attack, and, of these, how many would penetrate Soviet defenses.

It should also be considered that Secretary Laird told the Senate Foreign Relations Committee that because of geography and the location of major centers of population and industry in Russia, as compared with the United States, the United States needs to be able to deliver six times as many warheads as would the Russians to achieve destruction "parity" with them.

It would take, Laird reported, some 1,200 one-megaton warheads to destroy 45 percent of the total population of Russia while the Soviet Union would need only 200 warheads of identical size to wipe out 55 percent of our population.

THE SOVIET STRATEGIC DEFENSE

Mr. President, the Soviets always have devoted great attention to active defense as a key component of their military policy. As Dr. D. G. Brennan, Director of the Hudson Institute, has pointed out—page 12 Adelpia Papers, November 1967:

This heavy doctrinal bias in favor of defense can probably be traced to Russian military experience at least as far back as Napoleon. It is the Soviets who initiated ballistic missile defense deployment.

Against this background of Soviet thinking one can trace the manner in which the Soviet Union has developed strategic defense forces.

While the United States conducts a national debate over deployment of the Safeguard antimissile system, it is worthwhile noting that the genesis of the Soviet ABM system dates back from the early 1950's. With three generations of ABM weapons already developed, and a fourth undergoing tests, the Soviets are now in a position to deal with the far more sophisticated problems of defense against space weapons. Even if the Safeguard ABM system is approved by Congress, the Soviet Union still will enjoy a sizable lead in strategic defense.

From the first, the Soviets have given strategic defense the command recognition it deserves in the nuclear era.

In April of this year, a new book, "Fifty Years of the Armed Forces of the U.S.S.R.," arrived in the United States for registration at the U.S. Library of Congress.

Published last year, it was written by Marshall M. V. Zakharov, Chief of the

General Staff of the Soviet Armed Forces. In it, he states:

The creation of ballistic missiles and space vehicles required a modern air defense system to respond not only against the aircraft threat, but also—and first of all—to provide anti-missile and anti-space (specifically, in Russian) anti-cosmic defense.

The Soviets are developing a new surface-to-air missile roughly every year to 18 months.

This means that the U.S.S.R. has made consistent and steady investments in research and development forces to create ABM systems.

So, if the present Galosh and Tallinn systems are not wholly effective in the judgment of the U.S.S.R., new systems will undoubtedly appear which will improve the effectiveness of the overall Soviet ABM system.

THE ABM

On March 14, 1969, President Nixon announced that his administration planned to modify the Sentinel missile defense system approved by Congress under the Johnson administration by using it first to defend some U.S. retaliatory missiles rather than to defend cities. This modification was named the Safeguard system.

According to the President, this measured deployment is designed to fulfill three objectives:

1. Protection of our land-based retaliatory forces against a direct attack by the Soviet Union.
2. Defense of the American people against the kind of nuclear attack which Communist China is likely to be able to mount within the decade.
3. Protection against the possibility of accidental attacks from any source.

President Richard Nixon, at his press conference on April 18, 1969, said:

I believe it (the Safeguard ABM system) is absolutely essential for the security of the country . . . I do not want to see an American President in the future, in the event of a crisis, to have his diplomatic credibility be so impaired because the United States was in a second class or inferior position. We saw what it meant to the Soviets when they were second. I don't want that position to be the United States' in the event of a future diplomatic crisis.

Two American Presidents, representing our two major political parties, have now recommended to the American people that the United States needs a missile defense system.

The issue now squarely before the country is the Safeguard system. Unlike Sentinel, Safeguard has been modified so that its defensive intent is unmistakable. The first deployment is to cover only two missile sites, the first of which will not be completed before 1973. The President has asked for it in order that he or his successors hopefully will not be placed in a position where they can be blackmailed by our self-proclaimed Communist enemies. I do not want to see President Nixon or any other U.S. President ever placed in a position where he would be subject to blackmail by either the Soviet Union or Red China.

The opponents of Safeguard generally base their arguments on one or more of the following grounds:

First. It will not work.

One of the leading arguments advanced against the deployment of the ABM system is that the complicated array of radar and computer systems required to operate it are of such an involved nature that they will break down in face of an enemy attack.

Much testimony from scientific analysts who support the deployment of the ABM could be adduced against this argument. But perhaps the most graphic argument has just been shown on television screens across the Nation. That is the magnificent—and most highly complicated—American landing of men on the surface of the moon.

But little more than 8 years ago, the vision—and the belief in the scientific and technological capability of the American people—of President John F. Kennedy put in motion the work of going to the moon. At that time, too, there were many skeptics who argued that the thing could not be done, and that further years of research should precede any attempts at actual operational development and deployment of equipment. It is necessary to recall that the exotic array of radars, of computers, of electronic equipment which made the manned moon landing such a success will also constitute the basis for the radar array, the computers, and the sensitive electronic equipment which will go into the ABM system. These systems, too, will work if they are deployed, that is, if the ABM is made an operational system instead of being kept a theoretical, continuing research system.

Can anyone doubt that this vast, this extremely complicated American venture to the moon could ever have been made a reality if we had continued to study the matter, to research it for year after year rather than moving forward vigorously with actual development and deployment of the systems which made this entire great enterprise possible?

The "won't work" argument is seriously flawed on both specific and general grounds. Both the Spartan and Sprint missiles—the prime ingredients of the proposed Safeguard system—already have been successfully flown. These, in turn, are successors to the Nike series of missiles which were successfully employed to knock down other missiles. The prototype missile radar is in test operation at the present time. The initial deployment of the Safeguard missile defense is now necessary to give us further technical, engineering, production, and testing experience to improve the system. We learn by doing.

Safeguard will "work" in the sense it is intended to work. It is a "point" defense. A point defense is easier to achieve than an area defense since the enemy warhead can be usefully engaged at much closer proximity to its target. This, in turn, increases the time allowed the defense to track and react and greatly facilitates the separating out of decoys from the live warheads. Some people may feel that since all missiles may not be destroyed, the system is a failure. They say, "You may knock down nine, but the tenth will get through." But even if this is so, the enemy is forced to greatly multiply his arsenal with highly sophis-

ticated missiles before he would dare to attack. This enormously complicates his offensive problem and adds immeasurably to the deterrent effectiveness of our own offensive missiles.

In a larger sense, however, the United States has amply demonstrated its capacity to produce and operate the most complex communications, electronic, and nuclear warfare systems. It is well to remember that some people declared the hydrogen bomb was impossible or that ICBM's and Polaris missile systems would not work. Moreover, the astonishing technical capacity revealed in the successful Apollo moon program—as I have already indicated—and in the Telstar communications satellites is evidence of what the United States can accomplish.

Throughout the history of warfare, every offense has produced a corresponding defense. To argue that no defense can ever be possible against missiles is to fly in the face of historical precedent. And it is to fly in the face of the opposite conclusions already reached by the Soviet Union. It is doubtful that the Soviets would have devoted the resources they have to ABM if they had concluded that it "won't work."

Second. The scientific critics of the system.

Some of the scientific critics of the ABM system may be compared to the past critics of what could be accomplished in space—an area, of course, intimately related to missile defense. This is brought out very cogently in the July 18, 1969, issue of the London Daily Telegraph which devotes a great amount of space to the American moon landing achievement. States the Daily Telegraph:

It is only 13 years since Britain's Astronomer Royal described talk of space travel as "utter bilge."

Third. Safeguard is "too costly."

There are two broad subcategories of this argument. One is the technical one relating to the relative costs of defensive systems, and the corresponding offensive weapons needed to penetrate them. The other is that the Nation cannot "afford" missile defense because of the overriding priority of domestic social and economic programs.

On the first point, there are indications that the relative cost-ratios of offense-defense may be approaching parity. For example, D. G. Brennan, former president of the Hudson Institute, made this recent observation:

Several years ago, it was widely believed that missile defenses were easy to penetrate—so easy that offensive increments costing only one or a few percent of the cost of opposing defense would serve to nullify it. In recent years, however, it has become apparent that cheap forms of decoys and other penetration aids cannot be relied upon to nullify modern defense techniques. A good defense can be overcome, but it is difficult. This is reflected in the fact that cost exchange ratios for a good defense are now believed to be in the region of one to one—perhaps one-third or two, but not one-tenth or ten. Thus, it is about as expensive to nullify a good defense as to build it.

Even if we accept an estimate that missile defense may be two or three times more expensive than the offsetting attack, appropriate limited deployment

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could still force the attacker into greater expenditures than have been spent on defense. It is, therefore, of the utmost importance to find out whether effective defense can indeed be established for an expenditure which we can afford. This question cannot be answered by research alone. A limited deployment which may also be considered as a pilot operation is needed.

In weighing the second aspect of the cost question—the matter of national priorities—the American people would do well to consider the ultimate worth of the system which is measured in the safety of millions and the survival of the Nation. Without survival there will be no ghetto to rehabilitate. If we surrender as an independent nation to Soviet nuclear blackmail, it will be Soviet "welfare" programs we will live under and not our own.

Certainly, foes of the Safeguard ABM system should not underestimate the economic capacity of the United States. This capacity is far greater than many people realize. The Soviets have an advantage in the apparent lack of self-confidence among Americans in their own capacity to meet all of the Nation's needs.

Fourth. ABM is unnecessary: Deterrence is assured because U.S. retaliatory power will always be sufficient to destroy the Soviet Union if she attacks us.

The Soviets are serious people and they have long since rejected the hypothesis that a strong offense alone will guarantee deterrence. Their military policy is to create a balance of offensive and defensive power. How each will develop in relation to the other over future years is impossible to judge, they say. I think they make sense. If we counter Soviet ABM progress only by increasing our own offensive missiles, we would be gambling on the assumption that defense technology will not eventually overcome offensive weapons systems.

Additionally, the greater the number and the diversity of offensive and defensive systems the United States has in being at any time, the more difficult it will be for an aggressor to assess the probable effectiveness of a first strike and hence the more effective our deterrent becomes.

Fifth. Development of a U.S. ABM will only stimulate the arms race.

Will the Soviets now cease any further augmentation of their offensive striking power if the United States unilaterally refrains from missile defense? Will they cease their own ABM efforts? The burden of proof for such contentions falls heavily on its advocates. We know that the Soviets have not ceased offensive missile production, even though they have drawn past the United States—they are still building at a rapid rate. And we know from their statements that the Soviet leadership holds that active defense constitutes a vital component of the Nation's military capabilities. It seems only reasonable, then, to conclude that the Soviet leaders would regard U.S. failure to develop an ABM either as a sign of deficient military thinking—one that should be exploited, not followed—or as an indication that we lack the will or the technical ability to go forward with development and deployment.

Sixth. The argument that an American ABM will offend the Russians, that the Russians will consider it to be "provocative" and that it will thus prevent an arms-control agreement.

This argument rests on the thesis that the restoration of nuclear symmetry, through a U.S. ABM to match that of the Soviets, would be more destabilizing than the present asymmetrical situation which is developing between a balanced offensive-defensive U.S.S.R. force and an offensive-only U.S. posture.

To the extent that Safeguard is designed primarily as a defense of our retaliatory forces and not of our people it cannot be construed as indicative of a U.S. intention to attack the Soviets. The "provocative" argument also neglects the fact that the Soviets have deployed their ABM around cities—thus supporting a possible first strike intention—without worrying that this might be "provocative" to the United States.

While it may be true that Dr. Wiesner and Dr. York in the report attributed to them do not believe that an ABM system will work, the Russians most certainly do. Not only that, but they have been stating for the past 2 years or more that it will work, that it is a purely defensive system.

Thus, as long ago as February 23, 1967, Marshal of the Soviet Union Malinovsky, in a key speech in the official Soviet Communist paper Pravda, stated:

New and highly efficient antiaircraft rocket systems and aviation complexes have been deployed and accepted for armament. The various means of combat available to our antiaircraft defense troops insure the reliable destruction of any aircraft and of many rockets of the enemy.¹

And Soviet Prime Minister Kosygin has said flatly that the Soviet ABM system is purely a defensive system, that it is not provocative, and that even though it might be expensive, it will save lives. In developing the concept that the deployment of the Soviet ABM would decrease tensions rather than raise tensions, the interview given by the Soviet Prime Minister deserves to be quoted at some length. Kosygin said:

Which weapon can be termed a factor of tension: An offensive or defensive weapon? I think that defense systems warning against attacks do not cause armament contests, but constitute a factor preventing the killing of people. Certain people—

Kosygin obviously thought of Johnson and McNamara—think along the following lines: Which is cheaper? Offensive weapons which can destroy cities and entire States, or a defensive weapon which can prevent destruction?

The Chairman of the Soviet Government also replied to the question of "cheapness":

It is possible that an antimissile system costs more than an aggressive one, but it is destined to protect human lives.²

Seventh. There should be a moratorium on U.S. ABM deployment while we try negotiations with the U.S.S.R.

¹ Pravda, as quoted by Radio Moscow, February 23, 1967.

² Interview given in Moscow by Prime Minister Kosygin to the Czech Communist Party newspaper *Rude Pravo* and published February 22, 1967.

The difficulty with this argument is that it concedes to our adversaries the precious commodity of time. The Soviets would stretch out the talks and continue to develop their ABM system while our development of the ABM would be at a standstill. We are probably ahead of the Soviets in the level of our antimissile technology, but how long can we expect this to continue, since Soviet military research and development expenditures are running at a greater rate than ours?

It is unlikely that a U.S. ABM moratorium would be respected by the Soviet Union because, first, the Soviets are committed doctrinally to ABM no matter what the United States does; and, second, there is the complicating factor of Communist China. There are some indicators that the Soviet ABM system is being deployed partially against the potential Chinese threat to the U.S.S.R. If this is so, we cannot in any case expect the Soviets to dismantle or halt their ABM deployment because of any possible agreement with the United States. But if they continue to deploy and perfect their system—even if we were to concede that it was directed entirely against Red China—which is not the case—the Soviets would be in possession of a weapons system which could just as easily be used to neutralize U.S. retaliatory missile forces.

Eighth. The argument that, even though the Soviets have deployed an ABM, their most recent statements, such as that of Foreign Minister Gromyko, indicate a changed attitude.

Gromyko's foreign policy speech of July 10 might, at first glance, have appeared sweetly reasonable. But a more careful analysis indicates that he gave no slightest indication of any flexibility which would help to quiet the troubled situation in the Middle East. Furthermore, actions speak louder than words. What are some recent Soviet actions as opposed to words:

First. From March 1969 onward, the Soviet practice of jamming Voice of America broadcasts to the Soviet Union has been stepped up. In the past, this has been a sign of Soviet hostility.

Second. For the first time in history a Soviet naval squadron is visiting Cuba in an obvious show of force close to American shores. In addition, the Associated Press reported July 31 that this Soviet naval squadron was conducting exercises in the Gulf of Mexico. Further, the press reported on August 1 that the squadron contained a nuclear submarine.

Third. Further hard-line Soviet activities in Czechoslovakia are reported. The London Daily Telegraph, on July 4, 1969, stated that Czech leader Husak reported that all "opposition to his tough pro-Russian policies had collapsed." The Daily Telegraph went on to say:

Czech newspapermen voted to make the Press, radio and television into "warriors" for the cause of Communism and to encourage friendship with the Russian occupation troops. They declared themselves to be "Communists first and newsmen afterwards."

Fourth. And a very recent issue of the Daily Telegraph, on July 16, 1969, warns: Soviet naval activity in the Indian Ocean adds up to a significant display of power politics.

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Fifth. Soviet Minister of Defense Andrei Grechko made a sharp attack on the United States about "continued aggression by the United States in Vietnam" and he further announced that the Soviet Union would continue "raising the military might of the army and navy" as reported by the Washington Post on July 28, 1969.

In view of these actions as compared to honeyed words, we may well say a prayer of thanks that the Founding Fathers warned the yet unborn generations of Americans that the most effective deterrence of attack against the American homeland "consists in the best possible state of defence."

THE URGENCY OF THE SAFEGUARD MISSILE DEFENSE SYSTEM

I believe that President Nixon was entirely correct when he said during his campaign for the Presidency:

At this time I do not believe that the United States can afford to accept the concept of parity with the Soviet Union. I believe that we face a potentially dangerous situation . . . to negotiate a de-escalation of trouble points around the world, whether in the Mideast or Vietnam or Western Europe or what have you, if the next President of the United States goes into those conferences with the possibility that the Soviet Union rather than the United States is in a stronger power position. I think that we would not be able to effectively reach the goals that we want to reach. . . . And at any kind of negotiation when one side wants to expand and the other side wants to defend, make sure that the side in that negotiation which is in the defensive position has more strength than the other side. That is why I would restore the strength of the United States, keep it at a proper level at this point, so that we would not be afraid to negotiate.

In the present situation, Mr. President, I believe that there cannot be any substitute for the maintenance of U.S. strategic military superiority. This superiority must be substantial because U.S. policies have always permitted the enemy the first blow. In a nuclear war, an enemy might wipe out a very large percentage of our weaponry—and population—in a first strike. Unless we have enough military strength to survive a first strike and still strike back decisively, the risk of a nuclear war increases.

Avoidance of nuclear war requires that the United States maintain overall nuclear superiority, rather than acceptance of any kind of "sufficiency" which can only be ephemeral and inherently unstable.

For more than two decades, the heart and core of America's strategy has been deterrence of Soviet aggression. This deterrence has been accomplished by establishing and maintaining a nuclear retaliatory strike force that could survive a surprise attack and still retain the capacity to inflict unacceptable damages on the Soviet Union.

If the United States is to continue as a viable and independent society, we should, as a first step, create a missile defense system to protect our nuclear deterrent. Such a system will not, by itself, restore the military superiority which we have now lost. But this essential first step is necessary if we are to reverse the sharp shift—adverse to the United States—now taking place in the world's power balance.

Protecting our retaliatory missiles is important because the United States has no intent of striking the first blow in a global conflict.

Thus, the refusal of the United States to consider a first strike makes it all the more important that our retaliatory force be protected against a Soviet attack. And it is to this end that a Safeguard anti-ballistic-missile system has been recommended by the President of the United States.

In addition, the Safeguard system is designed—as was the earlier Sentinel concept—to afford defense—of heavily populated areas—against the type of attack Communist China is likely to be able to mount sometime in the 1970's.

From the time the Chinese Communists exploded their first H-bomb—June 17, 1967—their progress in nuclear weapons development has been rapid. Hence, it may well be that they will develop a nuclear ICBM delivery capability sooner than the mid-1970's, the time phase generally estimated by Western analysts.

In this context it may be well to consider the thoughtful words of Secretary of Defense Laird. He testified on May 22, 1969, with reference to the Chinese Communist threat:

The effectiveness of option 2C [of the U.S. ABM] against the Chinese ICBM threat is expected to be very high. If the Chinese deploy a force of only 30 ICBM's on launchers by mid-1976, they could inflict about 15 million fatalities on us—if we had no ABM defense. With option 2C deployed, fatalities could be held to less than 1 million. And, even if they were to deploy as many as 75 ICBM's on launchers by the end of the decade, fatalities could still be held to less than 1 million, particularly if the improved Spartan is deployed. Here again, the deployment of Safeguard would have a very large payoff if the Chinese ICBM threat should, in fact, emerge.

Mr. President, a cursory reading of the press or a casual glance at the television programs might give the impression that the vast mass of the academic community in the United States is enlisted heart and soul on the side of the opposition to the deployment of an ABM defense. It is, of course, quite true that many distinguished scholars are opposed to the ABM. It is right and proper that, living as they do in the country offering the greatest amount of freedom anywhere in the world, these academics should be quite free to form their opinions on the ABM and to write and present freely their views in opposition to the ABM.

It is, however, equally true that a number of distinguished academicians have written cogent arguments in favor of deploying the ABM, among whom are two representatives from among our oldest and most distinguished universities, such as Princeton University and Georgetown University. These men are the outstanding physicists and Nobel Prize winner in Physics, Dr. Eugene P. Wigner of Princeton, and Dr. James D. Atkinson, professor of government at Georgetown and member of the British Institute for Strategic Studies. And there are other distinguished scholars and scientists who have written and spoken in support of the ABM.

Mr. President, the underlying logic of the ABM concept is that an enemy is unlikely to launch a nuclear attack on

the United States, or credibly threaten such an attack, if he knows that U.S. retaliatory forces will survive—forces that would result in his own destruction.

ABM is a method of deterrence which will save lives and not destroy them.

I firmly believe that an American ABM system is the soundest insurance for peace and against nuclear war that the United States can buy in 1969 for the 1970's. Far from being an offensive weapon, the ABM is, in reality, insurance against war. It may well be, in fact, the single most important step the United States can take toward peace at this moment in nuclear history.

ORDER FOR RECESS FROM TOMORROW UNTIL WEDNESDAY, AUGUST 6, 1969, at 11 A.M.

Mr. BYRD of West Virginia. Mr. President, I ask unanimous consent that when the Senate completes its business tomorrow, it stand in recess until 11 a.m. on Wednesday, August 6, 1969.

The PRESIDING OFFICER. Without objection, it is so ordered.

ADJOURNMENT UNTIL TOMORROW AT 11 A.M.

Mr. BYRD of West Virginia. Mr. President, if there be no further business to come before the Senate, I move, under the previous order, that the Senate stand in adjournment until 11 o'clock a.m. tomorrow morning.

The motion was agreed to; and (at 6 o'clock and 29 minutes p.m.) the Senate adjourned until tomorrow, Tuesday, August 5, 1969, at 11 a.m.

CONFIRMATIONS

Executive nominations confirmed by the Senate August 4, 1969:

NATIONAL BUREAU OF STANDARDS

Lewis M. Branscomb, of Colorado, to be Director of the National Bureau of Standards.

ST. LAWRENCE SEAWAY DEVELOPMENT CORPORATION

David W. Oberlin, of Minnesota, to be Administrator of the St. Lawrence Seaway Development Corporation.

The following-named persons to be members of the Advisory Board of the St. Lawrence Seaway Development Corporation:

Jacob L. Bernheim, of Wisconsin.

Foster S. Brown, of New York.

William W. Knight, Jr., of Ohio.

Miles F. McKee, of Michigan.

Joseph N. Thomas, of Indiana.

IN THE ENVIRONMENTAL SCIENCE SERVICES ADMINISTRATION

The nominations beginning David M. Wilson, to be lieutenant, and ending John E. Thomasson, to be ensign, which nominations were received by the Senate and appeared in the CONGRESSIONAL RECORD on July 14, 1969; and

The nominations beginning Philip J. Taetz, to be commander, and ending Michael E. Wagner, to be ensign, which nominations were received by the Senate and appeared in the CONGRESSIONAL RECORD on July 18, 1969.

IN THE COAST GUARD

The nominations beginning George A. Blann, to be lieutenant (junior grade), and ending Marcus L. Lowe, to be lieutenant, which nominations were received by the Senate and appeared in the CONGRESSIONAL

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of the United States as employees of the United States Senate) whose compensation is increased by section 214(a) of the Federal Salary Act of 1967 (81 Stat. 634, Public Law 90-206) and the Order of the President pro tempore of June 29, 1968, is hereby increased by 10.05 per centum; and

That (b) for the purpose of arriving at the "annual rate of gross compensation" on which the increase of 10.05 per centum is to be applied, (these employees being compensated on a weekly, rather than an annual, basis), the weekly gross rates of compensation shall be converted for the purpose of this Order, to appropriate annual gross rates.

RICHARD B. RUSSELL,
President pro tempore, U.S. Senate.

CONTRACT COMPLIANCE AND THE "PHILADELPHIA PLAN"

Mr. BROOKE. Mr. President, one of the most serious problems which this country faces is that of improving employment opportunities for our minority citizens. Despite the passage of a great deal of equal employment legislation, there is still far too much "token compliance," particularly in the various construction industries.

It was to counter this problem that the city of Philadelphia established a program under the direction of an area coordinator for contract compliance designed to go beyond paper compliance to the adoption and implementation of specific goals of numerical standards in certain critical crafts.

This valuable program is now under serious consideration by the city of Boston in my own State of Massachusetts. I am most hopeful that an area coordinator for contract compliance may soon be approved for the New England area, and I have written to Secretary of Labor George Shultz in this regard. I ask unanimous consent that the text of my letter to Secretary Shultz be printed in the RECORD.

There being no objection, the letter was ordered to be printed in the RECORD, as follows:

JULY 30, 1969.

HON. GEORGE P. SHULTZ,
Secretary of Labor,
Department of Labor,
Washington, D.C.

DEAR MR. SECRETARY: I have just met with the Massachusetts State Advisory Committee of the United States Civil Rights Commission, which I understand has also conferred with Assistant Secretary Fletcher. The Committee has just completed a review of federal contract compliance in the Boston construction industry and, as they indicated to Mr. Fletcher, have urgently recommended the adoption of a plan for Boston comparable to that being implemented in Philadelphia.

I fully agree with the Committee that this is a matter of the highest priority. In particular, the appointment of an area coordinator to insure effective contract compliance is a fundamental necessity. I hope you will act immediately to appoint such a coordinator, perhaps as part of the consolidation of federal regional offices in Boston.

Your efforts to breach the barriers of discrimination in the construction industry are among the most encouraging initiatives taken by the Administration. I respectfully urge you to carry that effort forward by taking these steps in the Boston area.

With best personal regards, I am,
Sincerely yours,

EDWARD W. BROOKE.

AMERICAN PRISONERS OF WAR

Mr. BAYH. Mr. President, there are many ramifications to the conflict in Vietnam, but one of the most disturbing aspects of this tragic war is the fact that American prisoners of war are not being treated in accord with the Geneva Convention. More than 120 nations, including the United States and North Vietnam, have expressed their deep concern that personnel captured in wartime be treated humanely by endorsing the Geneva Convention of 1949.

Not only are more than 1,300 U.S. servicemen classified by the services as either prisoners of war or missing in action, but also, according to the Department of State, more than 40 American civilians are missing in South Vietnam plus more than 400 military personnel listed as missing, many of whom have been captured and are being held in South Vietnam. Of the total of 1,303 men being held captive or missing in action, over 200 have been held captive over 3½ years and over 500 have been held more than 2 years.

There is reason to believe that many of these listed as missing in action are being held captive by the North Vietnamese, but the families of these men do not even know if their loved ones are dead or alive because Hanoi refuses to provide even a list of those being held captive. This is truly the epitome of barbarism.

The State Department and the Department of Defense have been thwarted at every turn because Hanoi refuses to identify the U.S. prisoners held captive; they refuse to permit neutral inspection; they refuse to release the sick and wounded captives; they refuse to permit the regular flow of mail; in essence, Hanoi refuses to act in a civilized, humane manner. This callousness is absolutely inexcusable.

When Defense Secretary Melvin Laird demanded a full list of the prisoners held by the Republic of Vietnam on May 19, North Vietnamese negotiator Xuan Thuy replied:

He might as well know that so long as the United States has not ceased its aggressive war in Vietnam and withdrawn its troops from Vietnam, he will never have such a list.

It is my contention, Mr. President, that the United States has demonstrated its desire for peace. At present, our troops are being withdrawn from South Vietnam and we have modified our policy of "maximum military pressure." The United States has demonstrated its sincerity to end this conflict. How can we believe that Hanoi is sincere when it refuses to comply with a simple request? The total lack of reciprocity is appalling. However, my main concern is that the North Vietnamese abide by the requirements of the Geneva Convention which they endorsed in 1957. Specifically, I call for the adherence to the Convention which requires the release of names of prisoners held, the immediate release of sick and wounded soldiers, regular flow of mail, proper treatment of all prisoners, and the impartial inspection of prisoner-of-war facilities.

I urge that our negotiators in Paris

do everything in their power to influence Hanoi to abide by the Geneva Convention. I urge all foreign governments, including the Soviet Union and all regimes closely associated with Hanoi, to lend their assistance to the demands of the United States. I urge that the American public voice its cries louder than ever in demanding that the North Vietnamese behave and react in a civilized humane manner. And I appeal directly to North Vietnam and the Vietcong to terminate this lack of concern for the many families in the United States who are living in uncertainty and to respect the humane rights of those whom they hold prisoners of war. Why is it that the United Nations has not exerted itself and fulfilled its responsibilities on this matter?

How can it possibly harm the enemy to release the names of its prisoners? Think what a response to such a simple request would mean to the hundreds of wives, parents, and children who live in anguish, not knowing whether their husbands, sons, or fathers are being detained in a prisoner camp. I urge the State Department and the Defense Department to continue their efforts to obtain the release of those prisoners who are sick or wounded, to do everything humanely possible to obtain a list of names from Hanoi, and to work for the prompt release of all prisoners.

The United States has abided by the Geneva Convention in regard to prisoners of war. These North Vietnamese and Vietcong forces captured in South Vietnam are taken to prisoner of war camps which are inspected regularly by the International Committee of the Red Cross. Prisoners who are sick and wounded have been repatriated to North Vietnam. The United States, in essence, has responded in a humanitarian way. Now it is time that the enemy reciprocate and that the United States strongly demand that its servicemen be treated properly.

Needless to say, everyone has been shocked by Hanoi's uncivilized attitude and response. Hopefully, the entire civilized world will exert influence to end such flagrant violation of international law.

Mr. President, by coincidence, an excellent editorial pertaining to the families whose loved ones are being held by the North Vietnamese was published in the Washington Post this morning. It is evident that all Americans are concerned about servicemen who are missing in action and being held captive. Because of the editorial's relevance and timeliness, I ask unanimous consent that it be printed in the RECORD.

There being no objection, the editorial was ordered to be printed in the RECORD, as follows:

[From the Washington (D.C.) Post, Aug. 4, 1969]

KEPT IN THE DARK

The letters come in every day, in big and little batches from Santa Fe and Monterey, from Aberdeen, South Dakota, and Purdy, Missouri, from Richmond, Virginia and Lake Lure, North Carolina, from Downers Grove, Illinois and Finville, Michigan. Some are hand-scrawled and some typewritten and they all speak pignantly of the suffering of mothers and fathers and wives and sons

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ABM

AUTHORIZATION OF APPROPRIATIONS FOR FISCAL YEAR 1970 FOR MILITARY PROCUREMENT, RESEARCH AND DEVELOPMENT, AND FOR THE CONSTRUCTION OF MISSILE TEST FACILITIES AT KWAJALEIN MISSILE RANGE, AND RESERVE COMPONENT STRENGTH—AMENDMENT

AMENDMENT NO. 113

Mr. TYDINGS. Mr. President, it is a fundamental principle of our system of government that only with congressional approval may the executive branch spend the billions of dollars that make up the Federal budget. We have developed a system of authorization and appropriation of funds in order to give Congress an opportunity to examine each of the competing claims on our Nation's resources, and to demand that each program for which funds are allocated be thoroughly justified.

A singular exception to this principle occurs in the area of national defense. Maintaining an adequate and everready military capability requires that our defense establishment have some degree of fiscal flexibility in order to pursue unexpected technological breakthroughs and to meet unexpected problems and threats. But precisely because such fiscal flexibility results in erosion of the principle of congressional control of Government spending, and inevitably poses a threat to the principle of fiscal responsibility, flexibility in military spending must be limited to the minimum amount necessary to maintain sound national defense.

One of the devices available to the Defense Department to provide for fiscal flexibility is the defense emergency fund. Established during the Korean war, the emergency fund may be used at the discretion of the Secretary of Defense "for research, development, test, and evaluation, or procurement or production related thereto." In recent years most of the money appropriated to the fund has been used to solve Vietnam-related problems.

Although in each of the last 3 years the amount of money allocated to the emergency fund has been reduced, in fiscal year 1969 Congress still approved the substantial sum of \$50 million for the fund. This same amount was requested last January by the Defense Department for fiscal year 1970. On the basis of a revised DOD request, however, the defense authorization bill, S. 2546, which is now before the Senate, authorizes \$100 million for the defense emergency fund, double the amount received last year.

Fifty million dollars is a remarkably large amount of money for a discretionary fund over which Congress has no control. There is no justification whatsoever for allocating an additional \$50 million to the fund.

Therefore, with Senators EAGLETON, FULBRIGHT, HARRIS, HART, HATFIELD, JAVITS, MONDALE, MOSS, PACKWOOD, and PROXMIRE, I am submitting an amendment to S. 2546 to reduce the emergency fund authorization to the \$50 million level of last year.

There has been no demonstration that the need for the emergency fund has in-

creased. Last year was a period of heavy fighting in Vietnam, but even with this burden on our fighting men, and the identification of many military problem areas, the emergency fund was not fully exhausted until the end of the fiscal year. With the experience of last year behind them, the Defense Department had initially determined that no increase in the emergency fund was needed for this year. And the prolonged lull in the Vietnam war, coupled with plans for troop withdrawal, indicate that the number of Vietnam-related problems may actually decrease.

It has been argued, however, that the additional \$50 million for the emergency fund is needed to insure adequate financial flexibility within the Defense Department. But the Defense Department already has more than enough fiscal flexibility and independence. Much flexibility results from the authority granted the Secretary of Defense to use up to \$150 million in funds from congressionally approved programs for other projects. The usefulness of this transfer authority is not seriously impaired by the reduction in total research and development funds available this year, since the amount of money authorized in this year's bill is a full 95 percent of last year's amount. But even assuming that the R. & D. reductions have made the transfer authority somewhat less useful, by increasing the emergency fund, their effect is largely vitiated; we would be replacing programs which must be presented to Congress for approval with a fund over which Congress has no control.

Additional flexibility comes from other funds within the Defense budget which serve the same purpose as does the emergency fund. For instance, last year the military was initially authorized to spend a total of \$522 million for research and development on Vietnam problems—in addition to funds used from the emergency fund and transfer authority. In addition, there are contingency funds for specific purposes, such as the \$25 million requested this year for the defense agencies military construction contingency fund, which provides for military construction anywhere in the world necessitated by unforeseen circumstances. And, finally, to meet any additional needs, the Secretary of Defense has a separate \$10 million contingency fund which has even fewer restrictions than the emergency fund.

With so many budgetary devices to insure flexibility, and so much money allocated to unspecified uses, the Defense Department already has more than enough fiscal independence.

In short, we cannot afford to double the defense emergency fund by authorizing a total of \$100 million for fiscal year 1970—because the increase is unjustified on its face, because the increase purports to serve the purpose of flexibility already accomplished by other means, and because the increase represents an unwarranted incursion on the principle of congressional control of Federal spending.

To paraphrase Shakespeare, there comes a time when the representatives of the taxpayer must cry "Enough"—and there has already been enough mon-

ey wasted by the military, and enough fiscal independence in the Defense Department. Fifty million dollars is enough for the defense emergency fund, and I, therefore, urge that S. 2546 be amended to limit the emergency fund authorization to that amount.

The PRESIDENT pro tempore. The amendment will be received and printed, and will lie on the table.

MEETING SCHEDULE OF COMMITTEE ON INTERIOR AND INSULAR AFFAIRS

Mr. JACKSON. Mr. President, I wish to announce for the information of the Senate that because of the pending vote on Wednesday, the Committee on Interior and Insular Affairs will not meet as scheduled on S. 1830, to provide for the settlement of certain land claims of Alaska natives. This hearing will be postponed until 10:30 a.m. on Thursday, August 7. The executive session of the full committee previously scheduled for 10 a.m. on August 7, will now be held at 9 a.m. to be followed by the hearing on the Alaska native claims.

DIRECTIVES AFFECTING SALARIES OF MANAGEMENT-OFFICE EMPLOYEES OF SENATE RESTAURANT

Mr. ALLEN. Mr. President, under the Federal Salary Act of 1967, the President pro tempore of the U.S. Senate is authorized and directed to issue certain directives in implementation of the salary comparability policy set forth in the law.

I ask unanimous consent that a directive affecting the salary of management-office employees of the Senate restaurant, dated June 26, 1969, and certain related correspondence, be printed in the RECORD.

There being no objection, the items were ordered to be printed in the RECORD, as follows:

ARCHITECT OF THE CAPITOL,
Washington, D.C., July 29, 1969.

HON. JAMES B. ALLEN,
Chairman, Subcommittee on the Restaurant,
Committee on Rules and Administration,
U.S. Senate.

DEAR MR. CHAIRMAN: I am enclosing, herewith, copy of order dated June 26, 1969, issued by the President Pro Tempore of the Senate upon my recommendation and with your concurrence, providing for an increase in the compensation of management-office employees of the Senate Restaurants as required by Section 212 of the Federal Salary Act of 1967.

I would appreciate your having this document inserted in the Congressional Record in order that it might be a matter of record.

Sincerely yours,

J. GEORGE STEWART,
Architect of the Capitol.

ORDER PROVIDING FOR INCREASE IN COMPENSATION OF MANAGEMENT-OFFICE EMPLOYEES OF THE SENATE RESTAURANTS EFFECTIVE JULY 13, 1969

JUNE 26, 1969.

By virtue of the authority vested in me by section 212 of the Federal Salary Act of 1967 (81 Stat. 634), it is hereby

Ordered, That (a) effective July 13, 1969, the annual rate of gross compensation of each management-office employee of the Senate Restaurants (such employees having been recognized by the Comptroller General

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stimulating. They will be incisive; sometimes they will be trenchant; sometimes they will carry a few barbs. But we will understand fully that all that will come out of the expertise, the wisdom, and the background that Jack Bell accumulated from the time he was in the Senate Gallery. So I wish him well.

We think often that a man retires to the bliss of retirement, but that will not be the case with him. He leaves one employer; but I have an idea that in assembling information and material for his column, he is going to be infinitely busier than he ever was before.

I discovered, when they wished a column off on me—partly at the instance of the Senator from Arizona (Mr. FANNIN)—that I got into the toils of the Los Angeles Times syndicate; and I know what it is to sit around and drool and puzzle and look at a blank wall, wondering what the column would be for that week.

So Mr. Bell, if he is going to do a daily column, is going to be thinking long and loud about the things that ought to go into it. Perhaps here and now I ought to make a public offer to him that if he gets into difficulties, he can weep on my shoulder, as a fellow columnist, and perhaps I can give him a few ideas. I wish him well.

Mr. STENNIS. Mr. President, will the Senator yield?

Mr. DODD. I yield.

Mr. STENNIS. Mr. President, I wish to join in the compliments that have been paid to Jack Bell with respect to his professional capacity, professional integrity, and fine qualities. He certainly has been of service to the Senate, to Congress, and to the people.

ABM

AUTHORIZATION OF APPROPRIATIONS FOR FISCAL YEAR 1970 FOR MILITARY PROCUREMENT, RESEARCH, AND DEVELOPMENT, AND FOR THE CONSTRUCTION OF MISSILE TEST FACILITIES AT KWAJALEIN MISSILE RANGE, AND RESERVE COMPONENT STRENGTH

The ACTING PRESIDENT pro tempore. The Chair lays before the Senate the unfinished business, which will be stated.

The ASSISTANT LEGISLATIVE CLERK. A bill (S. 2546) to authorize appropriations during the fiscal year 1970 for procurement of aircraft, missiles, naval vessels, and tracked combat vehicles, and research, development, test, and evaluation for the Armed Forces, and to authorize the construction of test facilities at Kwajalein Missile Range, and to prescribe the authorized personnel strength of the Selected Reserve of each Reserve component of the Armed Forces, and for other purposes.

ORDER OF BUSINESS

The ACTING PRESIDENT pro tempore. Under the previous order, the Chair recognizes the Senator from Connecticut (Mr. DODD) for not to exceed 1 hour.

MORALITY, ARMS CONTROL AND THE NATIONAL SECURITY: THE CASE FOR THE ABM

Mr. DODD. Mr. President, over the past 6 months there has taken place in our country an historic debate on defense policy.

The specific question at issue is whether or not we should deploy the Safeguard antimissile defense system proposed by the President.

This debate takes place under the shadow of the so-called "balance of terror" which has been spawned by the nuclear era.

Winston Churchill described this balance of terror in these dramatic terms in a speech which he made in the House of Commons in 1953 as follows:

I have sometimes the odd thought that the annihilating character of these agencies may bring an utterly unforeseeable security to mankind. It may be . . . that when the advance of destructive weapons enables everyone to kill everybody else, nobody will want to kill anyone at all.

It is a commentary on the awful time we live in that the peace of the world has become dependent on the state of mutual nuclear terror which has characterized Soviet-American relations for the past 15 years or more.

We are obliged to rely on this balance of terror as the surest guarantee against annihilation, until that distant day in the future when agreements are reached abolishing these weapons of mass destruction.

There is general agreement that the peace of the world would become far less secure if this balance were ever to become unbalanced as a result of a major technological breakthrough by one side, in either offensive or defensive weapons.

This, essentially, is what the debate over the Safeguard ABM system is all about.

The Soviets have for more than 5 years now been deploying an ABM system around Moscow, and are carrying on an intensive program of continuing research in this area.

And the question has quite naturally arisen whether the United States can afford to be any less well defended than the Soviet Union.

The issue of whether or not the United States should deploy an antimissile defense system has been debated not only by Congress, both in committees and on the floor, but in the columns of our press, in the academic community, in our high schools, and even in our elementary schools.

It is questionable whether any issue of public policy has ever been discussed by so many people and with such intensity.

In a statement issued on April 7, 1969, the Public Affairs Committee of Freedom House in New York warned that "there is a grave danger that the debate over the ABM may become primarily emotionalized or politicized . . ."

From the mail that I have received in my office, I am afraid that the condition against which Freedom House warned has become very widespread. Attitudes have become set.

Minds have become closed. The process of rational discourse seems to have ground to a halt.

Instead, many of the participants in the debate display a disturbing tendency to assume that their side has a monopoly of knowledge, wisdom, and integrity, and that the other side is acting out of some sinister motivation.

Among other things, an effort has been made in certain quarters to characterize the debate on the ABM as a conflict between conservatives and liberals.

Nothing could be further from the truth.

The fact is that there are conservatives and liberals on both sides of this question; and to pretend otherwise only serves to confuse the issue.

It is my hope that the excesses which have characterized the ABM debate in the public domain will not be reflected in the closing debate in the Senate of the United States.

For all of us know that, like so many other problems of our time, the ABM is an issue over which men of equal intelligence and integrity can sharply disagree.

And no matter how committed Senators are at this stage of the discussion, they will, I hope, examine the record of all the testimony and all the debate, conscious of the grave importance of the decision.

Much of the argument is highly technical. This is so particularly in the case of the arguments over the possible effectiveness of the ABM, the possible effectiveness of confusion devices, and whether or not the Soviets can achieve a first-strike capability by the mid-1970's.

When men who have devoted their lives to science and technology can disagree so profoundly on these issues, I feel that it would be presumptuous for a layman to pretend to any final opinion.

Indeed, I feel that the entire debate has been bedeviled, on the one hand, because of the tendency of politicians and laymen to speak like scientists, and, on the other hand, because of a tendency on the part of our scientists to speak like political experts.

The 17th century English scientist, Robert Hooke, once admonished his fellow natural scientists that they should strive to—

Improve the knowledge of all natural things . . . by Experiment, not meddling with Divinity, Metaphysics, Moralls, Politics, Grammar, Rhetoric, or Logick.

But Robert Hooke notwithstanding, many of our scientists today seem to feel that the discipline to which they submitted themselves in achieving expertise in their own specialties somehow qualifies them to also act as political experts.

I have not been able to find a counterpart of Robert Hooke's admonition, addressed to politicians playing the role of scientists.

But I must say I have been impressed by the dauntless confidence with which so many of my lay friends have banded about technical estimates and calculations, and offered summary conclusions

Senate

FRIDAY, AUGUST 1, 1969

(Legislative day of Wednesday, July 30, 1969)

The Senate met at 11 o'clock a.m., on the expiration of the recess, and was called to order by Hon. JAMES B. ALLEN, a Senator from the State of Alabama.

The Chaplain, the Reverend Edward L. R. Elson, D.D., offered the following prayer:

Hear and help us, Eternal Father, to appropriate the promise of Thy word: "They that wait upon the Lord shall renew their strength." When times are tense and nerves are taut, when the body is weary and the going is hard, help us to know that "the Eternal God is our refuge and underneath are the everlasting arms." So may we lean upon the arms which support and strengthen us hour by hour that we may love Thee and serve Thee, and by loving and serving Thee minister to the needs of this Republic. May the words of our mouths, the meditations of our hearts, and the motives determining our deeds be acceptable in Thy sight, O Lord, our strength and our Redeemer. Amen.

DESIGNATION OF ACTING PRESIDENT PRO TEMPORE

The assistant legislative clerk read the following letter:

U.S. SENATE,
PRESIDENT PRO TEMPORE,
Washington, D.C., August 1, 1969.

To the Senate:

Being temporarily absent from the Senate, I appoint Hon. JAMES B. ALLEN, a Senator from the State of Alabama, to perform the duties of the Chair during my absence.

RICHARD B. RUSSELL,
President pro tempore.

Mr. ALLEN thereupon took the chair as Acting President pro tempore.

THE JOURNAL

Mr. MANSFIELD. Mr. President, I ask unanimous consent that the Journal of the proceedings of Thursday, July 31, 1969, be approved.

The ACTING PRESIDENT pro tempore. Without objection, it is so ordered.

LIMITATION ON STATEMENTS DURING TRANSACTION OF ROUTINE MORNING BUSINESS

Mr. MANSFIELD. Mr. President, I ask unanimous consent that, at the conclusion of the remarks of the distinguished Senator from Connecticut (Mr. Dodd), there be a brief period for the transaction of routine morning business, with statements therein limited to 3 minutes.

The ACTING PRESIDENT pro tempore. Without objection, it is so ordered.

AUTHORIZATION TO PRINT IN THE RECORD QUORUM CALL NO. 57

Mr. MANSFIELD. Mr. President, if the distinguished Senator from Connecticut will allow me a minute or so, I ask unanimous consent that Quorum Call No. 57, which was taken on July 17, 1969, during the closed session of the Senate, be printed in the Record of today, for the convenience of those who keep records of attendance and voting records of Senators. No question of security appears to be involved in revealing the names of Senators who were present. This request has been cleared with the minority leader and the Senator from Mississippi (Mr. STENNIS), as well as the President pro tempore.

There being no objection, the quorum call was ordered to be printed in the Record, as follows:

[No. 57 Leg.]

Alken	Goodell	Moss
Allen	Gore	Mundt
Allott	Gravel	Murphy
Anderson	Griffin	Muskie
Baker	Gurney	Nelson
Bayh	Hansen	Packwood
Bellmon	Harris	Pastore
Bennett	Hart	Pearson
Bible	Hartke	Pell
Boggs	Hatfield	Percy
Brooke	Holland	Prouty
Burdick	Hollings	Proxmire
Byrd, Va.	Hruska	Randolph
Byrd, W. Va.	Hughes	Ribicoff
Case	Inouye	Russell
Cook	Jackson	Saxbe
Cooper	Javits	Schweiker
Cotton	Jordan, Idaho	Scott
Cranston	Kennedy	Smith
Curtis	Long	Spong
Dirksen	Magnuson	Stennis
Dodd	Mansfield	Stevens
Dole	Mathias	Symington
Dominick	McCarthy	Talmadge
Eagleton	McClellan	Thurmond
Eastland	McGee	Tower
Ellender	McGovern	Tydings
Ervin	McIntyre	Williams, N.J.
Fannin	Metcalf	Williams, Del.
Fong	Miller	Young, N. Dak.
Fulbright	Mondale	Young, Ohio
Goldwater	Montoya	

COMMITTEE MEETINGS DURING SENATE SESSION

Mr. MANSFIELD. Mr. President, I ask unanimous consent that all committees be authorized to meet during the session of the Senate today.

The ACTING PRESIDENT pro tempore. Without objection, it is so ordered.

JACK BELL, WASHINGTON NEWSMAN

Mr. MANSFIELD. Mr. President, I should like to express my regret at the passing, in a sense, of Jack Bell, from the Washington political scene. He is not going away; he is just shifting from one base of operations to another. It is my

understanding that he is going to become a columnist for the Gannett newspapers. I am delighted with the news. I hope that his columns will extend far beyond that initial endeavor.

Jack has been a newspaperman's newspaperman. He has been analytical, he has been cynical, he has been critical, he has been kind, and he has been understanding—and that combination makes a good newsman.

So to Jack we bid a fond farewell from his present position as the chief political writer for the Associated Press on the Hill, and a fond hello to him on the basis of the new position he is going to undertake and the new responsibilities which will be his.

He is a great and a good newsman. I am delighted that he is not leaving us and is staying close at hand. I wish him well in his many years ahead.

Of his successor, Walter Mears, I want to say that a fine newsman has been chosen to succeed Jack Bell. I am delighted that Walter is going to head the political bureau in Washington. In assuming this position he stands in his own shoes. But, I must say there is a good deal of Jack Bell in Walter Mears, too. So to Walter Mears, congratulations and hello.

Mr. DIRKSEN. Mr. President, will the Senator yield.

Mr. MANSFIELD. I yield.

Mr. DIRKSEN. Mr. President, Jack Bell is really a student of our form of government and a student of the American political system, in the broadest sense of the word. He found time away from his duties as a top man with Associated Press to do a very excellent, scholarly book that he called "Splendid Misery." He took the title from a statement that was once made by Thomas Jefferson about the Presidency. Jefferson referred to it as the "splendid misery." Mr. Bell's book dealt with the Chief Executive and with that office, and it was a tremendous contribution to the literature in that field.

He has been an equally keen observer of the legislative scene over a long period of years and undertook, of course, to call them as he saw them. I always enjoyed the banter that I had with him, day after day and year after year, at the meetings in the Press Gallery which followed the minority part luncheon on Tuesday every week. To me, that was at once an informative, a delightful, and a rather challenging experience; and there I think I got to know Jack Bell better than I had at any other time.

He is in every sense a great reporter, and he goes to an excellent newspaper setup—namely, that of the Gannett chain. I am sure his columns will be

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on highly complex matters where the experts themselves are split down the middle.

I intend to confine my own argument to certain observations that are not dependent on technical expertise, and on certain basic estimates in the field of foreign policy where my personal experience over the years does qualify me, I believe, to speak with some competence.

After weighing all of the evidence, I have arrived at the conclusion that the Safeguard ABM system should be supported.

It should be supported in the interest of peace, because a limited ABM system on both sides will make peace more secure by giving both sides the ability to protect themselves against accidental firings or attacks by any new nuclear powers.

It should be supported in the interest of arms control because the mutual possession of anti-missile-defense systems would create a climate more conducive to agreements limiting the number of weapons of mass destruction.

It should be supported in the interest of our national security because the protection of our deterrent force protects the American people in the most basic way by reducing the possibility of thermonuclear war.

It should be supported for political reasons, because the entire course of Soviet conduct, especially in recent years, including the massive buildup of thermonuclear weapons by the Kremlin, points to the conclusion that we are entering a period of continuing crisis in which the lack of an ABM system could only serve to encourage Soviet challenges and adventures.

Above all, it should be supported on moral grounds because it is infinitely better to build defensive weapons, designed to protect and save life, than it is to build aggressive weapons, designed to harm and destroy life.

THE SOVIET ATTITUDE TOWARD ABM

There is absolutely nothing in the Soviet literature that would bear out the charges of the critics that the deployment of Safeguard would be regarded by the U.S.S.R. leaders as an escalation of the arms race.

On the contrary, the Soviets, because they believe in a balanced mix of offensive and defensive weapons, have a much more rational attitude toward antimissile defense than we do.

Essentially they take the stand that defensive systems are not provocative and that they are stabilizing, not destabilizing. Indeed, Soviet spokesmen have made some of the most effective arguments for the ABM.

When Prime Minister Aleksei Kosygin at a London news conference in February of 1967 was asked if the Soviets' antimissile system was not a new step in the arms race, he replied:

It seems to me that the system that protects against an attack is not a factor in the arms race. On the contrary, it is a factor that reduces the possibility of the destruction of the people.

This position has been spelled out in much more detail by other spokesmen for the Soviet viewpoint. For example, an

article written several years ago by a Soviet strategic writer, Maj. Gen. N. Talensky, said.

Antimissile systems are defensive weapons in the full sense of the word: by their technical nature they go into action only when the rockets of the attacking side take their flight paths, that is, when the act of aggression has been started. The advantage of antimissile systems in the political and international law context is that their use is caused by an act of aggression, and they will simply not work unless an aggressor's rocket makes its appearance in flight over a given area. There will be no difficulty at all in deciding who is the aggressor and who the attacked.

It is obvious that the creation of an antimissile defense merely serves to build up the security of the peaceable, non-aggressive states. The creation of an effective antimissile defense system by a country which is a potential target for aggression merely serves to increase the deterrent effect and so helps to avert aggression. It is said that the international strategic situation cannot be stable where both sides simultaneously strive for deterrence through nuclear rocket power and the creation of defensive antimissile systems. I cannot agree with this statement either. From the viewpoint of strategy, powerful deterrent forces and effective antimissile defense system, when taken together, substantially increase the stability of mutual deterrence.

Such statements, together with the fact that the Soviet Union has been developing its own antimissile system for more than 5 years now, effectively demolishes the argument that the Soviets would regard the building of an ABM on our side as a provocation.

I note, parenthetically, that none of the critics has yet suggested that the Soviets would be willing to dismantle their own ABM system if we should decide not to deploy one of our own.

In fact, unless I have missed something, none of them has even suggested that we raise this point in the forthcoming arms control negotiations with the Soviet Union.

Indeed, it would be difficult to think of any approach more calculated to get the Russians to put up their backs.

For such a proposal would really wreck any conference on the limitation of nuclear arms.

And it is not just that the Soviets would insist that the ABM is a purely defensive antiaggressive device, which the Americans need not fear and on which there can be no compromise.

Even if the Soviet leaders were completely satisfied about American intentions, they would still want their ABM system as a protection against Red China. And for this they certainly cannot be blamed.

Before going on to deal with some of the more controversial aspects of the ABM and with some of the other arguments that have been made against it, it would be useful to review certain things which the Safeguard system could almost certainly do or which it would have a very good chance of doing.

THE ABM AND ACCIDENTAL MISSILE FIRINGS

The Safeguard ABM and an equivalent installation in Russia would reduce the danger of accidental thermonuclear war by giving both sides the capability to deal with an accidental missile firing.

The probability of an accidental mis-

sile firing or of a firing by unnerved or psychotic commanders on either side is low.

Some of the critics of ABM have argued that the chances of an accidental firing are indeed so negligible that we can ignore this possibility altogether. I do not agree with them.

No one knows for certain whether the chance of an accidental missile firing through technological failure is one in a million or one in 50 million each year. But it is a disturbing thought that, if there is a one in a million chance that there will be an accidental firing in any given year, then, over a 20-year period, the odds would be reduced to one in 50,000. And if the number of existing missiles, worldwide, were to be doubled or tripled over the coming decade, then the odds would be reduced by just that much again.

We take fire insurance on our houses on the basis of odds that are not very dissimilar from this.

Besides, there would probably be a much higher chance of an accidental missile firing by Red China or some other new nuclear power, because it is unlikely that such powers will build into their offensive missiles the highly sophisticated and very expensive safety controls that are built into American and Soviet missiles.

Moreover, the danger of an accidental missile firing due to human failure is even greater than the danger of an accidental firing due to technological failure.

Consider a situation in which there has been a continuing crisis between the two superpowers, and both sides have for months had their nuclear forces in a state of maximum alert.

Such a situation would inevitably produce a cumulative nervous strain on both sides; and under such a strain it is conceivable that even the most rational and carefully selected group of commanders might crack and act without authorization. So let no one say that we can completely ignore the possibility of an accidental firing.

If, one day, Kosygin were to call the President on the hot line to say that there had been a terrible accident and that an SS-9 was headed toward New York City, the President of the United States, in the absence of a Safeguard system, would have only two choices:

First, he could let the missile destroy New York City without retaliation, writing the affair off as an accident; or

Second, he could order a retaliatory strike against Moscow—which would almost certainly result in all-out thermonuclear war.

What a dreadful position the President of the United States would be in if these were the only choices open to him. But the choice need not be this limited.

For, if we had the Safeguard system, then the President would have a third option: He could simply order the missile shot down.

Even the harshest critics of the Safeguard system do not deny its technical capability to deal with a single incoming missile or with a small salvo of missiles.

The challenge of the critics relates to Safeguard's ability to deal with a saturation attack.

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If the Safeguard system could accomplish nothing more than this one thing, that is, protecting the world against the possibility of thermonuclear war by accident, the system would be worth every penny of what it costs.

And so long as offensive thermonuclear missiles exist, it is clear that the world will be a much safer place if both sides carry this kind of insurance for themselves.

As the senior Senator from South Dakota pointed out in his very able statement in support of Safeguard deployment, the cost of this insurance over the coming year would average out to roughly \$4 per year for every man, woman, and child in the United States. In terms of what it insures us against, the Safeguard system is just about the cheapest insurance buy on record.

SAFEGUARD AND RED CHINA OR OTHER NUCLEAR POWERS

The Safeguard system, and its equivalent in the Soviet Union would provide a high degree of protection against the possibility of an attack by Red China or by some new nuclear power, or "nth" nation, as it is called in the jargon of nuclear politics.

Just about everyone is prepared to agree that the Chinese Communist leaders are aggressive, irrational, and unpredictable, and that their anticipated missile arsenal could constitute a danger, for ourselves and for the Soviet Union, by the midseventies. By that time, it is estimated, the Chinese Communists will have some 15 to 20 ICBM's.

Moreover, we cannot rule out the possibility of some other psychotic dictator somewhere in the world secretly or openly developing a few nuclear weapons for use against us or other nations.

Besides, there would probably be a much higher chance of an accidental missile firing by Red China or some other new nuclear power because it is unlikely that such powers will build into their offensive missiles the highly sophisticated and very expensive safety controls that are built into American and Soviet missiles.

Many scenarios have been written by strategic experts on the possibility of a Red Chinese nuclear confrontation with the United States.

In one of these scenarios, several missile-carrying submarines, which the Chinese are known to be building, surface off the American west coast and fire a demonstration missile, either against an unpopulated target or else against a small city.

This is accompanied by an ultimatum: Either we agree to withdraw all support from Taiwan, South Vietnam, Thailand, and Korea, and withdraw all air and naval units from the Far East at once, or else Chinese missiles will annihilate Los Angeles, San Francisco, Portland, San Diego, and other major population centers on the west coast.

The ultimatum would also say that the Chinese missiles would fire immediately if American missiles were directed against the Chinese mainland or against their submarines.

Now it is true that we have the power to wipe out Red China, or at least to wipe out all of its major population centers.

But would a President of the United States want to invoke this power, knowing that it would result in some ten to 20 million American dead and the devastation of half a dozen major American cities?

Without Safeguard, the President would have no alternatives but to accept the Chinese Communist terms or to press the thermonuclear button.

With Safeguard, the President would have a choice which would enable him to reject such an ultimatum.

There is another scenario involving the Chinese nuclear capability that has been drawn by experts on the area.

Technologically, the Chinese Communists will almost certainly be capable of striking, or threatening to strike, their neighbors in Asia, and even the U.S.S.R., before they are capable of attacking or threatening the United States.

Our main problem, therefore, may turn out to be whether or not we will honor the nuclear guarantee implicit in the Nonproliferation Treaty if New Delhi or Tokyo should receive a Chinese Communist ultimatum to "do so and so or we'll blast your cities off the map."

If both the United States and the Soviet Union possess missile defense systems, they would be in a far stronger position, psychologically and diplomatically, to deal jointly or separately with any such aggressive action in Asia by Red China.

SAFEGUARD AND THE POSSIBILITY OF AN UNIDENTIFIED ATTACK

There is a special type of "nth" nation attack that must also be a reason for concern and that is the possibility of an attack from an unidentified source.

Such an attack could take the form of a short-range missile launched from the ocean bed or from a submarine or a ship.

Clearly, if a missile of unidentified origin impacted on an American city, it would create an immediate danger of war.

The President would have no way of knowing for certain whether the missile was fired by the Soviet Union or Red China or Castro Cuba or some other anti-American dictatorship.

But meanwhile, the destruction of one of our metropolitan centers would put him under tremendous pressure to take some action.

The Russians, even if they had not fired the missile, would inevitably develop a nervous trigger finger because, in the uncertain situation thus created, they would have to fear a possible retaliatory strike by the United States.

In such a situation, the possibility of thermonuclear war between the Soviet Union and the United States could not be ruled out.

This scenario may seem rather far-fetched. But the experts are agreed that it is a possibility that we cannot ignore.

It is, for example, not inconceivable that the Chinese Communists might seek to launch such an unidentified missile

attack on the United States for the purpose of promoting a crisis between ourselves and the Soviet Union.

Here again, if we had Safeguard, we would at least have a good chance of dealing with an unidentified attack by one or several missiles from an offshore position.

Without it, we would have to sit by passively and take the blow, or strike back with massive retaliation, perhaps against the wrong country.

THE ABM AND ARMS CONTROL

By stabilizing the situation as described above, the possession of a limited antimissile defense by both sides would also create a climate more conducive to the negotiation of effective agreements in the field of arms control and disarmament.

There is an additional reason for believing the antimissile defense systems on both sides would be good for future arms control and disarmament talks.

The arms control talks of the 1970's will turn largely around the question of limiting or reducing the number of offensive missiles.

If we achieve an agreement, we will always have to worry about Soviet cheating: First, because it can be taken for granted that they will never agree to inspection, and, second, because of the unbroken record of Soviet cheating and violation of treaties.

If the Soviets were to cheat on such an agreement and get away with it, it could lead to disaster.

If, for example, both sides were to agree to cut back to 100 missiles, but if the Soviets in fact only cut back to 500, this would put us at an almost fatal disadvantage in any confrontation.

If, on the other hand, we had a Safeguard ABM system in existence to protect our arsenal of 100 missiles, we would still have to worry about Soviet cheating, but we would not have to worry as much.

The Soviets, on their side, would have no reason to worry about American cheating, no matter how much they might pretend to do so.

They know that it is virtually impossible for us to cheat because ours is an open society; while they have been able to develop the art of cheating to an all-time high because theirs is a completely closed society.

In the absence of antimissile defense systems, arms control measures by the two superpowers might be risky and destabilizing.

With missile defense, the same arms control measures would be less risky and, to that degree, more acceptable to both sides, and stabilizing.

WILL SAFEGUARD WORK?

As I have said, I would consider it presumptuous to attempt a technical evaluation of the ABM's effectiveness in dealing with a saturation attack. However, I do agree with two commonsense rules for laymen outlined by one of our top defense experts, Mr. Robert C. Sprague, in his testimony on the ABM before the Senate Armed Services Committee.

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These are the rules:

Rule No. 1: In assessing the potential of any important new field of technology involving new processes or systems—*half the scientists, or at least a large fraction, are usually wrong.*

Rule No. 2: If a significant percentage of scientists agree, or sometimes if only one or two agree, that something new can be done—it can be.

The validity of these rules have been borne out repeatedly in the postwar period.

The many scientists who said an H-bomb could not be built were wrong, while the minority who said that it could be built were proved right.

In this connection, I note that Dr. Jerome Wiesner, the chief scientific critic of the Safeguard program, was also one of the most vocal critics of our moon program.

According to a recent article in the Washington press, a former NASA Administrator, James E. Webb, was so disturbed by the vehemence of Wiesner's opposition that in July 1962 he called in his assistant, Joe Shea, and said to him:

Jerry Wiesner's in a highly emotional state. He thinks Lunar Orbital Rendezvous is the worst mistake in the world. We'll be risking the lives of the astronauts—everything. Get over there and see him.

The article said:

Shea whipped over to the White House and found Wiesner "screwed up into the ceiling." Shea talked for almost 2 hours, but at the end of it all found Wiesner still completely unconvinced.

It has been claimed that we will never know if the Safeguard will really work against a saturation attack, because it is obviously impossible to conduct a test simulating a saturation nuclear missile attack.

On this point they are completely right. For that matter, we have never tested our Minuteman or Polaris missiles systems under battle conditions.

But the important thing is that the Kremlin, too, will have no way of knowing just how effective the Safeguard system would prove against a Soviet surprise attack.

American technological opinion may be divided on the ultimate workability of the Safeguard system. But the Soviet planners, apart from the fact that they tend to have an enormous respect for American technology, would have to err on the side of crediting the Safeguard system with a higher rather than a lower capability.

Because Safeguard would complicate Soviet calculations, because it would inevitably raise further questions in their minds about the feasibility and the advisability of a first strike, to this extent Safeguard would act as an additional deterrent to the possibility of thermonuclear war.

Although no one can know for certain how effectively Safeguard would function if it were ever put to the final operational test against a saturation attack, there can be no doubt about its political and psychological effectiveness.

In this vital sense, Safeguard would work.

It would not by itself constitute a guarantee against nuclear war or against a Soviet first strike. But it would substantially reduce the possibility.

THE SAFEGUARD SYSTEM AND OUR RESPONSE TO A SOVIET FIRST STRIKE

President Kennedy, in his message to Congress of March 28, 1961, clearly repudiated a first strike by the United States:

Our arms will never be used to strike the first blow in any attack. We are not creating forces for a first strike against any other nation. We shall never threaten, provoke or initiate aggression—but if aggression should come, our response will be swift and effective.

I believe that no free democratic nation will ever engage in a first strike with nuclear weapons against another nation because of the moral and political restraints that govern the action of democratic leaders.

We cannot be so certain, however, about the restraints that govern the actions of the rulers of imperialistic, totalitarian societies. Nor can we be certain about the restraints that will govern the actions of the various psychotic dictators who are bound to hold power or come to power in a certain number of other nations over the coming decades.

Nor is there any reassurance to be found in a reading of Soviet military doctrine, because the fact is that their military doctrine, with its emphasis on flexibility, devotes serious attention to all possible options, including the option of a first strike.

Soviet military writings do not actually employ the term "first strike." Instead, they discuss the first strike in Aesopian terms. One commonly used formula talks about "frustrating the designs of the imperialists," before they can launch their missiles.

I want to make it clear that I do not say that the Soviets are planning a first strike against the United States.

But I do contend that this is a possibility which cannot be ruled out.

This much is conceded by some of the severest critics of the Safeguard project.

For example, Dr. George W. Rathjens of MIT, a leading opponent of the ABM, said on June 22:

I have never denied that by the late 1970's the Soviet Union could, if it wished, have a capability to destroy nearly all of our Minuteman force in a pre-emptive attack.

There is general agreement between the experts that if a first strike ever comes, it will take the form of an all-out attack designed to destroy or virtually destroy our Minuteman force, our Polaris submarines as well as our bombers. It would make no sense for the Soviets to launch a first strike against our cities and leave our deterrent missile force intact, because if they did so, they would be inviting a response that would completely obliterate all of their population centers.

Since the possibility of a Soviet first strike cannot be ruled out, it is also important to consider what options would be open to the President of the United

States if he one day received an emergency call informing him that 500 Soviet SS-9's had taken off for the United States, targeted against the ICBM complexes in the Midwest.

If we had no ABM system defending his deterrent force, the President would have only two options in the case of such an attack. He could either sit back and let the Soviet missiles obliterate our Minuteman ICBM's, perhaps hoping that our Polaris submarines will be able to survive; or else he could empty his missile silos in a retaliatory strike against Soviet cities as soon as he received the first radar warning that the Soviet missiles are in flight.

A decision to empty our missile silos before the Soviet first-strike salvo reached its targets would, of course, automatically bring a second wave of Soviet missiles directed against American cities; and the mutual holocaust which we seek to avoid would be upon us.

If he had a Safeguard ABM system, however, the President would have an alternative to the holocaust button. And this would be true even if 50 percent of our missiles were knocked out, because 500 American ICBM's would be more than enough to devastate the Soviet Union. In fact, the consensus of the experts is that it would be suicidal for any nation to attempt the first strike unless it was certain that it could knock out roughly 90-95 percent of its adversary's strategic missile force.

Coming back to our scenario, if the President had a Safeguard ABM system, he could then decide to wait out the Soviet strike, until he received information on which Soviet silos have fired their missiles and which Soviet missiles remained in reserve. Then, when he ordered our missiles launched, he could target them not against Soviet population centers but against the enemy's remaining strategic forces.

If we could succeed in destroying or largely destroying the enemy's strategic reserve, a mutual holocaust would have been avoided and the stage would be set for negotiations that would, at the very worst, assure us of a draw.

In contemplating the contingency of a Soviet first strike, therefore, it is of the greatest importance that we provide the President of the United States with some alternative other than surrender or the holocaust button.

To date, the Safeguard system is the only alternative that has been suggested which makes sense.

THE ALTERNATIVES TO SAFEGUARD DEPLOYMENT

A number of alternatives to the initial Safeguard deployment proposed by the administration have been suggested in the course of the present debate.

None of them make any sense to me.

For example, it has been suggested that instead of deploying an ABM system we could, if the Soviet buildup warrants it, deploy more Minuteman or more Polaris missiles. Some have even suggested the possibility of doubling our strategic strike force.

I am opposed to this proposal, because I think we have somehow got to bring

an end to the piling up on both sides of these terrible aggressive weapons of mass destruction.

I am also opposed to it because I believe that such a step would really be provocative and would therefore increase the danger of thermonuclear war.

It has also been proposed, that, as an alternative to Safeguard, we empty our missile silos against Soviet cities at the first sign of attack.

I find this proposal even more appalling than the proposal that we increase our ICBM force. In fact, it smacks frighteningly of Dr. Strangelove.

This is not a formula for defending the United States; it is a formula for mutual annihilation.

Another proposal which has been submitted in amendment form is that we limit the Safeguard program to research, development, and testing; and that, rather than installing any radars now at the projected operational sites in North Dakota and Montana, we instead build certain prototype radars at our Kwajalein test range. This amendment is currently before us for consideration.

I am opposed to this proposal on three grounds.

First, it would result in greatly increased costs if we ever decide to deploy Safeguard, because then our entire additional investment in the Kwajalein installation would be wasted.

Second, according to knowledgeable estimates, it would result in a delay of almost two years in the deployment of Safeguard, and time now is so precious that we cannot afford to squander it in this wanton manner.

Third, as Prof. Albert Wohlstetter, one of this country's leading strategic experts, has pointed out, a satisfactory testing of the entire system could not be carried out at Kwajalein.

In order to test the effective operation of Safeguard, we not only have to test interactions among the many components of the ABM system but also between the Safeguard system itself and other elements of our national defense.

This can only be done by deploying the various components in their intended environment in Montana and North Dakota.

In his testimony before the Subcommittee on International Organization and Disarmament Affairs, and in subsequent conversations which I had with him, Dr. Edward Teller hammered away at the essential argument that only by a comprehensive test of the entire Safeguard system with its various components and in its intended environment, would we be able to iron out the bugs in the system and determine just how effective Safeguard can be made.

In the absence of such an initial deployment, Dr. Teller holds, we will be voting for ignorance in an area where we cannot afford to be ignorant.

The Russians, he points out, do not suffer from the handicap of ignorance.

Dr. Teller further pointed out that in the period before the limited test ban treaty, the Russians tested an ABM with a live nuclear warhead against an incoming missile.

Since then, they have deployed an extensive ABM system around Moscow.

Furthermore, they are pursuing a vigorous program of refinement with a third generation of ABM missiles which have a "loitering" capability.

Now Dr. Teller is a man whose testimony deserves some attention because it was thanks to him, more than to any other single person, that we were able to run a neck-and-neck race with the Soviets in the development of the H-bomb.

The United States exploded its first hydrogen test device on November 1, 1952, in "Operation Ivy." But this was not a deliverable device.

Our first deliverable weapon was not exploded until March 1, 1954, in "Operation Castle."

Meanwhile, in early August, 1953, the Soviets had staged their first thermonuclear explosion, which, according to our intelligence, did involve a weapon capable of delivery.

It was thanks only to a massive effort and to the inherent superiority of American technology that we were able to pull ahead of the Soviets in thermonuclear weapons over the following years.

As we approach a decision on ABM, let us not forget what might have happened if the Russians had beaten us to the H-bomb.

THE POLITICAL CONTEXT

The distinguished junior Senator from Washington (Mr. JACKSON) has made the point that it is impossible to reach sound judgments on ABM or on other aspects of the national defense budget if we do not have a clear conception of the nature of our Soviet adversary.

The Senator's argument on this point is unchallengeable. Without such an understanding, we would be attempting to make our judgments in a political and intellectual vacuum.

The Senator from Washington was responsible for a remarkably profound article on the subject of Soviet policy which appeared in the June issue of Reader's Digest. He added to this presentation in the speech which he made in support of the ABM of July 9 on the floor of the Senate.

The conclusions to which he has come coincide completely with my own.

As Senators know, I have addressed myself in this Chamber repeatedly to the subject of Soviet policy.

I believe that the achievement of a true detente, involving a total cessation of cold war activities, should be a prime objective of our foreign policy.

I cannot, however, accept the judgment of those who hold that such a detente has already been achieved.

I have pointed out that if a detente really did exist, one should be able to find some evidence of this in the record of Soviet pronouncements and actions, but that the evidence is nowhere to be found.

I have also said that it makes no sense to talk about the existence of a detente in a decade that has witnessed the suppression of the Hungarian revolution; Khrushchev's Berlin ultimatum; the Communist seizure of Cuba; the

Cuban missile crisis; and Soviet involvement in the Laotian uprising of 1961-62, in the Vietnam war, and in the Tricontinental Conference of Revolutionary Parties in Havana.

Nor does it make sense to talk about a detente against the immediate background of the Soviet invasion and occupation of Czechoslovakia and the promulgation of the Brezhnev doctrine, under which the Kremlin has claimed the right to intervene in any so-called Socialist country if the Communist dictatorship there is threatened.

THE STRATEGIC BALANCE

Nor are prospects for the future rendered any more reassuring by the record of Soviet reaction to the unilateral limitations which we placed on our strategic arms in the mid-1960's.

Acting on the advice of some of the ivory-towered scientists who now are in the forefront of the fight against the ABM, we closed down a number of our nuclear weapons reactors, froze the number of our Polaris submarines at 41 and the number of ICBM's at 1,054, decided not to proceed with a new heavy bomber, and deliberately refrained from deploying a ballistic missile defense.

At that time it was taken as a matter of dogma that the Soviets simply desired to achieve nuclear parity with the United States and that it would be in our national interest if the Soviet Union achieved an "assured destruction capability" because this would reduce the Kremlin's concern over American intentions and make for a more stable situation.

The chief prophet of this policy was Dr. Jerome Wiesner, and his chief disciple was former Secretary of Defense McNamara.

When Wiesner and McNamara spoke about parity, they appeared to have in mind numerical parity in strategic weapons.

However, "parity" is a complex concept that does not lend itself to simple definition.

As Secretary Laird has pointed out, the relative size, or megatonnage, of the weapons on both sides is also a matter that has to be taken into consideration; and here the Soviets have a distinct edge over us.

Population concentration is another factor that should be considered in any calculation of "parity." And here, because of our much greater concentrations, we are at a distinct disadvantage compared to the Soviets. In fact, as Secretary Laird stated, 200 Soviet missiles would take just as heavy a death toll in this country as 1,200 American missiles would exact in the Soviet Union.

In terms of their ability to inflict damage on the United States, the Soviets unquestionably passed the point of parity a long time ago.

The achievement of numerical parity by the Soviets would, in fact, give them an enormous strategic advantage instead of simply strategic parity.

This is something that should have been obvious all along, even to the untutored layman. But, despite this, Wiesner and McNamara held to their belief in

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the protective potential of numerical parity in strategic weapons.

It was also taken as a matter of dogma that once the Soviet Union achieved "parity" it would automatically taper off its missile production, and the stage would thus be set for meaningful talks on arms limitations. This is not happening.

The Weisner-McNamara doctrine will be recorded historically as a double tribute to the good intentions of its originators and to their capacity for self-delusion.

Three years ago, in July 1966, when our own ICBM strength had already been frozen at the arbitrary figure of 1,054, the Soviet Union had 250 ICBM's.

Today, according to hard intelligence, the U.S.S.R. has some 1,250 ICBM's in addition to a force of 700 medium-range ballistic missiles and some 550 sea-launched missiles.

No one in the United States and no one in our intelligence community and no one in the Pentagon ventured to predict in 1966 that the Soviets would add 1,000 ICBM's to their missile force over the ensuing 3-year period.

Had anyone ventured such a prediction at the time, he would have been assailed as an extremist kook or a warmonger by the apostles of the myth of the detente.

THE INTELLIGENCE GAP

Our satellite reconnaissance enables us to know how many missiles the Soviets have deployed or are deploying at any given time. But when we attempt to determine at what rate the Soviet missile assembly lines are operating or what their production quotas are for the coming period, uncertainties inevitably arise.

I know that Secretary of Defense Laird ran into a lot of flack when he suggested that the Soviets might have a force of 2,500 ICBM's by the midseventies.

But if the Soviets continue to produce ICBM's at the 1966-69 rate, then simple arithmetic points to the conclusion that 4 years hence their ICBM force will in fact total 2,500.

Conceivably an order may come through from the Kremlin to close down the lines because the Soviet leaders now feel that they have "a sufficiency" of nuclear weapons.

On the basis of past experience, however, I consider it far more likely that the Soviet missile assembly lines and armament factories and shipyards and submarine yards will continue to function at the high level of recent years, until the Kremlin has achieved the marked and unmistakable superiority in offensive weapons which is their proclaimed goal.

There has been a lot of loose talk about the so-called "intelligence gap"; that is, about the gap that supposedly exists between the intelligence estimates presented by Secretary Laird and those officially prepared by the Board of National Estimates.

My own reading of the record is that, despite the very sharp questioning to which Secretary Laird and Mr. Richard Helms were subjected in their joint appearance before the Foreign Relations

Committee, their testimony failed to disclose the existence of any basic conflict.

Certainly, there was no conflict of any kind over the rapid buildup of Soviet strategic strength, because this is something that is based on "hard" intelligence.

When it comes to estimates of Soviet intentions, however, there is admittedly a lot of guesswork involved. In this area there is apt to be a difference of emphasis between those responsible for gathering intelligence and those responsible for defense policy, for the simple reason that our policymakers must prepare for the worst contingency rather than for the best contingency.

I think it pertinent to point out in this connection that our intelligence community has erred far more frequently on the conservative side than otherwise in their estimates of Soviet capabilities and intentions.

In fact, the American intelligence community, although it has performed well in certain situations, has not been impressive when estimating the intentions and plans of our adversaries.

It failed to warn our Government of the impending North Korean Communist attack on South Korea; and, at a slightly later stage, it failed to warn General MacArthur of the impending invasion of Korea by 1 million Chinese.

It failed to predict accurately either the Soviet A-bomb or the Soviet H-bomb. In both cases the estimates were that it would take the Soviets much longer to develop these weapons than actually proved the case.

In 1956, it failed to alert us to the Soviet invasion of Hungary.

In 1957, it was completely without advance information on the Soviet Sputnik.

Over the ensuing years, our intelligence community lapsed into one of its very rare periods of overstatement when it advised the Eisenhower administration that there was a massive missile gap between the Soviet Union and ourselves.

Today it has been documented that the so-called missile gap was a Soviet-engineered hoax, and that our intelligence community fell for phony information put out by Khrushchev for the purpose of intimidating us.

In more recent years, conversely, its estimates of Soviet intentions regarding the size of Soviet ICBM forces have turned out to be woefully conservative.

In the period immediately before the Cuban missile crisis, the advance consensus of the intelligence professionals was that the Soviets would not tempt the fates by deploying nuclear missiles in Cuba. And, despite warning signs which many of our lay experts took seriously, they were also disposed to discount the possibility that the Red Army would invade Czechoslovakia to depose the Dubcek regime.

The late Senator Robert F. Kennedy, in his book, "Thirteen Days," had this to say about the performance of our intelligence community during the Cuban missile crisis:

No one had expected or anticipated that the Russians would deploy surface-to-surface ballistic missiles in Cuba.

No official within the government had ever

suggested to President Kennedy that the Russian build-up in Cuba would include missiles . . . The intelligence community, in its national estimate of the future course of events, had advised him—on each of the four occasions in 1962 when they furnished him with official reports on Cuba and the Caribbean—that the Russians would not make offensive weapons available to Cuba. The last estimate before our meeting of the 16th of October was dated the 19th of September, and it advised the President that without reservation the U.S. Intelligence Board, after consideration and examination, had concluded that the Soviet Union would not make Cuba a strategic base.

It pointed out that the Soviet Union had not taken this kind of step with any of its satellites in the past and would feel the risk of retaliation from the United States to be too great to take the risk in this case.

This estimate of September 19, I want to note, was after the first missiles had already been landed in Cuba.

All this is not so much a matter of criticism as it is a lament.

But I dwell on this point because, on the record, it is demonstrably true that our intelligence community has not been realistic, much less extremist in its appraisals of the intentions and capabilities of our adversaries.

I know, too, that it is an exceedingly difficult task to gather intelligence having to do with the policy and intentions and future production schedules of a closed totalitarian society.

And it is better that our intelligence community shun alarmism and concentrate on hard information rather than speculating over Soviet intentions.

Nevertheless, in attempting to weigh the contingencies that may confront us over the coming years, it would be well to bear in mind that, over and over again, the Soviet performance in the field of armaments has either surprised us completely or substantially surpassed our estimates.

There seems to be some difference between our experts over whether or not the Soviets have already achieved nuclear parity with the United States. What is certain, is that if the Soviets continue to build up their nuclear forces at the rate of recent years while the United States stands still, the Soviet Union at a very early date is bound to achieve a substantial numerical superiority in nuclear missiles, on top of the marked superiority they already enjoy in total megatonnage.

THE JUSTIFICATION FOR PESSIMISM

If my own outlook is on the pessimistic side, it is because pessimism is indicated by the entire history of the postwar period.

The one lesson that emerges from this record, as I read it, is that if one assumes the worst about Soviet intentions, he will almost never go wrong.

In applying this rule of thumb, I have on a number of occasions found myself taking stands that were considered unpopular and which brought me a good deal of adverse editorial comment at the time. But almost invariably and unfortunately it has turned out that my apprehensions were right.

I do not like to talk about myself. I do so only because I know of no other way of making this point.

When Castro took over Cuba, there was a widespread tendency in our press and in our State Department and in Congress to regard him as some kind of non-Communist agrarian reformer, or Robin Hood, with whom we could and should continue to do business. Editorial brickbats flew when in mid-1959 I said that the evidence pointed to the conclusion that Castro was bent on establishing a total Communist dictatorship in Cuba and converting Cuba into bastion of Soviet power in the Caribbean.

But then Castro announced to the world that he was, in fact, a Communist; and a short while later our blundering and naivete were rewarded by the Cuban missile crisis.

When we entered into the moratorium on nuclear testing with the Soviet Union, I took the floor of the Senate repeatedly to warn that the moratorium was a trap because we were, in effect, giving the Soviet Union a total test ban treaty without inspection of any kind.

I referred to the moratorium on several occasions as "the most egregious act of bipartisan folly in American history."

It was a solitary and unpopular stand.

But then, in August 1961, with our own nuclear technology completely inactivated, the Soviets resumed atmospheric testing. And when the analysis of these tests were completed, it turned out that we had lost the estimated 3-to-4 year lead in nuclear technology which we had previously enjoyed.

The Soviet action was denounced as a betrayal of trust by the President, by Congress, by the press.

But it still amazes me that anyone expected the Soviet Government to behave any differently than they did behave in this situation.

More recently, I recall that I was one of the handful of people in Congress or out of Congress, who, last summer, warned that the Soviets were getting ready to invade Czechoslovakia.

The view was considered an alarmist one at the time. But in this situation, unfortunately, the alarmist view again turned out to be the correct one.

So let us be careful this time.

THE OUTLOOK FOR THE FUTURE

Let me now venture another prediction.

I do not hold that limited agreements with the Soviet Union are impossible.

On the contrary, I believe strongly that, despite all the difficulties, we must continue to seek agreements, no matter how limited, in the field of arms control and in every other area.

I supported the partial test ban treaty, and it pleases me to know that my resolution of May 27, 1963, which was co-sponsored by 33 other Senators, has been widely credited with having played a role in encouraging this new approach to the test ban treaty.

But, while holding to the conviction that we must always be prepared to walk the extra mile, and more, in the difficult quest for peace, I fear that the coming decade will be one of grave and recurring crises. It will be an era during which the Soviets will continue to expand their challenge to the free world and to extend their power and their influence in North

and Central Africa, in Latin America, and in Asia, and the massive Soviet missile and arms buildup of recent years will continue. Indeed, within a few years at the most, the unchallengeable evidence will persuade even the most wishful thinkers that the Soviets have achieved their goal of strategic weapons superiority.

When that day comes, many a Senator who will vote against the Safeguard ABM system at the close of the current debate, will have cause to rethink his vote.

It is impossible not to be alarmed by the prospect of having to deal with the Soviets in future crisis situations where they enjoy either parity, or worse still, a distinct superiority in nuclear weapons.

We were able to stand up to Khrushchev's Berlin ultimatum of November 1958, despite the flagrant manner in which he rattled his nuclear missiles, because we knew, and the Russians knew, that we possessed massive overall nuclear superiority.

In the Cuban missile crisis of 1962, President Kennedy, in effect, delivered an ultimatum to the Soviet and Cuban Governments. He told them that if the Soviet missiles were not removed from Cuba, the United States would take the necessary measures in its own self-defense.

The Soviet government was also informed that we would not permit the delivery of any more nuclear missiles to Cuba, and that if a nuclear missile were fired from Cuba at the United States, we would respond to such an attack in precisely the same way that we would respond to an attack from the territory of Soviet Union itself.

Confronted with this ultimatum, the Soviet leaders backed away from the brink and the Cuban missile crisis came to an end.

But we have to ask ourselves whether the Soviets would have backed down and whether President Kennedy would have dared to take the same brave line if it had not been for our very substantial nuclear superiority at the time of the crisis.

Since the Soviets played a very rough game of nuclear blackmail, even in the years when we had a marked nuclear superiority, there is every reason to believe that the Kremlin will use nuclear blackmail as a political instrument even more frequently and more brutally at the point where it achieves parity or superiority in nuclear weapons.

THE QUESTION OF COST

The question of cost is important, but it is not central to the problem before us.

If the peace of the world and the survival of our Nation are at stake, then, clearly, cost is a matter of secondary importance.

But this does not mean that we can forget about cost.

Everyone is worried about the heavy costs of our defense programs. A tightening up of procurement and management procedure is long overdue. Hopefully, the blue-ribbon panel which has now been set up will bring about a great improvement in these procedures and practices.

To those who fear that Safeguard may wind up costing us astronomical sums

of money, let it be remembered that what is involved in the bill now before us is the price of a 1-year deployment, costing some \$800 million. And this is a small sum, compared with our overall defense budget.

And we will not be locking ourselves in to an entire program. For it will be reviewed at every stage, from the standpoints of cost and effectiveness and of the international situation.

And it makes no sense to say that, once committed to a program, we cannot cancel it. It is only necessary to recall the recent cancellation of the F-111 program on the basis of its disappointing performance and its excessive costs.

Where national survival is at stake, it is better to err on the side of over-insurance than on the side of under-insurance.

Today I have set forth the reasons which have led me, after careful thought, to strongly favor the deployment of the Safeguard antimissile defense system.

To summarize, I believe that the ABM should be supported because it is a moral weapon, a weapon for peace, a weapon that would greatly increase the chances of bringing an end to the arms race and of instituting some meaningful limitation on offensive nuclear weapons.

There is an unfathomable mystery to the rationale of those who call upon us to refrain from deploying an antimissile defense system in the interest of future arms-control talks.

It would make much more sense for us in any arms control talks not merely to accept the right of the Soviet Union to deploy an ABM system of its own, but to actually encourage the development of defensive systems as a preliminary to limiting the deployment of city-destroying missiles and MIRV's.

Rather than calling on the United States to abstain from deploying Safeguard, all those who seriously believe in arms control should be focusing their attack on reducing the awesome arsenals of offensive thermonuclear missiles.

Up to now, the Soviets have been a fearsome problem, as they have overwhelmed one country after another.

At this very hour, the Soviets lie in political siege of several free but weak non-Communist countries.

If the past is any guidepost for the future, then there is more trouble in the offing.

We face dark and troublesome days ahead.

Our very freedom is at stake; our very survival is in peril.

Let us remain strong and secure so that we will be free to lead the way to real disarmament and peace.

I take it for granted that every Senator will reweigh the evidence with the utmost care before casting his vote, knowing that the quality of our life and the quality of our national security and the maintenance of world peace are heavily involved in the outcome of this vote.

So I say we should give the President of the United States an alternative to pushing the holocaust button.

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CONGRESSIONAL RECORD — SENATE

Obviously, the Safeguard ABM is not a perfect weapon. But it is the best our people have been able to devise.

What we have to do is to look at our adversaries in the world. They put up a defense system of their own; and it makes sense to me, sitting here with their missile pointed at us, for us to have a missile defense system of our own.

I earnestly hope that we will not vote the ABM down, for if we do, we may live to regret it. I hope that we will vote, instead, to be strong and safe, and secure.

Mr. BYRD of West Virginia. Mr. President, will the Senator from Connecticut yield?

Mr. DODD. I yield.

Mr. BYRD of West Virginia. Were there not some scientists who said that the hydrogen bomb was impossible to build?

Mr. DODD. Yes; it was on this same basis that they opposed the H-bomb, saying that it was impossible to build. There were also many members of the administration and of Congress who said that the hydrogen bomb could not be built. Of course, they were dead wrong.

Some of the same scientists now, on the same basis, are telling us that the Safeguard ABM cannot be made to work and that it should not be deployed.

Of course there were a minority of scientists who said that the hydrogen bomb could be built and they were proven to be right.

There were scientists, I remind the Senator from West Virginia, who said that the Polaris submarine system was technologically impossible. Not very long ago they were telling us that. And they were wrong, too. Thank God we went ahead, and that we now have a Polaris system to protect us.

The incredible success of the recent moon mission is pertinent here also.

As the Senator from West Virginia knows, I serve on the Aeronautical and Space Sciences Subcommittee, where we were told that the Apollo program was impossible, that we were throwing our money away, that it could not possibly succeed, that we would never put a man on the moon, that the whole thing was ridiculous.

I am talking about scientists who took this stand. Now they are telling us the Safeguard ABM cannot be made to work.

Mr. BYRD of West Virginia. Let me ask the Senator, what would be our situation now if we had continued only with research on the hydrogen bomb, if we had continued only with research on the Polaris submarine, if we had continued only with research in connection with the moon shot?

Mr. DODD. Well, with respect to the hydrogen bomb, I shudder to think of what would have happened if we had not succeeded in developing it at the time we did. As it turned out, we beat the Soviet Union to it by only about 6 months.

If we had not developed the Polaris submarine system, I shudder again to think of what might have happened to us during those years.

With respect to the moon shot, I am confident that, if our adversaries had gone ahead and gotten there first, they would turn their accomplishments into

some military advantage, to our great disadvantage.

The questions the Senator asks are well taken.

MESSAGE FROM THE HOUSE—ENROLLED BILL AND JOINT RESOLUTION SIGNED

A message from the House of Representatives by Mr. Bartlett, one of its reading clerks, announced that the Speaker had affixed his signature to the following enrolled bill and joint resolution, and they were signed by the Acting President pro tempore:

H.R. 13079. An act to continue for a temporary period the existing interest equalization tax; and

S.J. Res. 85. Joint resolution to provide for the designation of the period from August 26, 1969, through September 1, 1969, as "National Archery Week".

TRANSACTION OF ROUTINE MORNING BUSINESS

The ACTING PRESIDENT pro tempore. Under the previous order, the Senate will now proceed to the consideration of routine morning business.

The Chair recognizes the Senator from Ohio (Mr. YOUNG).

DAVE McNALLY TIES AMERICAN LEAGUE PITCHING MARK

Mr. MANSFIELD. Mr. President, for some time I have been intending to take the floor to express my commendation to a fellow Montanan, a young man by the name of Dave McNally, from Billings, Mont. Dave has been pitching for the Baltimore Orioles for a few years, and lately he completed his 15th victory for this season, with no defeats. If we add his two straight victories at the end of last season, Dave has a record of 17-0, which I believe is the way the baseball fraternity would refer to it.

Dave McNally is feeling no pressure. He is feeling no pain. But in his own words, he is feeling very lucky. What the 26-year-old Baltimore left-hander must be wondering, after running his record to 15-0, with a 4-2 victory over Kansas City on Wednesday night, is, "Just how lucky can I be, and just how long can this last?"

To use Dave's words:

No, I don't feel any pressure. I think probably I would feel it if I had pitched well in every game, but that hasn't been the case. I pitched badly enough to lose in six or seven games.

I know it has to end sometime, but I'm very happy to get this far, and I'm enjoying it. I'd rather be winning like this than losing but it's taken a lot of luck to do it.

McNally's number 15 put him in the American League record book alongside Johnny Allen of Cleveland. McNally, with two victories at the end of the 1968 season, tied Allen's mark of 17 consecutive triumphs over two seasons, set in 1936-37, and Allen's record of 15 straight victories at the start of a season, 1937.

Dave McNally is just one triumph away from the league mark of 16 successive victories in one season, set by four pitchers.

I know Dave McNally very well; I know his family extremely well. Those of us who come from Montana are very proud of what Dave McNally has been doing since first starting out in American Legion baseball and then graduating to the Baltimore Orioles. We want him to know that we are following every game with trepidation. We are hoping that his unbroken string of wins will continue through the entire season, because we know that even if Dave is lucky on occasion, he is an outstanding man in his own right.

We look upon him as a great Montanan. I look upon him as a close personal friend.

If Dave ever gets word of this, I just want him to know that there are a lot of us who may not see him at the stadium but who, nevertheless, are watching his every effort and wishing him every success.

AMERICANS SHOULD NOT BE DECEIVED

Mr. YOUNG of Ohio. Mr. President, Americans are entitled to know the facts regarding the much ballyhooed return of 25,000 of our combat troops from South Vietnam.

It would give me pleasure to report not only that 25,000 men of our Armed Forces had been returned home from Vietnam but also that at least 75,000 more combat troops would be returned to the United States from Vietnam before next December. Such a report would be contrary to the facts.

Furthermore, in view of President Nixon's recent statements in Thailand and Saigon, Americans have every reason to be gravely concerned that our fearful combat casualties in that undeclared, immoral, unpopular war in Vietnam will go on and on for many months. President Nixon should be reminded that he was elected because of his oft-repeated campaign statement that he had a secret plan to end the war in Vietnam. That plan is still his secret.

I am regretfully reporting the facts. On January 19, 1969, 2 days before Richard Nixon was inaugurated as President of the United States, there were 532,000 men of our Army, Navy, Marines, Air Force, and Coast Guard in Vietnam. Now, Mr. President, in view of reports issued from the Pentagon and from the White House, Americans have been led to believe that at this time the total men of our Armed Forces in Vietnam, 6 months following the time President Nixon was inaugurated, would be approximately 507,500. The fact is that on July 19, 1969, there were more men of our Armed Forces in Vietnam than at the time Richard Nixon became President. The total number of men in our Army, Navy, Marines, Air Force, and Coast Guard in Vietnam on July 19, 1969, was 535,500, whereas it had been 532,000 on the day before he was inaugurated.

On June 10, 1969, at the time President Nixon announced the withdrawal of 25,000 troops from Vietnam, the total number of men in our Army, Navy, Marines, Air Force, and Coast Guard in Vietnam was 537,500. On July 19, 1969,

the total number was 535,000, or only 2,000 less.

Incidentally, I report that on the day President Lyndon Johnson left the White House January 20, 1969, the total of American Armed Forces in Vietnam, off the coast of Vietnam and in Thailand was 613,200. From that date to June 10, 1969, 2 days after President Nixon announced that 25,000 troops would be withdrawn from Vietnam, this total had been increased to 621,200. On July 19, 1969, more than a month after the announced withdrawal and after 6 months of the administration of President Nixon, 618,600 American servicemen remain in Southeast Asia.

It is with a feeling of sadness, Mr. President, that I make this factually correct report.

I am sure I express the feelings of many millions of Americans who are profoundly disappointed over the failure of this administration to make a sincere effort to withdraw at least 100,000 young Americans from the Vietnam quagmire.

Mr. President, during the week July 19 to 26 Americans killed and wounded in combat numbered 2,926; during that same period South Vietnam friendly forces—too friendly to fight—2,339.

ENROLLED BILLS SIGNED

The ACTING PRESIDENT pro tempore announced that on today, August 1, 1969, he signed the following enrolled bills, which had previously been signed by the Speaker of the House of Representatives:

S. 38. An act to consent to the upper Niobrara River Compact between the States of Wyoming and Nebraska; and

S. 1590. An act to amend the National Commission on Product Safety Act in order to extend the life of the Commission so that it may complete its assigned task.

EXECUTIVE COMMUNICATIONS, ETC.

The ACTING PRESIDENT pro tempore laid before the Senate the following letters, which were referred as indicated:

REPORTS OF COMPTROLLER GENERAL

A letter from the Comptroller General of the United States, transmitting, pursuant to law, a report on the administration and effectiveness of work experience and training project under title V of the Economic Opportunity Act of 1964, Wayne County, Mich., Department of Health, Education and Welfare, dated July 31, 1969 (with an accompanying report); to the Committee on Government Operations.

A letter from the Comptroller General of the United States, transmitting, pursuant to law, a report on the effectiveness and administration of the Community Action Program under title II of the Economic Opportunity Act of 1964, Lake County, Ind., Office of Economic Opportunity, dated August 1, 1969 (with an accompanying report); to the Committee on Government Operations.

REPORTS OF A COMMITTEE

The following reports of a committee were submitted:

By Mr. MCGEE, from the Committee on Post Office and Civil Service, without amendment:

S. 2754. A bill to amend subchapter III of chapter 83 of title 5, United States Code, relating to civil service retirement, and for other purposes (Rept. No. 91-339).

By Mr. MCGEE, from the Committee on Post Office and Civil Service, without amendment:

H.R. 9825. An act to amend subchapter III of chapter 83 of title 5, United States Code, relating to civil service retirement, and for other purposes.

EXECUTIVE REPORTS OF A COMMITTEE

As in executive session, the following favorable reports of nominations were submitted:

By Mr. MAGNUSON, from the Committee on Commerce:

Lewis M. Branscomb, of Colorado, to be Director of the National Bureau of Standards;

Davie W. Oberlin, of Minnesota, to be Administrator of the St. Lawrence Seaway Development Corporation; and

Jacob L. Bernheim, of Wisconsin, Foster S. Brown, of New York, William W. Knight, Jr., of Ohio, Miles F. McKee, of Michigan, and Joseph N. Thomas, of Indiana, to be members of the Advisory Board of the St. Lawrence Seaway Development Corporation.

Mr. MAGNUSON. Mr. President, from the Committee on Commerce, I also report favorably sundry nominations in the Environmental Science Services Administration and the Coast Guard. Since these names have previously appeared in the CONGRESSIONAL RECORD, in order to save the expense of printing them on the Executive Calendar, I ask unanimous consent that they be ordered to lie on the Secretary's desk for the information of any Senator.

The PRESIDING OFFICER. Without objection, it is so ordered.

The nominations, ordered to lie on the desk, are as follows:

David M. Wilson, and sundry other persons, for permanent appointment in the Environmental Science Services Administration;

Philip J. Taetz, and sundry other persons, for permanent appointment in the Environmental Science Services Administration;

George A. Blann, and sundry other officers, to be permanent commissioned officers of the Coast Guard;

Dominic A. Calicchio, and sundry other Reserve officers, to be permanent commissioned officers in the Coast Guard;

Herman J. Lentz, to be a permanent commissioned warrant officer in the Coast Guard; and

George A. Blann, and sundry other officers, for promotion in the Coast Guard.

BILLS INTRODUCED

Bills were introduced, read the first time, and, by unanimous consent, the second time, and referred as follows:

By Mr. MCGEE:

S. 2754. A bill to amend subchapter III of chapter 83 of title 5, United States Code, relating to civil service retirement, and for other purposes; to the Committee on Post Office and Civil Service.

By Mr. BIBLE:

S. 2755. A bill for the relief of Donal N. Callaghan; to the Committee on the Judiciary.

By Mr. McCLELLAN:

S. 2756. A bill for the general revision of the Patent Laws, title 35 of the United States Code, and for other purposes; to the Committee on the Judiciary.

(The remarks of Mr. McCLELLAN when he introduced the bill appear later in the RECORD under an appropriate heading.)

By Mr. NELSON:

S. 2757. A bill to provide for the control and prevention of pollution, deterioration of water quality, and damage to lands and waters resulting from erosion to the roadbeds and rights-of-way of existing State, county, and other rural roads and highways, and for other purposes; to the Committee on Public Works.

(The remarks of Mr. NELSON when he introduced the bill appear later in the RECORD under the appropriate heading.)

By Mr. MONDALE:

S. 2758. A bill to amend section 312 of the Housing Act of 1964 to eliminate the provision which presently limits eligibility for residential rehabilitation loans thereunder to persons whose income is within the limits prescribed for below-market-interest-rate mortgages insured under section 221(d)(3) of the National Housing Act; to the Committee on Banking and Currency.

(The remarks of Mr. MONDALE when he introduced the bill appear later in the RECORD under the appropriate heading.)

By Mr. DODD:

S. 2759. A bill for the relief of Francesco Daniele; to the Committee on the Judiciary.

By Mr. STEVENS:

S. 2760. A bill to amend the Internal Revenue Code of 1954 to remove the limitations on the deductibility of expenses for care of dependents incurred to enable a taxpayer to be gainfully employed; to the Committee on Finance.

(The remarks of Mr. STEVENS when he introduced the bill appear later in the RECORD under the appropriate heading.)

S. 2756—INTRODUCTION OF A BILL FOR THE GENERAL REVISION OF THE PATENT LAWS

Mr. McCLELLAN. Mr. President, I introduce, for appropriate reference, a bill to provide for the general revision of the patent laws, title 35 of the United States Code.

On February 28 I introduced S. 1246 for the general revision of the patent laws. That bill incorporated the best features of several patent revision bills considered by the Subcommittee on Patents, Trademarks, and Copyrights during the 90th Congress. It also reflected a number of suggestions made during and subsequent to the subcommittee's hearings on patent law revision. Although the public hearings were completed last year, the subcommittee delayed action on this legislation at the request of the patent bar. Last winter, I indicated that if President Nixon determined that he wished to select a new Commissioner of Patents, I would further delay the reporting of a bill by the subcommittee until such time as the new Commissioner could review the various legislative proposals. The President did nominate a new Commissioner of Patents and I have met with him. Many suggestions made by the Commissioner have been included in the revised patent bill which I am introducing today.

This legislation has had a long history and can be traced back to a series of 30 studies on the patent system that were commissioned and published by the Subcommittee on Patents, Trademarks, and Copyrights. Following this review, the subcommittee concluded that "The objectives of the patent system are as valid today as at its inception," but

cial fruit-crop growers in California (the villains of the current United Farm Workers Organizing Committee confrontation with the California pesticide regulatory program), and the cotton producers in Mississippi and Texas. Together, they account for almost one-half of the acreage treated by pesticides annually in the US.

Federal and state governments subsidize the organo phosphor business through secret military chemical and biological warfare research, agricultural pesticide research and bio-chemical research. In fiscal 1967, a total of \$70 million in unclassified pesticides research was funded by the Department of Agriculture and the Public Health Service. An equal amount is estimated to be spent on pesticide chemical research by private industry and state universities. Only \$5 million is currently allocated for the support of research into the occupational and environmental health hazards of pesticides by the PHS.

In the legislative lexicon, pesticides are called "economic poisons," a euphemism devised by Congress and the Agriculture Department to distinguish between the purportedly beneficial nature of the potentially lethal stuff and "hazardous materials" generally. In fact, the "economic poisons" are specifically exempted from coverage under the Federal Hazardous Materials Act.

With well over 60,000 trade names of pesticides in existence, the job of industry surveillance and compliance with existing pesticide manufacturing and applications standards is virtually impossible. The response of the Johnson administration after the submission of the Scientific Advisory Council report on pesticides in 1965 was effectively to hobble the federal regulatory program.

Surveillance and regulatory functions were split between the Public Health Service and the Agricultural Research Service. The PHS Office of Pesticide Research has responsibility for conducting basic research on human and environmental health hazards of pesticide use and is also responsible for inspecting establishments involved with the formulation of pesticide chemicals. If that were not enough, the PHS is supposed to monitor areas of concentrated pesticide use in major commercial agricultural centers in this country. However, the fine Byzantine hand of the agricultural interests has made sure that the PHS cannot issue cease and desist orders. Violations are to be turned over to the Agricultural Research Service for disposition and prosecution. But the ARS hasn't filed a major violation prosecution with the Justice Department in the 13 year history of the Federal "rat and bugs chemicals" act.

That law contains some neat provisions to dissuade investigators from digging into the pesticide chemicals industry. Information on the production of synthetic organic compound pesticides is compiled by the US Tariff Commission, not Agricultural Research or Public Health. Further, information on the exact ingredients of specific formulations are not permitted to be disclosed by law, to protect "trade secrets."

SURTAX

Mr. BYRD of West Virginia. Mr. President, I voted against the surtax for the same reason that I voted against the surtax last year. I am against saddling the hardpressed taxpayer with this heavy burden while the Federal Government continues to spend and spend and spend. It is not right to take extra money away from the people and then pump it into questionable programs which can be trimmed. In other words, I am against collecting more money just to spend more.

CONCLUSION OF MORNING BUSINESS

The PRESIDING OFFICER. Is there further morning business? If not, morning business is concluded.

AUTHORIZATION OF APPROPRIATIONS FOR FISCAL YEAR 1970 FOR MILITARY PROCUREMENT, RESEARCH AND DEVELOPMENT, AND FOR THE CONSTRUCTION OF MISSILE TEST FACILITIES AT KWAJALEIN MISSILE RANGE, AND RESERVE COMPONENT STRENGTH

The Senate resumed the consideration of the bill (S. 2546) to authorize appropriations during the fiscal year 1970 for procurement of aircraft, missiles, naval vessels, and tracked combat vehicles, and research, development, test, and evaluation for the Armed Forces, and to authorize the construction of test facilities at Kwajalein Missile Range, and to prescribe the authorized personnel strength of the Selected Reserve of each Reserve component of the Armed Forces, and for other purposes.

SAFEGUARD AND NATIONAL PRIORITIES

Mr. MUSKIE. Mr. President, we are engaged in a debate, as we consider the Safeguard proposal, over national security—our capacity to prevent or survive an enemy attack—and national vitality—our ability to create opportunities for a more meaningful, rewarding, and healthy life for each of our citizens. The Safeguard system must be tested against each of these considerations if we are to make an intelligent decision on the deployment question.

We face this decision at a time when our instincts, both prudent and humane, point toward the need to stem the decay of American society and to reconcile the differences among us. For more than a generation, external challenges have sapped our energies and diverted our resources from building America, while the accumulation of grievances, dramatic social change, and rising aspirations have made our needs ever greater.

As a result, public facilities are outmoded and overwhelmed, the effort to help the poor and the desperate has faltered, and patience is wearing thin. The agony of continuing sacrifice in Vietnam has brought our people to the greatest national anxiety and discord any of us has known.

These considerations are an important influence in this debate. They create pressures which prompt many Senators, of both parties, to differ from the administration on such an important matter of national security. The American people look to the Senate to provide balance and prudence in national security policies which have so heavy an impact upon the resources which are available for all our urgent tasks.

In the period immediately following President Nixon's announcement, I expressed my doubts about the Safeguard system—doubts about the scope of the program, its justification, its feasibility, and its consequences for future strategic arms races and impending arms negotiations.

Those doubts have not been resolved in the course of this debate.

A question which finds the Senate so closely divided must, I suppose, be considered a close question.

Honorable and able Americans—with in and outside the Senate—find themselves in disagreement on every critical issue which has been raised in this debate: Will the system work? Is it vulnerable? What is the thrust of Soviet weapons development? What are Soviet intentions? Which result in the Senate will contribute most favorably to the prospect of favorable negotiations with the Russians to limit nuclear weapons? What are the security risks associated with an "aye" vote? With a "nay" vote?

Each Senator, I am sure, has carefully considered each of these questions. Each Senator, I am sure, has concluded that the answers to these questions support the position he has taken. This Senator has found that the answers require a careful balancing of the arguments and available information.

Although the division in the Senate appears to be close, there appears to be much broader agreement on the wisdom of continued development toward a reasonable system to protect us against missile attacks. When and if it is needed.

Much of the debate over the ABM, therefore, has revolved around whether the nature of the foreseeable threat from the Soviet Union justifies going ahead now with deployment of this weapons system in its present form.

Though the weight of the evidence leads me to doubt that such circumstances are at hand, I believe most Senators are prepared to vote for authorization upon a proper showing of need.

For now, however, an impressive array of scientific skepticism about the Safeguard proposal, persuades me that it would be a mistake to go ahead with this program, at this time, and in this form. If there is well-founded doubt that the system can function effectively—while it distracts our efforts from other, more appropriate steps and provokes our adversaries to a defensive escalation of the arms race—deployment would be a serious mistake.

Safeguard is billed as a defense against a Soviet first-strike attack, but it depends on untested subsystems for logic and computing functions that may well fail against a massive sophisticated attack. Moreover, Safeguard's radars are critically susceptible to spoofing and its "eyes"—unshielded missile-site radars—"MSR"—could be blinded by a concentrated strike, leaving the Minutemen missiles wholly unprotected.

These questions raise doubts about the ultimate justification of Safeguard's technical worth and the wisdom of deploying the system in the light of such doubts. The committee resolves both questions in these words:

It is prudent that any doubt on this question (its ultimate feasibility) be resolved in favor of confidence in the system.

In my judgment, such a "benefit-of-the-doubt" resolution does not give proper weight to the risk that deployment will provoke a Soviet response based not upon

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year old girl sampled the can, which her older brother had opened. She died in twenty minutes.

Because of readily available supplies of pesticides for both commercial and private use, suicide and accidental deaths from pesticide poisoning is an increasing problem. While only 13 percent of pesticides are used in the home for pest control, 50 percent of all accidental deaths and suicides, traced to pesticide deaths, are from non-agricultural uses of pesticides. For example, in just one of Florida's 67 counties there were eight accidental and five suicidal deaths from phosphate pesticide poisoning in 1963 alone.

California is better than most states in the regulation and use of pesticides; but the form of regulation leads to abuses by special interest groups that have severely weakened the national pesticide regulatory program and have blocked efforts to seek increased protection of farm workers.

The four-part regulatory structure consists of: a) registration or licensing of pesticide products; b) licensing of agricultural pest control operators; c) the registration and use, by permit, of injurious materials such as the highly toxic phosphate ester pesticide family; d) sampling of crops for pesticide residue inspection. As in the federal program and some other state programs, the responsibility for regulation of pesticides is in the hands of the Department of Agriculture and, in the case of California, the County Agricultural Commissioner.

GOVERNMENT IGNORES MOST PESTICIDE VIOLATIONS

With the exception of registration, testing and evaluation of specific pesticide products, the California program is effectively run by the County Agricultural Commissioner. For example, an agricultural pest control operator must register with the Commissioner in each county in which he does business and supply a monthly report of his operations in the county. The Commissioner also issues licenses for agricultural aircraft operators and administers special examinations for agricultural aircraft pilots. Most important, the Commissioner issues permits for the use by farm operators of chemicals registered by the California Department of Agriculture as injurious materials. These include the toxic phosphate ester family of pesticides and 14 other pesticides.

The State Department of Agriculture, to ensure quality control over application of pesticides, inspects and analyzes samples of fruits, produce and meats in wholesale marketing distribution facilities to check on pesticide residues on food offered for sale in the State. The U.S. Food and Drug Administration does the same thing in interstate traffic. Tolerances for pesticide residues used in California are the same as those developed by the Federal Food and Drug Administration.

These tolerance levels are set for the particular crop and practically none are developed for the foliage on which the crop is grown. The outbreak of pesticide poisoning among the 95 peach harvesters in California in 1963 was traced to excessive application of parathion on the foliage, but not the crop.

The effectiveness of this program of regulation by state and federal agricultural authorities has come under serious attack recently in a salient area—registration, evaluation and testing of pesticide products. Under the Federal Insecticide, Fungicide and Rodenticide Act, the U.S. Agricultural Research Service can take action to remove products from the market, cancel the registration of products and prosecute those who ship products that violate the law.

The GAO report last September detailed that Research Service's concept of "law and order" is for the benefit of pesticide industry. The report went on to show that of 2,751 samples of products tested and re-

viewed during fiscal 1966, 750 were found to be in violation of the law. Of these, 70 percent or 520 were in "major" violation of the law. In 1967, of 4,958 samples taken 23 percent or 1,147 were found in violation.

Part of the reason for the situation is the old complaint of fiscal starvation and bureaucratic passivity toward vested interests. The pesticides regulation division has a staff of about 150 of which 26 are field supervisors and 5 are supervisory inspectors. In fiscal 1968 the total budget of the agency was \$3.8 million. By way of contrast, the California State Assembly appropriated and spent \$20 million last year for agricultural research support for its state university and college system.

Obviously, federal and state agricultural agencies are oriented towards maximizing the productivity-increasing features of agricultural chemicals, generally, and pesticides, specifically. The fact that no research in the U.S. is currently conducted into the occupational health hazards of agricultural and industrial chemicals is indicative of the general lack of concern in the regulatory organization for worker interests.

A portent of the future direction of public policy in this area is the fact that the budget of the Bureau of Occupational Health of the California State Department of Public Health was cut by one-third as part of Governor Reagan's attempt to bring "efficiency" into government operations.

If a severe budget cut were not enough, the Bureau of Occupational Health was also in jeopardy of being legislated out of existence. The chief legislative analyst of the California State Assembly, Alan Post, uncovered the fact that the Bureau's existence was subject to legislative approval. Recently legislation has been introduced into the Assembly to rectify the anomaly before the Bureau's existence becomes an object of lobby pressure. This may seem like just another administrative oversight, but the Bureau is practically the only source of information on occupational disease and health hazards among farm workers for the United States. (California is the only state in the country where injuries among farm workers are counted and where farm workers are also covered by Workmen's Compensation.)

California is one of the few states to have developed safety standards for agricultural operations. The standards are administered by the Division of Industrial Safety of the State Department of Industrial Relations. Safety orders for injurious materials (as defined in Section 2461 of Title 3 of the California Administrative Code) cover four areas: first, the provision of medical services by an employer engaged in commercial operation who uses toxic pesticides; second, decontamination of equipment; third, precautions for aircraft crop dusting and spraying; and fourth, standards for equipment used in both ground and air application of pesticides and other injurious agricultural chemicals. By far the most important of these for protection of the farm worker is the standard of medical supervision over application of pesticides. Even this is weakened, since control over recommendations and reports filed with the Division of Industrial Safety covering the determination of restricted activities for employees exposed to injurious materials, is under the employer.

Part of the pesticide problem comes from our failure to recognize that a problem really exists. Dr. Irma West, a leading champion of pesticide control among environmental health specialists, writing in *California Medicine* has summarized the issues involved clearly:

"Man has manipulated his environment so large a scale that he has inadvertently invented and produced a multitude of the most complicated new problems ever to confront the health professions. Unfortunately,

we have been slow to realize that plans for health and safety should be built into technological advances in the planning stages. By the time technical tools are in operation and their use results in undesirable and unexpected effects upon people and their environment, the best opportunity to minimize these effects efficiently and humanely is largely lost."

DEATH STALKS THE GARDEN

Thousands of home-gardeners have suffered peculiar "flu" symptoms after spraying their flowers and shrubs with a common form of pesticide. They rarely learn that they have been mildly "poisoned" by an organo phosphor compound. In more lethal strengths, the same chemical agent is used in "nerve gas," and can wipe out huge populations of men or animals in a few minutes. But despite the obvious hazards, very little is being done to control the widespread foreign and domestic sale of highly toxic pesticides; beyond that, the Army is continuing its secret tests of nerve gas as a weapon of mass annihilation.

Army experimenters had an unexpected windfall of data from the accidental exposure of several thousand sheep to air-sprayed nerve gas near Dugway, Utah. The chemical that killed these sheep also goes into the organo phosphors pesticides—such as the widely distributed garden product called Parathion. Until the end of World War II, Parathion itself was the favorite candidate for the standard nerve gas in the Army Chemical Corps' arsenal. Then the Army "liberated" the secret German nerve gas, "GB," and it won out over Parathion, for two reasons: it was easier to disseminate, and it would not so readily arouse public fears as would the use of a common pesticide like Parathion. "GB" was saved for people and Parathion relegated to weeds.

Both agents have the same toxicity: 2 milligrams per kilogram of body weight. Both use the same "kill mechanism": they prevent the manufacture of enzymes which carry body "messages" controlling respiration. In other words, victims simply suffocate. Early symptoms (the whole process can take less than five minutes) include pinpointing of eye pupils, tightness in the chest, convulsions, paralysis, and finally respiratory failure. If the dose is less than lethal, the symptoms resemble the onslaught of an attack of the flu.

Current hearings in Wisconsin into the environmental hazards of the chlorinated family of insecticides—the most notable of which is DDT—focus concern about the chemical "synergy" of simultaneous and continued exposure to different pesticides: there is some evidence that since both the organic phosphor pesticides and the chlorinated insecticides accumulate in the fatty body tissues, under certain conditions (such as malnutrition stress), genetic damage could occur.

In 1966 alone, over 55 million lbs. of organic phosphor pesticides were manufactured for use in US agri-business. The passage of the Federal Insecticide, Fungicide and Rodenticide Act and the public disclosures of pesticide abuses had indicated that some reduction or stabilization in manufacture and use would occur. But there has been a growth of 188 percent in the production of organic phosphor pesticides over the period from 1950 to 1966, as compared to an increase of 25 percent in the production of all classes of pesticides over the same period. Effective substitutes exist, such as the pesticide Malathion with 1/2,000 of the toxicity of the organic phosphors, and the price differential between the two is nominal.

In 1968 alone, US manufacturers exported 59 million lbs. of organo phosphor pesticides to users overseas, the largest consumers being Canada and Mexico. Within domestic agri-business the big users are the commer-

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our doubts but upon the assumption of maximum effectiveness of our system.

Moreover, such a benefit of the doubt resolution may freeze us into a technological solution to the problem which is not the best answer.

But, even if the system achieves the limits of its planned effectiveness, I am persuaded that the simple mathematics of United States-Soviet confrontation may make the effort futile; the Soviet Union could negate the incremental protection of Safeguard with a few months' production of offensive missiles.

It is possible, Mr. President, that at some time in the future, developments in the threat may make an ABM essential to protect our retaliatory forces. It is also possible that a limited deployment of ABM's could become an element of practical and stable big-power arms limitations.

And it is certainly possible that a credible and effective ABM can be developed, applying lessons our scientists are learning today.

It is for these reasons that I welcome the initiative of Senators HART and COOPER to authorize research and development of an ABM program that can work when and if it is needed, but that will not, because it is deployed prematurely, embroil the American people in costs and consequences we will regret. I intend to support their amendment, and I commend their effort to put ABM development in a posture consistent with the Nation's long-term needs, a program the majority of the American people can sensibly support.

ii

There is what could be a tragic irony in the way in which the Safeguard program has been presented to the American people.

As cast by the administration, the ABM would serve to "safeguard" our Minuteman retaliatory forces. If the need were clear and this role could be assured, I feel confident that the Senate would not hesitate to follow the President's lead. But reality is far more complex than the administration's assurance would suggest, and the Senate must ultimately judge the strategic impact of the Safeguard system in the broader context of its effects in combination with other pending weapons systems.

The Soviet Union will see our ABM deployment in this perspective, and will make decisions about its own future weapons developments and the forthcoming arms negotiations in the light of how it perceives America's true intentions in the field of strategic armaments. The mysterious efforts of the Soviet's lunar vehicle to dog the heels of our Apollo 11 may well be fresh evidence that they do not take all our declarations at face value.

It is in this context—the role Safeguard will play in the overall strategic posture of the United States and the threatening direction our adversaries must perceive emerging in our strategic forces—that I find the administration's proposal constitutes, not a Safeguard, but a provocative and possibly dangerous game. It is notable that while the word "provocative" is the President's own

term, the denial of such intent in Safeguard deployment cannot escape being taken by others as a thin mask for profoundly disturbing threats to the balance of mutual deterrence.

In assessing the overall capabilities of our strategic forces, the Soviet Union will give attention not only to the Safeguard, but also to our ongoing programs for equipping retaliatory forces with multiple independent reentry vehicles—MIRV's.

The linkage between Safeguard and the MIRV's leads to a stark fact: by deploying a vastly expanded, hard point strike capability along with an ABM area defense system, American retaliatory nuclear forces could be converted into a system suitable for launching a first-strike attack upon the Soviet Union, while minimizing retaliatory damage to the United States. I understand that that is not our intention.

I understand that is not our intention, and the Senate and the American people do not so regard our nuclear weapons development. Of course the President would deny that this is our intention—as he should—but, Mr. President, the Soviet military planners cannot escape looking at our weapons development in that way.

Specifically, with the expansion in the number of deliverable nuclear warheads and the significant improvements in accuracy of delivery stated as the objectives of MIRV programs, the United States could, barring significant expansion in the number of Soviet strategic targets, achieve the capability to wipe out a significant portion of the Soviet Union's nuclear strike forces. Meanwhile, although the Safeguard has been billed primarily as a local defense of U.S. Minuteman silos, it also is designed with a degree of area defense capability—pointedly described by Secretary Laird in his statement to the Armed Services Committee as "defense of the continental United States against the kind of attack which the Chinese Communists may be able to launch in the mid-1970's." This area defense would, by the same token, also serve to defend the United States against the weak retaliatory effort of the Soviet might be capable of mounting after receiving a first-strike American attack.

I need not emphasize, Mr. President, the rather simple fact that the technical problems faced by an ABM in the role of back-up to a first strike are far simpler than those the same system would face in meeting a sophisticated adversary's surprise attack. Safeguard's credibility in a first strike role, I regret to say, is far greater than its credibility as a protection for our defense forces.

In terms of what we all believe American intentions to be, the foregoing might seem hypothetical and far-fetched; but in terms of what the Soviets may logically fear our intentions to be, the threat of an impending American first-strike capability, based on Safeguard and MIRV, could seem terrifyingly real.

The linkage between these two systems in the American weapons arsenal is by no means casual. On March 19, in his statement to the Armed Services Committee

justifying Safeguard expenditures, Secretary Laird also sought funds for a significant acceleration in the development of the Poseidon, a submarine-launched MIRV-carrying missile, for the express purpose of "enhancing its effectiveness against hard targets."

He said, at page 32 of his prepared statement:

The increase of \$12.4 million for the development of an improved guidance system for the Poseidon missile, will advance the IOC ("Initial Operating Capability") of the system by about six months. This development was started in FY 1968. The IOC, however, was slipped by about one year in connection with the FY 1969 expenditure reduction effort, and the level of funding provided in the original FY 1970 budget, \$33.5 million, would have slipped it further. This is an important program since it promises to improve significantly the accuracy of the Poseidon missile, thus enhancing its effectiveness against hard targets.

Surely, Mr. President, we cannot expect the Soviets to ignore that development as it undertakes to evaluate the thrust of our weapons development.

In the Poseidon program, 31 submarines will each carry 16 missiles, each in turn carrying as many as 10 warheads, for a total of almost 5,000 deliverable weapons, from the Poseidon boats alone. These and other offensive systems available to the United States, including the more than 1,000 Minutemen we may also equip with MIRV's, would be more than a match for the 1,200 to 1,300 ICBM's the Soviets are anticipated to have deployed during the next few years.

In this context, Mr. President, the Safeguard is a destabilizing weapon, raising the risk of nuclear war rather than diminishing it. As the American MIRV nears perfection and the Safeguard nears deployment, we are reaching for a point of no return in the arms race. If the Senate authorizes the deployment of Safeguard, we may well be stepping across that point of no return.

iii

On April 3, I noted the following dimension of the administration's Safeguard proposal:

It is altogether possible, on the other hand, that the Administration is not, in fact, taken in by its own reassurance as to Soviet reactions. It may be that the Safeguard proposal is intended as a blunt challenge to the Soviets to come to the bargaining table and negotiate over strategic weapons, or else the United States will heat up the arms race, counting on our own superior technology to protect us if negotiations fail.

I submit, Mr. President, that this interpretation of our intentions is the logical one from the Soviet point of view, and interpreted as this kind of bluster, it has no rational justification.

One need not dwell on the lack of good faith such an American bargaining strategy would entail with respect to the forthcoming strategic weapons negotiations to which we and the Russians are both committed. What is more important is the lack of realism in assuming that negotiations with a proud and powerful country such as the Soviet Union might ever yield success when undertaken under the gun of crude threats, a lesson we should have learned in every arms con-

trol negotiation from the Baruch plan to the present.

For the Russians as for ourselves, national and ideological motivations and the high stakes of international competition compel the continuing commitment of resources to weapons developments at whatever level is thought necessary to insure national security and at whatever level a prudent estimate of the intentions of the other may indicate. As a result, if the talks fail, the prospects for negotiated arms controls will dim, unbridled arms competition will resume, and the stability of mutual deterrence will be destroyed.

It is equally unrealistic to assume that any reasonable purpose could be served by locking the Soviets into another round of fantastic spending competition for armaments. Ever since arms competition with the Soviets began in earnest 20 years ago, the superior resources and technological advancement of the United States, coupled with the geographical encirclement of the Soviet Union, have combined to keep the Soviets on the defensive in any arms competition.

But the fact that in years past we could afford more weapons than the Soviet Union and that we could build them with less strain on our resources is not relevant to future competitions. The demands on our energies and resources are now too great, and the costs of the phenomenal weapons systems of which Safeguard is the precursor are too high, to warrant the conclusion that the American people can afford future strategic arms races.

Mr. President, the needs of the American people are too urgent and too demanding to bank our future as a nation on the casual economic dividends that high and rising levels of defense spending have come to mean. We must recognize that in future arms races—even if we manage to keep the Soviets and all our other adversaries at bay without incinerating the world in the process—the costs and sacrifices the competition will entail are such that we, not they, will be the losers.

IV

To recognize the futility and the risk inherent in adventurous weapons development is only the beginning of the necessary effort to forge security policies that serve the Nation's best interests in a time of strain and transition, at home and abroad.

Arms sufficiency is the new watchword, and arms sufficiency is an apt watchword, but one that requires careful judgment. Together the President, the Congress, and the country must find ways in the months and years ahead to substitute good sense and prudence for uncontrollable gambits that lead only to blind and dangerous alleys. As we strive to end the war in Vietnam, we must never forget the lessons on the need for restraint that unhappy conflict teaches.

At the same time, we must also be mindful of the urgency and the extent of the Nation's domestic needs—needs which can overwhelm us just as surely as the threat of external aggression,

unless we can find the wherewithal, the ingenuity, and the spirit equal to the challenges.

The grim chain of urban sprawl and rural decline, of individual poverty and social disorganization, of wasted resources and hostile environments will not be broken by a government which is indifferent, or a private sector which is inactive—or preoccupied with hunting the next arms contract.

The chain can be broken only if we set priorities, if we make a commitment to meet them, and if we organize ourselves to fulfill our commitments. I have indicated the priorities I would establish, and they are not the priorities of a fortress America. The priorities I would set are the priorities of men and women and children who have a right to enjoy for themselves the fruits of this world and to help insure the same right for others. The priorities we must set recognize the interrelationship of jobs, income, education, health care, housing, transportation, public facilities, recreation, and environmental protection in the balanced development of urban and rural communities.

These priorities will never be set or achieved so long as the United States is being bled by the continuing hemorrhage of spending on strategic armaments.

Mr. President, much attention is now being given to the consequences ending the Vietnam war will have on the funds which will be available for domestic programs. It has become common to speak for planning purposes of the revenue surplus resulting from the lessening of hostilities as a "fiscal dividend"—the measure of the flexibility in the Federal budget that would be available for other national needs as the result of the termination of special Vietnam costs.

In March 1967, President Johnson appointed the Cabinet Coordinating Committee on Economic Planning for the End of Vietnam Hostilities. Their report appears as an annex to this year's report of the Council of Economic Advisers. The committee, assuming early cessation of hostilities, forecast annual fiscal dividends rising to \$22 billion in fiscal year 1972—funds available for spending on other priority programs or for tax reduction. While the calculation assumed the continuation of existing authorized military programs—including the Johnson administration Sentinel ABM—that \$22 billion sum, less amounts returned to taxpayers in tax cuts, represents a basic ceiling in funds available for expansion of all Federal programs, military and domestic.

To the extent that new weapons systems are authorized, or existing authorized systems exceed their anticipated costs, the funds available for domestic program expansion will be further reduced. Thus while \$22 billion represents a basic maximum for domestic public purposes, a tax cut, weapon cost overruns, and additional weapons procurements will all squeeze that sum far below the maximum. If the costs of the war do not soon recede, of course, virtually no lessening of the budget squeeze can be

anticipated. On the other hand, reduction of non-Vietnam military cost including the cancellations of all ABM deployment, would cause the fiscal dividend to be increased. There will be no fiscal dividend at all.

The fiscal dividend forecast by the committee, even assuming maximum availability, does not begin to match urgent demands for the rehabilitation and improvement of our society. For example, the report notes a \$6 billion gap existing now between amounts the Congress authorized for fiscal year 1969 and the amounts the Congress has funded for domestic purposes. I ask unanimous consent that the table from the Coordinating Committee's report be printed at this point in the RECORD.

There being no objection, the table was ordered to be printed in the RECORD, as follows:

TABLE 2.—Estimated gap between amounts currently authorized and funded

[Billions of dollars per year]

Program:	
Total full cost.....	6.0
Elementary and secondary education.....	2.0
Higher education.....	1.3
Housing and community development.....	.6
Water and air pollution control.....	.5
Crime and control and prevention.....	.2
Area redevelopment.....	.5
Health training and research, etc.....	.4
Agricultural conservation and adjustment.....	.5

Source: Bureau of the Budget.

Mr. MUSKIE. The group also compiled a list of new programs "prominently and generally discussed recently as desirable to meet the needs of the Nation during the next several years," calculating their annual costs for fiscal year 1972—the year of the projected dividend. In many instances, the committee assigned dollar amounts far below the recommendations of the task forces or study groups from whose studies the programs were drawn. Even then, recognizing the list to be incomplete and inadequate, the Coordinating Committee reached a conservative total of almost \$40 billion for these urgent needs, nearly double the maximum fiscal dividend estimated to be available. I ask unanimous consent that the committee's table, with explanatory footnotes, be printed at this point in the RECORD.

There being no objection, the table was ordered to be printed in the RECORD, as follows:

TABLE 3.—Illustrating new programs or major expansions of existing Federal civilian programs, fiscal year 1972 (derived from proposals of task forces and study groups)

[In billions of dollars]

	Hypothetical expenditures
Total expenditures.....	39.7
Education.....	7.0
Preschool.....	1.0
Elementary and secondary.....	2.5
Higher.....	3.0
Vocational.....	.5

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TABLE 3.—Illustrating new programs or major expansions of existing Federal civilian programs, fiscal year 1972 (derived from proposals of task forces and study groups)—Continued

[In billions of dollars]	
	Hypothetical expenditures
Health	3.8
Kiddle-care .....	.5
Medicare for disabled	1.8
Comprehensive health centers	1.0
Hospital construction and modernization .....	.5
Nutrition	1.0
Community service programs .....	.8
Jobs and manpower	2.5
Public jobs	1.8
Manpower Development Training Act .....	.5
Employment service .....	.2
Social security and income support	9.5
Unemployment insurance	2.0
Public assistance	4.0
Social security improvements	3.5
Veterans .....	.3
Economic, area, and other special development programs	2.2
Entrepreneurial aid .....	.5
Area redevelopment .....	.5
Rural development	1.0
Indian assistance .....	.2
Crime, delinquency, and riots	1.0
Violence and riot prevention .....	.1
Safe streets programs .....	.3
Rehabilitation of offenders and delinquents .....	.3
Prevention of delinquency and crime by special measures for delinquent prone youth .....	.3
Quality of environment	1.7
Air pollution prevention and control .....	.1
Public water supply construction programs .....	.3
Water pollution control and sewage treatment	1.0
Solid waste disposal .....	.1
Natural beautification, environmental protection, and recreational development .....	.2
Natural resource development and utilization	1.4
Land and forest conservation .....	.2
Water resources and related programs .....	.5
Mineral and energy (excluding hydroelectric) development .....	.2
Natural environmental development .....	.5
Urban development	5.5
New cities .....	.5
Land acquisition and financial planning (suburban) .....	.5
Urban mass transportation .....	.5
Model cities	2.0
Other urban facilities and renewal	2.0
Transportation	1.0
Airway and airport modernization .....	.4
Rapid interurban ground transit .....	.1
Modernization of merchant marine .....	.2
Motor vehicle and transportation safety research and safety grants .....	.3

TABLE 3.—Illustrating new programs of major expansions of existing Federal civilian programs, fiscal year 1972 (derived from proposals of task forces and study groups)—Continued

[In billions of dollars]	
	Hypothetical expenditures
Science and space exploration	1.0
Post-Apollo space program .....	.5
Scientific research in oceanography, communications, social and behavioral sciences, and natural sciences .....	.5
Foreign economic aid	1.0

NOTES

Education. The preschool program, an extension of Head Start, would provide full-time preschool education for about 500,000 children. The elementary and secondary education funds would about double the Federal support in that area. The funds proposed for higher education would more than double current Federal support. The vocational education funds would raise Federal support about halfway toward the recommendation of the 1968 Advisory Council on Vocational Education.

Health. The "kiddle-care" proposal would provide health care for needy mothers and infants. Medicare offered to beneficiaries of social security disability insurance on a contributory basis would potentially reach 2.2 million persons in 1972. About 350 additional comprehensive neighborhood health care centers a year could be established for the amount shown. The added funds for health facilities would enable the Federal Government to double the rate of output of such facilities, in line with estimates of national needs.

Nutrition. Nutritional supplements for needy pregnant women, nursing mothers, and small infants account for about \$200 million, while the remainder would allow a doubling of existing food assistance programs.

Community service programs. This would provide for expanded daycare centers for children of needy working mothers and for expansion of coordinated services through neighborhood centers.

Jobs and manpower. The funds for jobs in the public sector would permit expansion of about 500,000 jobs to provide public service employment for the chronically disadvantaged: this program would reinforce expansion in education, health services, and urban and area redevelopment. The increase in MDTA training would support expansion of the Jobs program and would reinforce efforts to lower unemployment while improving the Nation's price performance. It would also provide trained manpower for construction. The growth in employment service operations envisions strengthening, decentralizing, and computerizing manpower activities; developing a rural manpower service; and enlarging services to the disadvantaged.

Social security and income support. The unemployment insurance funds would provide for higher benefits, extended benefits during recessions, and aid to the unemployed through retraining and mobility assistance. The public assistance funds could permit revision of benefit standards and extended coverage, or the adoption of a modest new program of income aid with objective standards. The added expenditure could fill as much as 40 percent of the current poverty income gap. Expansion of the WIN program would provide more job and training opportunities for welfare recipients. The social security expenditure could pro-

vide a higher minimum benefit for those dependent on social insurance benefits as the main source of income, and liberalization of eligibility requirements for disability insurance, as well as some general improvement in benefit levels.

Veterans. The higher priority recommendations made by the Veterans' Advisory Commission in March 1968 could be instituted with these funds.

Economic, area, and other special development programs. The entrepreneurial assistance program could help minority groups—so-called "black capitalism." Area redevelopment programs would assist growth centers in less populated areas, while rural redevelopment programs would concentrate on small communities, providing community facility development, special housing, and family farm assistance.

Crime, delinquency, and riots. Federal aid to State and local governments could be provided to help prevent violence and riots and permit a higher degree of Federal readiness to cope with such emergencies. The safe streets program funds would be used to work towards the objectives of the National Crime Commission with respect to strengthening the police and courts. Rehabilitation of offenders and delinquents would be pursued by intensive retraining and other services.

Quality of environment. Federal funds for pollution abatement may be required to enforce standards, investigate claims, or abate pollution caused by government or not readily attributable to particular private individuals. Assistance in expanding the Nation's water supply system would provide a small fraction of the \$2.5 billion annual requirement over the next 10 years. Provision of more recreational areas near population centers would be made possible.

Natural resource development and utilization. Department of the Interior, Corps of Engineers, and Department of Agriculture programs relating to land, mineral, energy, forest, recreational, and other fields have large backlogs of useful projects, many already planned and authorized but held back for budgetary reasons.

Urban development. Metropolitan development assistance would support improved planning and coordinated advance land acquisition. Each of these programs emphasizes these requirements, whether in new communities, suburbs, or older central cities. The allowances represent only a fractional contribution to the reconstruction and development of the cities.

Transportation. Such expanded investments in the improvement of the principal elements of the Nation's transportation system would serve the objectives of economic development, safety, and national defense.

Science and space exploration. The allowances would permit the science and space agencies to fund some of the research opportunities not covered in the stringent budgets of recent years.

Foreign economic aid. This additional amount would help to meet growth targets in Southeast Asia and under the Alliance for Progress as well as to cover other aid requirements. Even this increase would leave our foreign assistance program below levels of a few years back.

Source: Bureau of the Budget.

Mr. MUSKIE. Even this conservative calculation of the additional resources we will need to spend at home does not provide much leeway in making a major dent in the problems of the poor, such as a negative income tax preserving adequate incentives, which the committee noted might require between \$15 and \$20 billion a year, or in providing sufficient employment to make a significant reduc-

tion in the numbers of Americans who cannot find jobs. Nor does it encompass steps to assist States and localities in meeting their mounting revenue needs from their increasingly inadequate tax bases—for which a revenue-sharing program of between \$5 to \$10 billion a year has been considered appropriate.

Mr. President, these are not small sums. They do not reflect small problems we can ignore. Together, these estimates, whether or not one agrees with them in detail, represent a conscientious effort to determine a level of "sufficiency" for a comprehensive approach to the nonmilitary problems facing America, a level of sufficiency which we must attain if we are to preserve our viability as a nation.

By contrast, the \$6 to \$7 billion pricetag assigned by the administration to the Safeguard system represents a far more valid measure of the relative significance of the ABM program, even assuming those systems costs have been fairly estimated, which many Members of the Senate have strong reason to doubt.

The true measure of the ultimate significance of the administration's Safeguard proposal lies in the likelihood of forcing the United States and the Soviet Union to higher and higher levels of arms competition, for which the costs forecast by Secretary Laird are only a very small downpayment. The cost of such an adventure must be counted in tens or even hundreds of billions of dollars, which the United States can ill afford to spend on engines of destruction.

I think these great figures estimating our domestic needs, and estimating the cost of an unrestricted arms escalation, pose the problem which faces us on the ABM issue in its stark magnitude. We cannot do both. At least, we cannot do both without the exercise of discriminating judgment. We cannot do both without exercising restraint, geared to a careful evaluation of the risks involved with any subjects which we consider in the development of weapons for our arsenal.

We must somehow take a reasonable risk to protect our national security abroad. However, we must do more than we now are doing—to eliminate the risks to our national security here at home.

Mr. PEARSON. Mr. President, will the Senator yield?

Mr. MUSKIE. I yield.

Mr. PEARSON. Mr. President, I commend the Senator from Maine for a reasoned discussion and speech today in support of the pending amendment. He developed at some length the effect that construction and deployment of ABM would have on the forthcoming arms limitation negotiations with the Soviet Union. And in that regard the administration, particularly the Secretary of Defense, strongly made the point that the decision to go ahead at this time is essential to their position as a bargaining point as they enter the negotiations.

I have constantly failed to understand really this point in the particular argument, because we have, as I understand the figures after hearings and the debate and otherwise, a superiority in strategic force levels. For instance, in ICBM's, we

have about 1,054 to approximately 1,000 on the part of the Soviet Union.

With respect to the Polaris missile, in round figures we have an estimated number of about 656 or 660 to perhaps 77 by the the Soviet Union.

With respect to the intercontinental bombers, we have in round figures about 650 to 150 operated by the Soviet Union.

In deliverable warheads, we have some 4,200 as against 1,200 by the Soviet Union.

We have superiority in numbers in all of these fields. They must know of our industrial might measured against theirs. They must have some appreciation of our technical skill, for in the time frame of 1 week we succeeded in putting a man on the moon, whereas they failed with an unmanned moon vehicle.

We are ahead of them in the testing of MIRV's today.

With our superiority in all of these fields, does the Senator agree with me that the argument that we must have an ABM simply because the other side has an ABM to be in a proper bargaining point in negotiations?

Mr. MUSKIE. Mr. President, I think the Senator has made a very excellent point. I agree thoroughly.

I would like to add an observation. It seems to me that one can speculate prudently or prooflessly about what the Soviet position may be at the negotiating table and what we might do to influence it favorable toward arms limitation.

We have concentrated, as we have debated what will be a strong negotiating position, upon the need to demonstrate to the Soviet Union that we have the strength because of our deployment of the ABM to caution them against permitting a continuation of the arms race.

It seems that what we need, if we are to negotiate successfully, is to convince them that we want a stabilization of the arms race, that we want to roll back the growing risk to the survival of mankind.

It seems to me, in other words, that the situation is something like this, there are two great military powers—we and the Soviet Union. Only if one of the two takes the initiative to move the other way from escalation of arms, do we have any chance to achieve that objective.

One of these two powers must take the initiative. One must be induced by the other.

It seems to me that the best way to make that initiative credible from the point of view of the other side is to take an initiative which carries some risks for us.

The road we seem to be choosing is to find a way to strengthen our arms to a point which will deter the Russians from trying to match it. I think we should try to encourage them to match us in taking risks in reducing arms. Of the two powers, the one most likely to take this kind of initiative historically, in the light of its belief in the tradition of humanism, is the United States of America.

I do not think delaying the deployment of an ABM system is an unacceptable risk. That there are risks or that there are considered to be risks is evident from the debate on the floor. So, to the extent that there are, our initia-

tive in refusing to deploy an ABM to me would add credibility to our recommendations to the Soviet Union that we mutually deescalate the nuclear arms race.

So, I agree with the Senator's argument, and I add this one of my own.

Mr. PEARSON. Mr. President, I thank the Senator. I notice also that the Senator dwelt at some length about the response on the part of the Soviet Union.

It is my understanding that the rules of the war planners, and rightly so, involve these concepts. The Senator from Virginia (Mr. BYRD) is in the Chamber today. He has sat with me in the Armed Services Committee and heard the same words and concepts spelled out. We always plan on a greater than expected risk. We always plan—and these are the rules by which our war planners govern themselves—on the worst possible case.

We always plan on the basis that our systems will not work as well as we expect and that the enemy's will work better than we anticipate.

We always plan on the basis of long lapse time between conception and deployment of a modern weapons system taking about 10 years.

Does the Senator suppose that the rules we apply are any different than those applied by the Soviet Union war planners, and that this in and of itself has an inherent action or reaction cycle which is more accelerated when we get a defensive—offensive switch back and forth?

Mr. MUSKIE. The Senator is right, of course. This involves one of the principal arguments in my remarks.

We have a tendency to think that if the enemy looks at us, he must, of course, recognize that our purposes are innocent, that we would never launch a first-strike attack and do not mean him harm. Unfortunately, that is not the way they read us. They are just as suspicious of our intentions as we are suspicious of their intentions. It will continue.

We are going to limit arms not because the other fellow thinks that we are nice guys, but because we are able to define the area of mutual interest which each decides is in his national interest.

The Senator is eminently right.

Mr. PEARSON. Mr. President, one other point. I note that the distinguished Senator from Wisconsin (Mr. PROXMIRE) wishes to join in the colloquy.

The Senator from Maine raises some question about reliability.

Aside from the reliability of the components, computers which have not yet been built, and the radars which have some vulnerability under attack—the Senator has been a student of this debate and of the RECORD—does he recall that at any time in the very excellent presentations made on both sides, any explanation has been made of how effectively we can deal with the subject of decoys, balloons, chaff, saturation problems, blackout problem, and the electronic jamming problem? Does the Senator find answers to those questions any place in the debate or any place in the RECORD before the Senate?

Mr. MUSKIE. I do not recall seeing it, and the answer has not been provided in any portion of the debate to which I

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have listened on the floor, either in closed session or in open session; nor has it been answered in any of the literature I have read which has been made available to me, rather generously, from both sides in this debate. I have not had a chance to read it word for word, but I have searched for that answer.

I understand, of course, the argument that has been made, I think very eloquently, by the distinguished Senator from Rhode Island (Mr. PASTORE), that at some point in the development of new technology you have to start putting the technology together and research the unanswered problems as you go along. I understand that.

Nevertheless, I think the Senator is absolutely right in the implication of the question he has put to me, that there are many unresolved technical problems seriously bearing upon its feasibility and its effectiveness which have not yet been answered. I think the supporters of the ABM proposition concede that.

Mr. PEARSON. I thank the Senator for a very valuable contribution at this time.

Mr. MUSKIE. I thank the distinguished Senator from Kansas.

Mr. STENNIS. Mr. President, will the Senator yield?

Mr. MUSKIE. I yield.

Mr. STENNIS. On the question the Senator has brought up about the blackouts, the jamming, and decoys, I can say with firm assurance, as far as I can go, that that is a problem that always shows up. It is a part of the picture concerning any kind of method involving a weapon, offensive or defensive. If we never had built the ICBM's—offensive weapons—until we were certain that we had all the problems solved that go with it in the same field, in reverse, we never would have one. If we are going to wait until all the problems are solved and everything is known with reference to an ABM, a defensive weapon—in that field, particularly—we will never have one, and no one else will. It is all a part of the process.

I do not pose as an expert in this field, but I have been on a subcommittee of the Committee on Armed Services and chairman of the Subcommittee on Military Construction during all the years that these missiles have been in process. The military construction came in in this way: You have to have those sites, and you have to have the research and development that involves those sites. Sometimes it is handled in a special way in that bill. We got this back in the days of the Nike-Ajax. That was the first little ground-to-air missile we had. We also got into the space field when Sputnik went up, and all those problems that went with it.

I know that uniformly we have these problems. I opposed the deployment of the ABM—what is now the ABM—years ago. We had a secret session. We have had many sessions in the committee over the years. The Senator from Kansas was a member of the committee for some time, and a very valuable member. I had always opposed the deployment until I was convinced that we had gone about as far as we could go, and I believe as far as we can go, with a weapon of this kind, until we really get down to the nub of

things and take some steps forward that this very modest program now contemplates.

That brought me to the proposition as the Senator from Rhode Island has expressed it. He is the former chairman of the Joint Committee on Atomic Energy, and he really does know a great deal about this. We must make a start. It has been amazing, in the case of other missiles, how many problems have been overcome after the start, has been made. Men are surprised, and then they are disappointed, too, on the same subject of the many different missiles. I refer to men such as Dr. Wernher von Braun and others who are really capable.

I am glad to give the Senator a résumé of my experience in that field, without getting into the scientific part of it, because I do not try to master that.

Mr. MUSKIE. I appreciate the Senator's comments, and I will respond briefly myself, but first I yield to the Senator from Kansas.

Mr. PEARSON. Let me say to the distinguished chairman of the committee, the Senator from Mississippi, that I understand and agree that many of these problems today, scientific and otherwise, which are talked about as deficiencies of the system, probably will be cured in time.

As a matter of fact, the great advance we have been making in computers really gave great credibility to the so-called Sentinel-Safeguard, as distinguished from the other systems.

But some other scientific problems are involved here, which I am not qualified to discuss, which have nothing to do with the ability of American scientists to conquer problems, and they deal fundamentally with the laws of nature and the laws of physics. The very efficiency of the radar makes it susceptible to chaff which may be spread across the sky. The better the radar, the better it can be fooled by that particular device.

Blackout, as I understand it, is a result of an explosion or high or low yield atomic blast within the atmosphere, which creates—as its name implies—enormous blackout, perhaps with a diameter of 100 miles, lasting as long as 5 minutes.

These are things, it seems to me, to which even the genius of the American scientific community has not found an answer. As a matter of fact, some of the very efficiency of our own system gives us back greater problems.

I do appreciate the response of the chairman of the Committee on Armed Services. I know of no one who knows more about this field or who embraces it and brings it to the Senate with a greater degree of honesty and sincerity than my former chairman.

Mr. MUSKIE. Mr. President, may I add this to the comments made by the distinguished Senator from Mississippi.

First, I agree with the comments that have just been made by the Senator from Kansas. I do not know of a Senator who would bring a question to the floor more conscientiously, more thoroughly, and with more thoughtful judgment, than the Senator from Mississippi. I want him to know that.

But what is involved here is not simply the question of whether, having decided to build a piece of technology—something it is a weapons system or something else—we have reached the point where we can start putting it together and work out additional bugs from there on. If that were the only question, I would say, "Yes," let us start, and let us start the business of working on a piece of hardware as we undertake to answer the unanswered questions. But, in addition, these other questions are involved, which are not susceptible to precise measure: the effect of our deployment upon the arms race, the effect of our deployment upon the Soviet evaluation of the thrust of our weapons development, and the effect of our deployment on negotiations.

Then, there is my own fundamental belief that if we want really to put together a credible negotiating posture from the point of view of the Russians, I think it is more important to convince them that we want to roll back in weapons development than it is to convince them if they will not agree with us that we have the capacity to deploy an ABM. I think the first conviction is more likely to be persuasive upon them than the second conviction.

I can see that honest men can disagree on this matter, as they obviously do, and we appear to be divided about 50-50 here. However, it is my conviction that we must take an initiative that is clearly recognized and identified by the Russians as an initiative toward peace.

Mr. PROXMIRE and Mr. DOMINICK addressed the Chair.

Mr. MUSKIE. The Senator from Wisconsin has been waiting to be recognized for quite a while. I yield to the Senator from Wisconsin.

Mr. PROXMIRE. Mr. President, I wish to commend the distinguished Senator from Maine for a superlative speech. I am especially impressed by his presentation because I think we in the Senate, and I think people around the country during the last year or so, have recognized that he is a very careful man, very measured, and responsible, and unusually so.

For example, he indicated we are taking a risk in not going ahead with the ABM. Many of us might not share that feeling because we may be more impulsive and feel we are convinced on the basis of what we have seen and heard that the ABM will not work, that it is a waste, and that the decision is, therefore, easier. But the Senator from Maine was very careful in not taking that position. He said that it may work and that we may be mistaken in not going along with it, but that we have to take certain risks.

I think the Senator makes an extremely strong case in arguing on the basis of his own assumptions about the Soviet Union that they are more likely to negotiate an arms limitation if we do not go ahead than if we do.

Mr. MUSKIE. I wish to say something on that point which the Senator has brought out. The Senator has said "more likely." This is something more than agreeing to go to the negotiating table. When I speak of the likelihood, I am talking about the substance of an agree-

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ment. We have to be concerned with that, too.

It was argued on the floor of the Senate that last year when we voted on deployment, the Russians indicated they were willing to go to the negotiating table. That is not the whole story. What is their attitude when they get to the negotiating table? It would take a crystal ball to foresee what their attitude would be, and I do not know or claim to know what that situation would be.

Mr. PROXMIRE. I thank the Senator. The Senator's observation goes to the heart of the matter.

The other point I wish to make is one that I think has been overlooked in this debate and I refer to the question of recognizing priorities, and that we have to make these hard choices; that when we go ahead with ABM it has an effect on what we can do with regard to our domestic problems which are so pressing and urgent.

I think no Senator has been more concerned and done more constructive work in preventing pollution or has made a greater contribution in connection with the Federal-State relationship than the Senator from Maine. I think he is eminently qualified to recognize the urgency of those priorities. It is always difficult to say we will not move for a marginal weapons system at this time because certain domestic situations must be met. I think the Senator from Maine, in posing this problem with respect to priorities and reminding us we cannot have everything we want, has made a real contribution today.

Mr. MUSKIE. I thank the Senator.

Mr. President, I yield to the Senator from Colorado.

Mr. DOMINICK. Mr. President, I did not have the pleasure of listening to the entire speech of the Senator from Maine. However, I did enter the Chamber during the process of his colloquy. I wish to make a few comments in this regard.

First, with respect to the point made by the Senator from Kansas about technical difficulties that are involved, I wish to point out that a panel of four very fine scientists appeared before the Committee on Armed Services in a public hearing. I am not sure the Senator from Mississippi brought out this point. I know he has in the past. Two of these scientists were against the ABM system and two were for it. Each of them, in response to direct questions, said this was the very best available technical mechanism for a defense of this kind that had been or could be developed under present technology. That statement was agreed to whether they were for or against the ABM. All four of them said that.

With regard to the blackout situation, and I do not wish to get into a technical discussion on the situation, the system of arrangements of radar which has been contemplated under this system would avoid that particular problem and a great deal of work has been done in connection with it. So I would think that although there are problems, and no one doubts that there are problems, under the present meth-

ods of deploying the system most of the problems that have been brought out, or a good many of them, have already been foreseen and circumvented by the planners who worked on the system.

With respect to the comment by the Senator from Maine on the need to convince the Soviets that we want meaningful arms limitations, I do not think anybody in the Senate or anybody in the Congress would disagree with the Senator. I think we all agree on that point. I cannot think of a happier situation than a viable arms limitation agreement which is properly supervised. I think it would be enormously fruitful for the Russians, for us, and for the entire world.

However, I wish to recount a few things along this line.

In connection with the test ban treaty, or moratorium—it was not a treaty—we followed through and said we would not do any more high-altitude testing. The Soviets said the same thing, but when it became in their interest to do it in 1960 and 1961, they unilaterally violated this moratorium and put themselves in a technical situation which, having gone forward, they had an earlier start or solution on some of the technical problems the Senator from Kansas has been talking about.

Mr. MUSKIE. That did not involve an agreement.

Mr. DOMINICK. That did not involve an agreement. It was a joint unwritten moratorium by verbal acquiescence.

Mr. MUSKIE. The Senator mentioned "verbal acquiescence." What does the Senator mean?

Mr. DOMINICK. We had gone along for a period of 18 months under a statement publicly made by the President of the United States that we would not make any more high-altitude tests as long as the Russians did not, and they did not. As a matter of fact, when they broke this unwritten agreement—

Mr. MUSKIE. The President said something. Did the Russians respond in kind?

Mr. DOMINICK. Yes. There were verbal assurances from the Soviets at that time that they had no intention of going ahead with this either as long as we did not.

Mr. MUSKIE. I think the language is important. I do not know if the Senator is paraphrasing the Russian attitude or position. An intention not to go forward is different than an agreement not to go forward unless there is a unilateral intention not to do something or a bilateral agreement with somebody not to do something.

Mr. DOMINICK. We tried to convince them of the fact that we did not intend to go forward with any more of these testings and we would not do so even though it was important to all kinds of applications, space and otherwise, if we had gone forward with it. We said we would not do it. I am sure the Senator from Maine remembers that well.

Mr. MUSKIE. I do.

Mr. DOMINICK. The time they violated this agreement was when they were before the so-called Belgrade group, saying again that they were not going to do

anything in the way of disturbing what was going on, while at that very time they sent up the high altitude missile.

Mr. MUSKIE. I understand. Whether we thought that hope was documented by a binding agreement may be another question, but I am sure we all hoped, by the coincidence of two unilateral actions taken by the two governments involved, that we had achieved an end of testing in the atmosphere. I am sure there are clearer illustrations in history of violations of agreements by the Russians. I understand that. The question is whether, now, we are so inhibited by history and documentation from trying again to work out an understanding with the Russians.

Mr. DOMINICK. We were never inhibited by that, we should not be, and I hope that we never will be. That was the point. The point I am making is that the United States, over a period of time, has tried again and again to impress upon the Soviets that we are not happy with our arms buildup, that we are ready to limit it; that it looks as though we are getting somewhere, and then, all of a sudden, we shoot off on a tangent again.

Let me illustrate the particular situation that we are faced with on the ABM. The United States has proposed not to build any more land-based ICBM's. We have a gigantic number of launchers, which the Russians know about. We have not built any more. We have not built any more Polaris submarines. We have a large number of submarines, and we have not increased them or replaced them or replaced them as they get older. We have a declining number of manned bombers. We had hoped—against experience, I might say—but we had hoped that in recognition of this, the Soviets would also level off their production, but they have not done so in any one of those fields.

This would indicate to me that we have done our best to impress on them we would like to get to an agreement on arms limitation and reduction just as rapidly as we can, that we do not want a proliferation of our weaponry. If we could reach such an agreement we would be delighted to do so.

Mr. MUSKIE. May I ask, in response, How do we identify a point where it is clear to both sides that the reaction of one side on continuing an activity is not a reaction to what the other side did earlier? If we are going to look for the point, because each side has unilaterally taken such clear steps to limit its arms that the other side can be sure that there is no risk of escalation, then we will not need an agreement.

We had Polaris submarines long before the Russians, and they are now engaged in producing their own. I cannot recall at the moment whether the dates of the beginning of construction of their Polaris program were at the time we were developing the MIRV program, but it is conceivable, unless the dates suggest otherwise. I do not have them. Their Polaris program was a response to our MIRV program. Thus, we can debate this until the cows come home.

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The other point I make is that the Senator may be right. It may be that what we have already done to stabilize our own nuclear weapons development will be sufficient evidence to the Russians of the credibility of our initiative to work out a meaningful agreement. But it may not, as well.

We have to decide this question, not after we understand what the Russians' willingness may be, but now.

I must say that I regard the debate to be on the Senator's side of this question of MIRV, that development and deployment of the ABM is more meaningful in respect to our defense posture vis-a-vis the Russians than the addition of more Minutemen, because the Senator has told us that the additional Minutemen are offensive missiles and are not the answer to the Russian threat. It is argued that the ABM is the answer. The Senator from Washington (Mr. JACKSON) made an eloquent speech to that effect in this Chamber that few of us were privileged to hear. So that I think with respect to evaluating the attitude of the Russians, what we do about the ABM may be more persuasive than what we have done to discontinue production of more Minutemen.

Mr. DOMINICK. The interesting fact about that is that Kosygin himself and other Soviet leaders have said they consider the ABM a purely defensive weapon, for the purpose of protecting their own citizens and our citizens from being killed, and not as a threat to the other side.

Mr. MUSKIE. I do not know why we should take their word on that, when we do not take their word on other things when it seems to suit our purpose.

Mr. DOMINICK. They have already deployed their ABM.

Mr. MUSKIE. I understood that they had discontinued it.

Mr. DOMINICK. That is not so. I had some colloquy on that with the Senator from Tennessee (Mr. GORE) just the other day.

Mr. MUSKIE. I would be happy to get the facts.

Mr. DOMINICK. I brought up the fact that they are continuing the construction of their ABM system. They are modernizing their present system and are also developing a new one.

Mr. DOMINICK. Mr. President, I ask unanimous consent to have printed in the RECORD an article published in the Chicago Tribune dated July 27, 1969.

There being no objection, the article was ordered to be printed in the RECORD, as follows:

WORDS UNRELATED TO ACTIONS

All indications are that the Nixon administration and the Soviet Union are getting ready for negotiations, including a summit conference, on a broad range of problems, including strategic arms limitations.

Andrei Gromyko, Moscow's foreign minister, coupled a scathing attack on Red China with an appeal for "friendly relations" with the United States in his recent address to the supreme soviet. Recalling President Nixon's statement in his inaugural address that we are moving from a period of confrontation to a period of negotiation with the Russians, Gromyko said his government favored

"wide-ranging" negotiations with the Nixon administration.

Hubert Humphrey, in Moscow, said Premier Alexei Kosygin talked to him "in some detail and with complete and utter frankness and candor" about world problems and urged him to tell President Nixon and the American people how much the Soviet Union desires "to work with the United States in the cause of Peace." Humphrey was almost as rapturous about Kosygin as the egregious Ambassador Joseph E. Davies was about Stalin in World War II.

This sudden access of euphoria, so soon after the recent tragic events in Czechoslovakia, is disturbing. It is reminiscent of the "spirit of Geneva" in 1955, only a year before Russian tanks crushed the Hungarians; of the "spirit of Camp David" in 1959, only a year before Khrushchev insulted President Eisenhower and torpedoed the Paris summit conference and three years before he put nuclear-tipped missiles in Cuba; and of the "spirit of Glassboro" in 1967, only a year before the Russian invasion of Czechoslovakia.

With recurring armed clashes on their frontiers with Red China, which could lead to a major war, the Russians naturally would like some temporary accommodation with the United States that would assure its benevolent neutrality. Having bamboozled the United States with a so-called gentlemen's agreement against atmospheric nuclear tests, which they broke by testing monster warheads, and with a test-ban treaty which now forbids us to test similar weapons; having jumped into the lead in over-all offensive missile strength, and having deployed an anti-ballistic missile system, the Russians now would like to bind the United States with an arms limitation treaty that would prevent us from catching up.

We hope President Nixon will keep these considerations in mind when he enters into negotiations with the Russians. There is danger that they will be persuaded, by all the unreciprocated concessions we have made to the Communists in our efforts to end the war in Viet Nam, that we want peace at any price and can be pushed around.

Dean Acheson, former secretary of state, was a high priest of the "trust Stalin" cult during and after World War II, but he was disenchanted by bitter experience. He learned, as he has written, that the Russians use conferences and the forms of negotiation as "an instrument of war."

Acheson, as quoted in a recent Senate report on the soviet approach to negotiations, says the notion that "there is no alternative to negotiations with the Russians . . . is, of course, silly. For if there is no alternative, and if the Russians will only negotiate, as is now the case, on their own terms, then there is no alternative to surrender. But plainly there is an alternative, which is by action to change the attitude of the other party. . . . Action is often the best form of negotiation."

The soviet concept of diplomacy was best expressed by Stalin: "Words must have no relation to actions—otherwise, what kind of diplomacy is it? Words are one thing, actions another. Sincere diplomacy is no more possible than dry water or wooden iron."

O, but the present Russian leaders are different, it is said. Robert Conquest, a distinguished English author and student of Russian affairs answers that argument in the same Senate report:

"Russia is now ruled by a faceless group, almost all of whom took the first moves in their careers in the great purge of 1936-38. Kosygin went up in four steps, from shop manager in a Leningrad factory to minister, in about two years. This was at a time when the Leningrad Communists were being slaughtered on an even larger scale than else-

where. And so it was with Brezhnev and Kirilenko in the Ukraine, where there was three survivors of the 102-man local central committee."

To have been promoted in those days was a sign of active complicity in Stalin's crimes. Conquest writes. He describes the Lenin-Stalin-Malenkov-Khrushchev-Brezhnev succession as a "dynastic disaster." And in the last two years, he adds, "we have seen an increasingly swift process of re-Stalinization." Even the long-discredited "short course" history of the Communist party, an embodiment of the Stalin myth, has been rehabilitated by the Brezhnev-Kosygin regime.

Such is the character of the present Russian rulers, who are so anxious, we are told, to work with the United States in the cause of peace.

Mr. PEARSON. Mr. President, will the Senator from Maine yield, so that I may address a question to the distinguished Senator from Colorado?

Mr. MUSKIE. I am happy to yield.

Mr. PEARSON. As the Senator has returned to the Chamber, recognizing that he has been here all during the session, we were debating and discussing the point made by the able Secretary of Defense as to authorizing the construction and deployment of the ABM system as a bargaining point as we enter into the talks that are contemplated with the Soviet Union.

Does the Senator from Colorado hold a similar view as to the ABM and say that it is essential as a bargaining point to go ahead with it at this time?

Mr. DOMINICK. I do not know that I would want to put it in those words. I should say that it is an important bargaining point; I do not say it is an essential bargaining point, no.

Mr. PEARSON. I asked the Senator that question because a point has been made and developed a number of times that we must have an ABM because the Russians have an ABM. The Secretary of Defense, in his own words, made it an essential bargaining point. The reason I address this question to the Senator from Colorado is that it was the distinguished Senator himself who first warned about and watched and studied the Russian deployment of a FOB system. Long before it was announced, the Senator from Colorado was doing some studying in this field. The testing of the fractional orbiting bombardment system did go forward, and the Russians have such a system today.

Mr. DOMINICK. That is correct.

Mr. PEARSON. It has been our judgment that the United States should not build or construct or deploy a FOB system. Does the Senator think that the United States should perhaps build an FOB system today because the Soviet Union has one, because if we do not have one and we enter discussions with the Russians, perhaps we would be in a weakened position?

Mr. DOMINICK. No, I do not think so at all. I hope we will never develop a FOB system.

The PRESIDING OFFICER (Mr. EAGLETON in the chair). Does the Senator from Maine yield the floor?

Mr. MUSKIE. Yes.

THE PRESIDING OFFICER. The Chair recognizes the Senator from Colorado.

Mr. DOMINICK. Mr. President, I merely wish to finish the colloquy.

It seems to be that the FOB system which has been developed by the Soviets is designed either to attack our airfields, which can also be done with submarine launchers, or by air bombers; or for use as a city destroyer, which is something that gives me cold chills. I hope the United States will never develop a weapon which is aimed to strike against cities only.

Mr. PEARSON. Would the Senator from Colorado agree that perhaps the Soviet utilization of that system would be to negate any effectiveness that an ABM system would have?

Mr. DOMINICK. No, I would not. I have a deep reluctance to have us forego the deployment of an ABM system, if for no other reason than to give the President another button to save us from an accidental or an unauthorized launch in the middle 1970's, whether it be by the Soviet Union, the Chinese, the Egyptians, or whoever it might be at that point. I just cannot see putting ourselves in a position where the only alternative we would have would be to wreak a holocaust.

Mr. PEARSON. I thank the Senator from Colorado.

WORLD REFUGEE PROBLEMS

Mr. KENNEDY. Mr. President, refugee problems seldom dominate the headlines but the troubles of our time are taking a growing toll in the flight of people from conflict and oppression. All over the world, people are on the move.

In a recent series of nine articles, the Christian Science Monitor described today's vast movement of the homeless, the many governmental and private efforts being made to help them, and the continuing need for even greater efforts in behalf of our suffering fellowman. Because I feel these articles will be of considerable interest to Members of Congress and others, I ask unanimous consent that they be printed at this point in the RECORD.

There being no objection, the articles were ordered to be printed in the RECORD, as follows:

[From the Christian Science Monitor, Apr. 23, 1969]

HELPING HOMELESS: WORLD DOES CARE

(NOTE.—The world's refugee problem is one of the biggest stories of the space age. Millions of people are either on the move or leading restricted lives in camps. A vast proportion have little if any idea of the future. This account, the first of a nine-part series on the world's refugees, sets the scene as viewed from Geneva.)

(By Carlyle Morgan)

GENEVA.—Suddenly by thousands, or gradually a few at a time—that is the way political refugees come about.

Right now, nearly 20 years after leading governments thought the post-World War II refugee problem was all but finished, there are still 2½ million such people settling out, awaiting further directions midway in their journeys, or being repatriated or resettled.

Though confined to this planet, this is one of the space age's biggest stories.

"We need not wait for an invisible invasion from outer space. Our environment is already being changed by a sort of invisible invasion from within."

The speaker is an "old hand" at one of the world's oldest yet newest problems—the burden that millions of homeless, stateless refugees place on the world's conscience.

In scope and even in essence the problem of political refugees has recently been changing, almost unnoticed. Certain of their needs remain the same. But areas of concentration and major currents of refugee movements across the world have altered radically from what they were only a few years ago.

The awakening to the long-term need, and the international efforts to aid the refugees, have built up to a cause on earth that is as big as the conquest of outer space.

The crux is a spacious regard for the rights of men, women, and children to be safe from political, religious, or racial persecution.

This right is being buttressed by international agreements and accepted as a duty of national governments and international organizations.

It promises to be a powerful and enduring force. This appears certain because of the scope of the problem—and because emerging new nations and the demands for change in older ones have been generating refugees as fast as or faster than they can be resettled or repatriated.

Two and a half million—that is as many refugees as there were 10 years ago.

They inhabit boxlike houses and frail tents in refugee camps. Or, with their families, the more fortunate ones crowd ships for far-away places, board chartered airplanes for their old homelands—or perhaps for new ones.

WHO ARE THEY?

Their names pack the files of offices scattered over a large part of the world, where experts record where to, where from, skills, languages, backgrounds, and causes of displacement.

But who are the refugees?

Certainly in this century they have had remarkable origins. The movement included a million Russians fleeing from the 1917 revolution into Western Europe or wandering from Siberia into China, Mongolia, and Manchuria.

Soon afterward Armenians were fleeing the Turks—and many Turks sought resettlement within new national borders when their birthplaces were placed under Greek control.

Jews in the 1930's sought safety from their wouldbe exterminators in the Nazi Reich.

After World War II southeastern Europeans waited in Paris for restoration of freedom in their homelands.

In 1948 the emergence of Israel heralded hundreds of thousands of new refugees. There the problem is a great as ever.

Farther east there has been the steady post-1949 stream of Chinese fleeing the mainland to Hong Kong and Macao.

Then there was the 1956 Hungarian crisis and the Algerian turmoil of the late 1950's and early '60's—both producing refugees.

To the dismay of an astonished world came the flight of many Czechoslovaks following the 1968 Soviet invasion.

And in Africa today there are thousands on the move from one country to another. But the hapless caught in the Nigerian-Biafran conflict are not classified as refugees in an international sense since they are confined to their country.

For international experts the word "refugee" has acquired a distinct meaning. It is defined as a person forced to leave his own country for a political, racial, religious, or some other social reason not judged to be criminal.

Felix Schnyder, former United Nations High Commissioner for Refugees, said of the problem:

STANDING ARRANGEMENTS FOR AID

"Of all the various types of evil which man inflicts on man, the suffering of refugees persecuted for reasons of race, religion, nationality, or political opinion has, through-

out history, been among the most cruel and persistent . . . reaching a monumental and tragic climax in our own 20th century."

A leading UN legal specialist on refugees, Dr. Paul Weis, has pointed out that "while the refugee problem is as old as history, international action for refugees started only after the first world war when the Bolshevik Revolution brought in its train a problem of refugees numbering 1 million persons."

This action has established the rights of refugees in international practice and has provided food and shelter for them.

Today a network of verbal and tacit international agreements makes the world a safer place for refugees. It helps to give them legal and social status.

The UN has made strides from League of Nations days. The league's refugee operations were undertaken for specific problems, such as the Russian refugees and those fleeing Nazi Germany.

Except for the Middle East problem, the UN has been able largely to generalize its approach to refugees.

Wherever refugees originate they are covered by standing UN arrangements for aid. The UN has also been able to "depoliticize" the aid. It help carries with it no judgment on the policies of states which produce the refugees. The states have begun to understand this and are becoming increasingly cooperative.

This trust is part of the basis for today's worldwide movements of refugees. But it follows from this that detailed accounts of their odysseys are usually sheltered from unnecessary publicity.

Privacy regarding countries of origin and of destination is dictated by political and diplomatic need. And it helps to ensure the personal safety of individual refugees and families.

The rights of refugees—the willingness of governments to let them go from their homelands and of others to receive them in transit or as permanent residents—have developed slowly.

To give wide publicity to the name of a country from which refugees are moving, for example, could cause that country to close its borders to the outflow. East Germany did so when it built the Berlin wall.

MIGRATIONS REPORTED IN GENERAL

Also risky is to name the countries receiving refugees. It can give the appearance that the countries are critical of policies in countries from which the refugees fled. In extreme cases this could lead to charges that receiving countries were conniving with agitators.

One of the vital rights of refugees is that presenting themselves at borders of neighboring states without fear of being turned back. For thousands this can mean the difference between life and death, authorities say, or between freedom and unjust and indefinite imprisonment.

Despite the need for official discretion about today's migrations, these can be reported and charted in general terms. Their most striking feature is the recent, little-known shift in the refugee problem from Europe to Africa, while the Middle East refugee situation remains much as it has for the past 20 years.

In the Middle East 1½ million Palestinian Arabs are still living (some observers say virtually "rotting") in refugee camps. Authorities who care for these refugees provide food, shelter, clothing, some education, and work training. But in the Middle East the refugees are "caught." They are waiting for a political solution of the Arab-Israeli crisis to return them to normal living.

Africa is the next largest—and newest—problem. There some 850,000 are on the move. The number, however, does not include those fleeing from the dangers of war in Nigeria.

The concentrations seen in Europe after World War II no longer exist. Millions have

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ment of Justice in the fight against organized crime;

Now therefore be it resolved that the 63rd Annual Meeting of the National Association of Attorneys General in St. Thomas, Virgin Islands reassert its interest and concern in the continuing fight in the field of organized crime; that we work with all levels of government and all branches of law enforcement in creating a total effort; and

Be it further resolved that the members of this Association, jointly and severally exchange information of desirable legislation to control organized crime, and that the members and the Association offer vigorous support to the efforts of the Department of Justice in their field.

ABM

AUTHORIZATION OF APPROPRIATIONS FOR FISCAL YEAR 1970 FOR MILITARY PROCUREMENT, RESEARCH AND DEVELOPMENT, AND FOR THE CONSTRUCTION OF MISSILE TEST FACILITIES AT KWAJALEIN MISSILE RANGE, AND RESERVE COMPONENT STRENGTH

The Senate resumed the consideration of the bill (S. 2546) to authorize appropriations during the fiscal year 1970 for procurement of aircraft, missiles, naval vessels, and tracked combat vehicles, and research development test, and evaluation for the Armed Forces, and to authorize the construction of test facilities at Kwajalein Missile Range, and to prescribe the authorized personnel strength of the Selected Reserve of each reserve component of the Armed Forces, and for other purposes.

Mr. ALLEN. Mr. President, the basic information necessary to a decision on deployment of the Safeguard antiballistic missile system has been before Congress for many months. It is true, of course, that much additional testimony from many sources has since been submitted, most of it in the form of opinion—some of it informed, some ideological and speculative, some simply conjectural, and much of it contradictory.

However, I have been impressed by the fact that arguments pro and con seem to derive not so much from disagreement on hard facts and reasoned opinions as from contrary assumptions and premises to which the facts and opinions are related.

Accordingly, few Senators seem to have been influenced to change their minds on the wisdom of deployment of the ABM. This fact would seem to indicate that the decision before us may hinge not so much on data as on basic assumptions respecting national power, ideology, national intentions, and the ultimate determinate factor of national will in shaping defense policies of our Nation.

As the time approaches for final decision on funding deployment of the ABM, I find myself more persuaded than ever that the risks involved are extremely grave, that the security of the free world is at stake, and that the consequences of inaction could be catastrophic not alone for our Nation but for the free world.

These considerations influenced my original decision. Since then no new facts have been presented and no new arguments have been adduced to alter my

original conclusions which, in abbreviated form, are as follows:

In the present contest between two great world powers, all of the idealistic good intentions in the world cannot be substituted for the integrity and therefore the credibility of our deterrent capability.

We believe that our deterrent is today a critical factor in the security of our Nation and of Western Europe, the Middle East and the Far East, and that it is essential to continued confidence in our leadership on the part of uncommitted and undeveloped nations of the world.

I am convinced that an effective ABM Safeguard System is scientifically and technologically feasible; that it can be developed to provide a satisfactory measure of defense of our land-based deterrent; and that the cost is not disproportionate to the defense afforded.

Furthermore, I do not believe that the limited deployment of the ABM will result in escalation of the arms race nor that it should or would impede arms control negotiations with Russia.

In addition to these conclusions, Mr. President, undisputed facts show that Russia has continued from 1962 till now with successive improvements of their ABM System. It must be clear that an effective ABM protection of Russian cities would necessarily diminish our deterrent capability. On the other hand, Russia's deterrent remains unimpaired by reason of continued vulnerability of our cities. To permit Russia to enhance its deterrent by continued vulnerability of our cities and at the same time voluntarily accept vulnerability of our ICBM sites is to invite an unstable world situation which I find unrealistic and dangerously intolerable.

Mr. President, I earnestly hope that the nuclear arms race may be ended. But I have found no reasonable ground to believe that a negotiated agreement with Russia can be reached which would not be to the further advantage of Russia, nor am I aware of any evidence or of any argument that would convince us that unilateral abandonment of a defense of our strategic armament would alone induce the Soviet Union to cease its own efforts to achieve and maintain strategic superiority over us.

In this connection, it is my judgment that the power essential to our survival in today's world is our power of deterrent. Today we have that power. The question is, do we have the will to maintain it?

Mr. President, it is my sincere hope that we will defend our deterrent and protect our national security.

I support ABM.

Mr. BYRD of West Virginia. Mr. President, will the Senator yield for two unanimous-consent requests?

Mr. PROXMIRE. I yield.

ORDER FOR ADJOURNMENT UNTIL MONDAY, AUGUST 4, 1969

Mr. BYRD of West Virginia. Mr. President, I ask unanimous consent that when the Senate completes its business

today, it stand in adjournment until 12 o'clock noon on Monday next.

The PRESIDING OFFICER. Without objection, it is so ordered.

FORTUNE'S EXCELLENT ANALYSIS OF THE AMERICAN MILITARY PROBLEM

Mr. PROXMIRE. Mr. President, for years Fortune magazine has been recognized as a publication that has brought remarkable competence to reporting on American industry.

In their August issue they have done one of the best jobs I have seen of analyzing the defense spending problem that so concerns all Members of Congress.

This issue is specially pertinent to Congress right now, when we are in the midst of debate on the military procurement authorization bill.

Mr. President, there are two articles in this issue that are so pertinent and informative that I ask unanimous consent that they be printed in the Record following my remarks.

The PRESIDING OFFICER. Without objection, it is so ordered. (See exhibits 1 and 2.)

Mr. PROXMIRE. One is entitled: "The Case for Cutting Defense Spending," the other is "Where Military Contracts Go."

In addition, Mr. President, I am going to read in full to the Senate the lead editorial in the August issue of Fortune, entitled: "It's Time To Audit the Defense Department."

As I read this remarkable editorial, keep in mind that this is not the expression of an impulsive critic of the so-called "military-industrial complex." Fortune has consistently hailed American industry and understands and deeply respects the reasons for America's industrial excellence.

This is not the expression of an advocate or polemicist for arms control or disarmament, or of a publication that underestimates the very real threat posed by Soviet military power. Indeed, in that connection, I invite Senators to read another article entitled "Military-Industrial Complex, Russian Style" in this same August issue of Fortune.

Here is an editorial from a publication that highly values American security and that fully and intelligently understands why it must meet whatever challenge may develop.

Mr. President, this is the editorial:

IT'S TIME TO AUDIT THE DEFENSE DEPARTMENT

The U.S. is in the grip of a costly, escalating pattern of military expenditure that could well keep rising even after Vietnam. As reported in a special defense section of this issue, evidence multiplies that this expenditure has come to live a life of its own—neither soundly based on our commitments nor, indeed, properly responding to the very real potential of the U.S.S.R. Appropriately, the Nixon Administration has begun a thoroughgoing review of the threats facing the U.S. and the defense structure needed to cope with them. The reassessment is urgently needed.

At staggering cost, the military has repeatedly bought weapons and deployed forces in ways that have added only marginally to national security. Moreover, in the procure-

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William Cahn, a Long Island district attorney, told SIC:

"I interviewed John Dioguardi in the summer of 1963, shortly after his release from prison (for tax evasion).

"He told me he was a hard-working kosher frankfurter salesman who left his home in Point Lookout every morning at 4 and drove to Sullivan County to sell his products, and that he received \$250 a week for these efforts. "Our investigation disclosed his meteoric rise from a \$250-a-week salesman to a reputed \$250,000-a-year income from the Kosher meat business.

"This commission is aware of John Dioguardi's close association with powerful leaders in the Teamsters, in particular, James R. Hoffa (now in federal prison).

"A reliable confidential informant advised my office that Dioguardi's success was due to the fact that the supermarket chains accepted his product to insure they would continue to have labor peace.

"This informant advised that the principals of these large chains would refuse to cooperate with our investigation because of the fear of union troubles. This lack of cooperation became a reality and thwarted our investigation.

"Dioguardi's instant success is not the realization of the 'American dream' but a continuation of his successful activities as a labor fixer, extortionist and important member of syndicated organized crime."

One witness at the hearing was "Mr. A," who prevailed on SIC not to disclose his real name. "Mr. A" was sales manager of a firm that began to hit the skids after Dio emerged as a "salesman" for the competition.

(Actually, says SIC sources, Dio became the owner of the rival company. Under the McClellan-Hruska Bill, this company could be dissolved by a court order or Dio could be forced to surrender his interest in it, providing certain facts were proved.)

"Mr. A" was asked how many supermarket chains switched from his organization to Dio's. He replied:

"Seven or eight. It wasn't over a particular time. It was over a period of months."

The next witness was Moe Steinman, director of labor relations for a large supermarket chain. Steinman said that he had seen Dio "50 to 75" times over the last three or four years.

But they never conversed about unions; Steinman insisted.

Here are excerpts from the Steinman testimony:

Q. You are not business associates and you are not social friends and you sit down to have dinner together. What do you talk about?

A. Very good question. Just in general speaking of life in general.

Q. Would you talk about how your business was doing?

A. How our chains were doing? He would ask the questions. I said to him, in fact, "Last year was a little better than the year before."

Q. Did he ever tell you how Mizrach was doing?

A. No, he never brought that out.

Q. You seem to give the impression that you never meet Mr. Dio except accidentally when you stumble into him. Have you ever made appointments to meet with him for dinner?

A. I said I did. He was at my house once or twice.

Q. Were there any other occasions when you made appointments?

A. I don't recall. I would be lying, you know, if I said no or yes.

Similar testimony was taken from Aaron Freedman, vice president of a chain of 78 stores.

SIC counsel Paul D. Kelly asked:

Q. "Has Mr. Dio ever been to your home?"

A. Yes . . . I got a call that he was in the neighborhood, would I mind if he came over

to see me? . . . I found out that he wanted to sell me pins, primarily these types of pins that we give out to our employes after . . . a number of years of service.

Q. Is that the first time that Mr. Dio has ever requested you to purchase something from him?

A. Yes.

Q. He has never mentioned Mizrach Provisions in your presence?

A. No, sir . . .

Q. Have you ever had occasion to ask Mr. Dio for help with respect to labor contracts?

A. No, sir . . .

Q. Were you curious enough at any time to ask Mr. Dio what his connections were with the kosher meat industry?

A. I wasn't that close enough to ask him those questions.

Dio is under a five-year sentence for bankruptcy fraud in connection with the failure of Consumer Kosher Provisions, Inc., a forerunner of Mizrach and the first company in that field to become a vehicle for Dio.

Immediate successor to Consumer Kosher (and also a forerunner of Mizrach) was First National Kosher Provisions. In this firm Dio was neither an officer nor a shareholder of record, although he organized the firm and illegally shifted Consumers' inventory to it.

The racketeer is appealing his sentence.

But whether Dio himself ultimately goes to jail because of his conviction under existing laws is not as important, say federal officials, as the mob's future in the industry.

President Nixon, in his crime message to Congress April 23, explained why an anti-trust-type bill such as the McClellan-Hruska measure was needed.

"The arrest, conviction and imprisonment of a Mafia lieutenant can curtail operations," Nixon said, "but does not put the syndicate out of business.

"As long as the property of organized crime remains, new leaders will step forward to take the place of those we jail.

RESOLUTION ON ORGANIZED CRIME ADOPTED BY NATIONAL ASSOCIATION OF ATTORNEYS GENERAL

Mr. McCLELLAN. Mr. President, the Subcommittee on Criminal Laws and Procedures, which I am privileged to chair, is presently in the process of studying and revising a number of bills dealing primarily with the control of organized crime. We are now obtaining the last comments of the Department of Justice on these proposals, and we hope soon to begin reporting out a comprehensive legislative program in this area. The major bills include:

First. S. 30, which comprehensively revises and strengthens the evidence-gathering process in organized crime cases;

Second. S. 974, which creates within the Department of Justice the position of Assistant Attorney General for Organized Crime;

Third. S. 976, which provides for increased sentences for certain persons who are being sentenced for a felony as part of a continuing criminal activity in concert with one or more persons;

Fourth. S. 1623, which prohibits the investment of certain illegally gained income in any business enterprise affecting interstate or foreign commerce;

Fifth. S. 1624, which would amend the Internal Revenue Code of 1954 and facilitate the collection of wagering taxes;

Sixth. S. 1861, which would prohibit the infiltration of legitimate organiza-

tions by racketeers or the proceeds of racketeering activity where interstate or foreign commerce is affected;

Seventh. S. 2022, which would make gambling affecting interstate commerce or operated by corruption a Federal crime; and

Eighth. S. 2122, a general immunity statute.

The subcommittee has been fortunate in having been able to obtain the critical comments and suggestions of a number of distinguished witnesses during three hearing sessions. Several of their suggestions have been incorporated into tentative markup drafts of the proposals. I stated at the beginning of hearings on these proposals that I was not committed or wedded to the exact language contained in any of them and that I hoped that they could be improved and strengthened. This has certainly been the case. Several of these bills have indeed, in my opinion, been much strengthened as a result of the hearing process.

Hopefully, the enactment of a number of these bills will mark the beginning of a sustained war against the forces of organized crime. These measures, along with several of the titles from last year's omnibus crime bill should give law enforcement some badly needed, and long overdue tools, in their fight against the large criminal cartels. Any effort in this direction, however, must include all levels of law enforcement: Federal, State, and local. I was, therefore, very gratified to learn that the recent annual meeting of the National Association of Attorneys General that organization passed a resolution manifesting its concern in the continuing fight against organized crime.

Mr. President, the public and law-enforcement agencies everywhere are becoming increasingly aware of the many faceted activities of organized crime and are becoming educated to the fact that organized crime, in one way or another, affects each of us. It will soon be time for the Congress to act to meet its responsibilities, too. The time for effective legislation against organized criminals is imminent. In concluding, I use the same words the President's Crime Commission used to close its chapter on organized crime:

The extraordinary thing about organized crime is that America has tolerated it for so long.

I ask unanimous consent to have a copy of the Attorneys General resolution inserted in the Record immediately following my remarks.

There being no objection, the resolution was ordered to be printed in the Record, as follows:

ORGANIZED CRIME

Whereas the members of this Association are directly involved in curbing the efforts of organized crime to expand its income, and its influence and control over legitimate business; and

Whereas this Association recognizes the need for all levels of government, whether local, state or federal, to join together and to cooperate in ferreting out and destroying the sources of income of organized crime; and

Whereas this Association recognizes and appreciates the concerted action underway and planned by the United States Depart-

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Mr. JAVITS. Of course, I would not dream of being so irresponsible as that to seek to block this legislation but I do want to get abreast of how it will work. That is why I asked for the information I did. I have no objection, of course.

Mr. LONG. I will cooperate with the Senator to that end.

The bill was ordered to a third reading, was read the third time, and passed.

Mr. LONG. Mr. President, I move that the vote by which the bill was passed be reconsidered.

Mr. MANSFIELD. Mr. President, I move that the motion to reconsider be laid on the table.

The motion to lay on the table was agreed to.

LEGISLATIVE PROGRAM

Mr. SCOTT. Mr. President, I rise to inquire of the distinguished majority leader whether he expects any votes tomorrow.

Mr. MANSFIELD. Mr. President, responding to the question raised by the distinguished acting minority leader, I cannot give an unequivocal answer but to the best of my knowledge, it does not appear that there will be any votes tomorrow.

Mr. SCOTT. I do thank the Senator from Montana.

ABM

AUTHORIZATION OF APPROPRIATIONS FOR FISCAL YEAR 1970 FOR MILITARY PROCUREMENT, RESEARCH AND DEVELOPMENT, AND FOR THE CONSTRUCTION OF MISSILE TEST FACILITIES AT KWAJALEIN MISSILE RANGE, AND RESERVE COMPONENT STRENGTH

The PRESIDING OFFICER (Mr. SAXBE in the chair). The Chair lays before the Senate the unfinished business which the clerk will state.

The LEGISLATIVE CLERK. S. 2546, to authorize appropriations during the fiscal year 1970 for procurement of aircraft, missiles, naval vessels, and tracked combat vehicles, and research, development, test, and evaluation for the Armed Forces, and to authorize the construction of test facilities at Kwajalein Missile Range, and to prescribe the authorized personnel strength of the Selected Reserve of each reserve component of the Armed Forces, and for other purposes.

The Senate resumed consideration of the bill.

AMENDMENT NO. 111

Mr. FULBRIGHT. Mr. President, I submit an amendment to the pending bill. It is a simple amendment which I would like to explain briefly.

The amendment would require the Secretary of Defense to make available to a congressional committee, upon request, any study or report prepared outside the Department of Defense which was financed in whole or in part by the Department. The purpose is to insure that the Congress is given access to research studies performed by the so-called "think tanks," the universities, or individuals whose work is paid for by the taxpayers. The amendment recognizes the issue of executive privilege and carefully specifies that the mandate applies

only to work performed outside the Department of Defense.

This amendment is the outgrowth of an effort by the Committee on Foreign Relations to obtain a study prepared by the Institute for Defense Analysis relating to the Gulf of Tonkin incident. It is my understanding that the study contains a review of what happened in the Gulf of Tonkin, how communications were handled, and in general how decisions were made. The purpose of the study, I was informed, was to determine what lessons could be learned for future crisis situations. I think that my colleagues will agree that there is much that all of us can learn from that incident and its aftermath. The committee has attempted several times to obtain this study from the Department of Defense, but has been refused each time.

The Institute for Defense Analysis receives virtually all its funds from the Department of Defense. In fiscal year 1969 this organization received \$10,898,000 from the Department of Defense, and the Department proposes to give it \$11,150,000 in 1970.

I believe that the Congress, which imposes the taxes on the public to finance this organization, and which authorizes and appropriates the money for it, should have the right to see how that money is being spent. The issue here is far more important than this one study—it is a question of whether the Congress has the power to obtain information, prepared outside the Government with tax money, for which no claim of executive privilege has been made.

The Senate is beginning, at long last, to reassert its constitutional prerogatives and to restore the proper balance to our system. Passage of this amendment will be one small, but positive step in that direction.

In that connection, I wish to simply observe that today I believe is the first—perhaps the second—time in my 25 years in the Senate in which all 100 Senators were present and voting on pending measures—which again I think is also a demonstration of the Senate's taking its responsibilities more seriously.

Mr. CASE. Mr. President, will the Senator yield?

Mr. FULBRIGHT. I yield.

Mr. CASE. Are there any cosponsors of the Senator's amendment?

Mr. FULBRIGHT. There are none, but I am always glad to have cosponsors.

Mr. CASE. Will the Senator request that I be made a cosponsor?

Mr. FULBRIGHT. Mr. President, I ask unanimous consent that the name of the Senator from New Jersey (Mr. CASE) be added as a cosponsor of the amendment.

The PRESIDING OFFICER. Without objection, it is so ordered.

Mr. JAVITS. Mr. President, will the Senator do the same for me?

Mr. FULBRIGHT. Mr. President, I ask unanimous consent that the name of the Senator from New York (Mr. JAVITS) be added as a cosponsor of the amendment.

The PRESIDING OFFICER. Without objection, it is so ordered.

The amendment will be received and printed, and will lie on the table.

COLLECTION OF FEDERAL UNEMPLOYMENT TAX—AMENDMENT (NO. 110)

Mr. FULBRIGHT. Mr. President, I also submit another amendment to the pending bill, and I should like to discuss it briefly.

The amendment and the purpose are simple. It would reduce the authorization for research, development, test, and evaluation by a total of \$45,614,000. This represents a 7-percent reduction in funds for the "military sciences" research category for each of the three services and the Department of Defense, plus a 20-percent reduction in the authorization for the Defense Department's overseas research program, Project Agile, which is funded under a category labeled "Other equipment." The proposed reductions, by service, are: Army \$11,893,000; Navy \$10,157,000; Air Force \$9,989,000; and the Department of Defense \$13,575,000. The purpose is to make a modest cutback in the Department's funding of Federal contract research centers—the so-called "think tanks"—other social and behavioral science research, foreign research, the Department's aid-to-education program, Project Themis, and research on counterinsurgency matters. The intent is to have the \$45 million reduction applied roughly as follows:

First, reduce the funding of the Federal contract research centers by 10 percent, or \$27 million;

Second, reduce research in foreign institutions—colleges and universities, primarily—by \$2 million, or approximately one-third the program proposed;

Third, reduce counterinsurgency research, Project Agile, by 20 percent, or \$5 million;

Fourth, cut other social science research, performed by organizations such as the Hudson Institute, by the remaining \$3 million; and

Fifth, hold the line on new starts under Project Themis by reducing the request by \$8 million—a 25 percent reduction.

The committee has recommended an 8 percent cut in the military sciences item, the funding source for most of the programs I listed. This is but a slap on the wrist, and I think that the circumstances call for a more meaningful reduction in non-essential research activities. I propose that the Senate cut this category by an additional 7 percent, to, in effect, impose a 15 percent surtax on the research programs I have listed. My amendment would also reduce by \$5 million the funds for Project Agile, the overseas research which is funded under the "Other equipment" category.

It cannot be said that the amendment ties the hands of the Defense Department since each service will be left with considerable flexibility to distribute the cutback within these general areas. I might add that, under provisions of this bill, the Department of Defense will still have a \$100 million emergency fund to play with, double last year's contingency fund.

It is time that the Senate took a hard look at what the taxpayers' money is being spent for in the Defense research program. This amendment is but a small

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cooperative in it. I believe it represents a fine consensus which will accommodate the entire membership of the Senate.

Mr. COOPER. Mr. President, in view of the proper addition that was made to the request dealing with any amendments that might be offered to the Cooper-Hart amendment, it will be necessary to strike from the original request I made that we shall vote at 3 o'clock; because if amendments are offered, of course, we could not have both 4 hours of debate and still vote at 3 o'clock.

Mr. MURPHY. Mr. President, will the Senator yield?

Mr. COOPER. I yield.

Mr. MURPHY. Does the Senator wish to limit the time on the amendment?

UNANIMOUS-CONSENT AGREEMENT

Mr. COOPER. Mr. President, I shall state the agreement again, as modified.

We ask unanimous consent that on Wednesday, August 6, 1969, but not before 3 p.m., the Senate shall vote on the amendment proposed by the Senator from Michigan (Mr. HARR) and myself to S. 2546.

We ask unanimous consent that on Tuesday next, after the morning hour, there be 4 hours of debate on the amendment, equally divided between the proponents and opponents; that on Wednesday the Senate will convene at 11 a.m.; that there will be no morning hour; that there will be 4 hours of debate on the Cooper-Hart amendment, equally divided between the opponents and proponents; that if there be further amendments to the Cooper-Hart amendment, the time will be limited to 1 hour on such amendments, to be equally divided between the proponents and the sponsors of the Cooper-Hart amendment.

The PRESIDING OFFICER. Is there objection to the unanimous-consent request? The Chair hears no objection, and the agreement is entered into.

Do Senators yield back their time?

Mr. DIRKSEN. I yield back my time.

Mr. MANSFIELD. I yield back my time.

The PRESIDING OFFICER. All time has been yielded back. The question is, Shall the bill pass? On this question, the yeas and nays have been ordered, and the clerk will call the roll.

The bill clerk called the roll.

The result was announced—yeas 70, nays 30, as follows:

[No. 63 Leg.]
YEAS—70

Aiken	Gravel	Mundt
Allott	Griffin	Murphy
Anderson	Gurney	Muskie
Bellmon	Hansen	Packwood
Bennett	Harris	Pastore
Boggs	Hartke	Pearson
Brooke	Holland	Pell
Byrd, Va.	Hruska	Percy
Case	Hughes	Randolph
Cooper	Inouye	Ribicoff
Cranston	Jackson	Russell
Curtis	Javits	Schweiker
Dirksen	Jordan, N.C.	Scott
Dodd	Kennedy	Smith
Dole	Long	Sparkman
Eagleton	Magnuson	Spong
Eastland	Mansfield	Stennis
Ellender	Mathias	Stevens
Ervin	McCarthy	Thurmond
Fannin	McClellan	Tower
Fong	McGee	Williams, Del.
Goldwater	McIntyre	Young, N. Dak.
Goodell	Miller	
Gore	Mondale	

NAYS—30

Allen	Dominick	Nelson
Baker	Fulbright	Prouty
Bayh	Hart	Proxmire
Bible	Hatfield	Saxbe
Burdick	Hollings	Symington
Byrd, W. Va.	Jordan, Idaho	Talmadge
Cannon	McGovern	Tydings
Church	Metcalf	Williams, N.J.
Cook	Montoya	Yarborough
Cotton	Moss	Young, Ohio

So the bill (H.R. 9951) was passed.
Mr. LONG. Mr. President, I move that the vote by which the bill was passed be reconsidered.

Mr. JAVITS. Mr. President, I move that the motion to reconsider be laid on the table.

The motion to lay on the table was agreed to.

Mr. LONG. Mr. President, I am not going to make a request for the conferees at this point, because we only had one amendment, which is the same language as that in the House, and so would hope that the House would take it as an amendment. If they want conferees, we will be glad to accommodate them, but it is important that we act on the interest equalization tax, which expires tonight, which bill is now at the desk.

Mr. MANSFIELD. Mr. President, as the votes on this measure today indicate, no particular point of view can claim victory or, for that matter, defeat. If there was a victory attached to it, it was a victory for the Senate as a whole, the administration, and, hopefully, the American people.

I am happy that we were able to reach, on a bipartisan basis, a reasonable accommodation after a very lengthy exchange of views and collection of conferences, and I want it clearly understood that any credit which inures for the measure which has just passed the Senate belongs to all of us and not to the leadership on either side, or to any individual Senator. In that action, the administration has also played a very worthwhile and responsible part.

No particular interest can claim credit or rejection. Rather than these proceedings have indicated above all is that the Senate as a whole can be proud of an accomplishment attained in the spirit of accommodation and responsibility. The only winners are the people.

The able chairman of the Finance Committee, the distinguished Senator from Louisiana (Mr. LONG) once again displayed his remarkable ability in his expert handling of this very important measure. And the minority leader offered his characteristic cooperation and full support. Their participation was indispensable in effecting a meeting of the minds on all sides of the issue, thus making possible the responsible action taken by the Senate today.

Working also so indispensably to accomplish the responsible end obtained were the capable senior Senator from Delaware (Mr. WILLIAMS) and the able Senator from South Dakota (Mr. MUNDT). Their views were expressed with the deep understanding and wisdom that have characterized all of their efforts in the past. I might say that it is most difficult to express in words my esteem and gratitude for their splendid contribution.

To say it simply: Senator DIRKSEN, Senator WILLIAMS, and Senator MUNDT all deserve our deepest appreciation for their tireless efforts to resolve this matter reasonably. They happen to serve on the other side of the aisle, but I might say that in the interest of accommodation and unity in the Senate, their services rise above partisanship.

May I say, also, that I think the entire Senate is to be commended on that score. The close attention and support during the discussions today and the splendid cooperation displayed by all certainly credits this body immeasurably. It was imperative that all views be heard and considered. I am proud to say they were. I thank each and every Senator. We may all be proud.

CONTINUATION FOR A TEMPORARY PERIOD OF THE INTEREST EQUALIZATION TAX

Mr. LONG. Mr. President, I ask that the Chair lay before the Senate a message from the House of Representatives on H.R. 13079.

The PRESIDING OFFICER laid before the Senate H.R. 13079, an act to continue for a temporary period the existing interest equalization tax, which was read twice by its title.

Mr. LONG. Mr. President, I ask unanimous consent that the Senate proceed to its immediate consideration.

The PRESIDING OFFICER. Is there objection to the present consideration of the bill?

There being no objection, the Senate proceeded to consider the bill.

Mr. LONG. Mr. President, this is a mere 30-day extension of the existing equalization tax, so that we can get the bill considered.

Mr. JAVITS. Mr. President, will the Senator from Louisiana yield?

Mr. LONG. I yield.

Mr. JAVITS. Mr. President, this is an important bill, which has a widespread interest, especially today. I understand that it is only a 30-day extension but I should like to ask the Senator from Louisiana whether there are any facts or figures available as to how it is operating today, both in terms of our balance of payments problems, for which it was originally devised, and in terms of the high interest rate we have not only in this country but also the very high interest rates now being paid by our banks with regard to Eurodollar borrowings abroad. I should like to ask the Senator whether the Finance Committee is going to look into the general network of questions which are involved so that when we do come to act in a definitive way, we will have that body of information.

Mr. LONG. Mr. President, I shall seek to obtain that, and any other information the Senator wants, if he will just let us know. Unfortunately, I cannot provide all of that for the Senator today, as he is well aware of, I am sure. I am merely told by the Treasury Department that if we do not do this, a large amount of money might flow out of the country which would create some problems for us in this country.

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Many of these trails are really automobile routes that follow in the footsteps of the pioneers or explorers, thus providing an easy way of exploring history. One of these, for instance, is the Lewis and Clark Trail—1,000 miles of good roads from St. Louis, Mo. to Fort Clatsop on the Pacific Ocean.

There are also waterway trails that can be followed utilizing transportation ranging from houseboats to canoes.

And there are wilderness trails, such as those designated in the National Trails System which the 90th Congress established only last year.

The details of this expanding outdoor recreation opportunity is best told by the National Park Service, Mr. President, and I ask unanimous consent that its press release be printed in the RECORD.

There being no objection, the release was ordered to be printed in the RECORD, as follows:

**LAND AND WATER TRAILS EASY WAY TO
EXPLORE AMERICA**

Many Americans are taking to the trails this summer.

This doesn't mean they're necessarily following a winding footpath through the forest, but that they've discovered the scores of land and water trails that are available for vacationers.

Whether by houseboat or canoe, on foot or in an automobile following a regional trail can be a great experience for the whole family.

One of the easiest ways of exploring history, and enjoying outdoor recreation at the same time, is by following one of the many regional automobile trails crisscrossing the country. These are modern highways specifically designated to follow a historic or scenic route and, generally, marked with an identifying symbol. They're designed for moderately high speed automobile traffic, not foot travel.

The Dixie Trail, with a distinctive marker of a silhouetted Southern belle, takes you through the famous Bluegrass state of Kentucky into areas of Tennessee and North Carolina and the panoramic countryside of South Carolina and Georgia.

The Lewis and Clark Trail winds over 1,000 miles of good roads from St. Louis, Missouri to Fort Clatsop on the Pacific Ocean. You can be a Modern explorer on this trail that passes through 11 states, closely paralleling the original route. This is a great trip for historical sightseeing, but there are many recreational opportunities along the way and cities such as Kansas City and Portland are included.

The Old West Trail steers you through the five states of Nebraska, North and South Dakota, Montana and Wyoming. Along this adventuresome route, you can visit historic museums, stop at an Indian pow-wow, or camp out for a few days of hiking, fishing, hunting, or mountain climbing.

The Hiawatha Pioneer Trail travels through Iowa, Illinois, Wisconsin and Minnesota. You'll have a chance to sample the history, agriculture, culture and recreation of America's mid-west region along this trail.

The Ozark Frontier Trail is a memorable loop from St. Louis across Missouri and Kansas, down into Oklahoma and east to Arkansas.

The Lincoln Heritage Trail, starting in Illinois and continuing into Indiana and north central Kentucky encompasses many highlights of the boyhood and career of your 16th president.

New England's Heritage Trail begins in New York, Connecticut, and meanders through the six northeastern states. Early American history will mean more to you when you've

stopped at such places as Mystic Seaport with its Waterfront Village, and Cape Cod, famous for its quaint fishing villages and beautiful seashore. There's even a Freedom Trail Walking Tour of Boston available on this route.

To make sure you don't miss important local points of interest, many states and even some cities have inaugurated their own automobile trail systems. The George Washington Trail, for instance, takes you through the coastal section of South Carolina; The Charter Oak Trail begins at Hartford and continues through the state of Connecticut; the Liberty Trail covers the five southeastern counties of Pennsylvania and includes a ride on a scenic railroad along the way; and the Hill Country Trail is one of ten new automobile trails in Texas.

For more information on any of these state or regional trails, write to the tourist office of the state you'd like to visit and ask for their free brochures on automobile tours of their areas. Tourist directors are located in the state capitals.

Regional trails aren't limited to land, however. If you'd like to vacation on water, there are many river and stream trails that provide great fishing, swimming, and boating fun. Houseboats are available for rent in many parts of the country and canoe or float trips are possible, also. Check your state Travel Office or Game and Fish Department for established rental agencies.

Following a trail into the wilderness can be an exciting experience too, but it needn't be a difficult one. Several organizations have set up guided trips into remote regions in various parts of the country.

The Wilderness Society, for instance, offers 45 expeditions this year, including 14 horseback pack trips, 16 walking trips, nine backpacking expeditions, three waterway trips, two ski outings and an Alaska tundra trek. The trips are planned to take into account the inexperienced wilderness travelers as well as the seasoned outdoor enthusiasts. Local outfitters provide most of the equipment and make complete arrangements from the time you arrive at the starting point until the trip is over. You don't have to be a member to take part.

For a listing of available expeditions and fact sheets on the individual trips, write The Wilderness Society, 5850 Jewell Avenue, Denver, Colorado 80222.

Other organizations that promote hiking and outdoor tours are the Appalachian Mountain Club, 5 Joy Street, Boston, Massachusetts 02108; the American Forestry Association, 919 17th Street, N.W., Washington, D.C. 20006; and the Sierra Club, P.O. Box 3471, Rincon Annex, San Francisco, California 94120. For information on hiking and biking trips, contact the local branch of the American Youth Hostels, or the national headquarters at 535 West End Avenue, New York, New York 10024.

One of the most famous regional trails in the country is the Appalachian National Scenic Trail—a beautiful hiking trail that extends 2,000 miles from Maine to Georgia. The route, marked by an identifying symbol can be picked up at any place and you can hike for as little or as long as you'd like. If you're planning an extended hike, you should write for the guidebooks and maps to The Appalachian Trail Conference, 1718 N Street, N.W., Washington, D.C. 20036. Prices are nominal.

Whether you want to canoe in Wisconsin, drive through Maine, hike through North Carolina, backpack in Colorado, or fish in Oregon, regional trails will make traveling easier for you. Look for the identifying marker on whatever route you're following. You'll find it will add greatly to your enjoyment of the countryside, and, probably, lead you to some sights you might have missed.

**CONCLUSION OF MORNING
BUSINESS**

Mr. BYRD of West Virginia. Mr. President, is there further morning business? The PRESIDING OFFICER. Is there further morning business? If not, morning business is closed.

ABM

AUTHORIZATION OF APPROPRIATIONS FOR FISCAL YEAR 1970 FOR MILITARY PROCUREMENT, RESEARCH AND DEVELOPMENT, AND FOR THE CONSTRUCTION OF MISSILE TEST FACILITIES AT KWAJALEIN MISSILE RANGE, AND RESERVE COMPONENT STRENGTH

Mr. BYRD of West Virginia. Mr. President, I ask unanimous consent that the Senate proceed to the consideration of the unfinished business.

The PRESIDING OFFICER. The bill will be stated by title for the information of the Senate.

The ASSISTANT LEGISLATIVE CLERK. A bill (S. 2546) to authorize appropriations during the fiscal year 1970 for procurement of aircraft, missiles, naval vessels, and tracked combat vehicles, and research, development, test, and evaluation for the Armed Forces, and to authorize the construction of test facilities at Kwajalein Missile Range, and to prescribe the authorized personnel strength of the Selected Reserve of each Reserve component of the Armed Forces, and for other purposes.

The PRESIDING OFFICER. Is there objection to the present consideration of the bill?

There being no objection, the Senate proceeded to consider the bill.

Mr. BYRD of West Virginia. Mr. President, I suggest the absence of a quorum.

The PRESIDING OFFICER. The clerk will call the roll.

The assistant legislative clerk proceeded to call the roll.

Mr. BYRD of West Virginia. Mr. President, I ask unanimous consent that the order for the quorum call be rescinded.

The PRESIDING OFFICER. Without objection, it is so ordered.

The Chair recognizes the Senator from Oregon.

Mr. HATFIELD. Mr. President, on March 14 the President announced his decision to deploy the Safeguard antiballistic-missile system. At that time, the administration gave three reasons justifying its need:

1. Protection of our land-based retaliatory forces against a direct attack by the Soviet Union;
2. Defense of the American people against the kind of nuclear attack which Communist China is likely to be able to mount within a decade;
3. Protection against the possibility of accidental attacks from any source.

Originally, the proponents of this system seemed to give greatest emphasis to the possible threat posed to our deterrent forces by the Soviet SS-9 missile development. But, many have effectively questioned whether the Soviets have either the intention or the capability to develop a first-strike force. Such questioning appears to have had an impact of those supporting the ABM. Now,

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than 80 witnesses appearing before the Committee, only 19 could be considered as being ecologically oriented.

As the editorial clearly pointed out:

The majority, therefore, came to this assignment with the self-assurance that chemical pesticides are "good" since they have helped increase agricultural production.

It is apparent that the effect of persistent pesticides on the ecological balance within our environment was not uppermost on the minds of most of the committee members and its witnesses.

As the Audubon Society puts it so well:

We have a right to expect more from the National Academy of Sciences—at least the recognition that given our contemporary illiteracy in ecology, this twenty-year pesticide controversy will not yield to consensus.

I ask unanimous consent that the editorial be printed in the RECORD.

There being no objection, the editorial was ordered to be printed in the RECORD, as follows:

THE ACADEMY OF SCIENCES LAYS ANOTHER THIN-SHELLED EGG

In November 1966, the U.S. Department of Agriculture asked those scientific advisors to the nation, the National Academy of Sciences/National Research Council, to appoint a special Committee on Persistent Pesticides to help review the rising challenge to the use of these chemicals mounted by conservationists and a growing segment of the scientific community. The eleven-member committee heard testimony from more than 80 witnesses and issued a report on May 27th, 1969.

The report illustrates the characteristic, difficult, and dangerous conflicts of interest that beset our new technoscientific civilization. It recognizes that controlling the long-lived residues of DDT and other similar chemicals in the world environment will require regulation by all nations. It also recognizes that DDT has had an unfair economic advantage over other more acceptable insecticides, and that worldwide environmental contamination by DDT is serious, but that unless (and until) governmental regulations eliminate the present advantage of cheapness that makes DDT so popular, it will continue in general use.

Despite this, the committee, speaking for the National Academy of Sciences, failed to recommend a ban on DDT!

In 1963 another special committee of the academy failed utterly to come to grips with the problem of persistent pesticide contamination, and the academy's staff recognized the failure. Why did it fail again?

A thorough analysis of the false philosophical assumptions that beset the academy and all of us may be necessary to answer this question fully, but it may suffice to suggest here that too many of the tools and techniques we have so proudly and naively developed are simply beyond our current ability to use wisely. The technologist has become the sorcerer's apprentice! Chemists, engineers, and economists, who make most of the decisions to loose these inventions on the landscape, are unfortunately the least qualified to judge their possible effects.

The academy's Committee on Persistent Pesticides should have been an ecological board, since the pest control problem and pesticide pollution are both ecological problems. But only two of the eleven members were so oriented. Eight others, including the chairman, had backgrounds and philosophical commitments close to the agricultural community; two were from the chemical industry. Even though all these men were highly qualified and respected specialists, most of them were ecologically incompetent.

The majority, therefore, came to this assignment with the self-assurance that chemical pesticides are "good" since they have helped increase agricultural production; this too is "good" because our growing population requires it. The "problem" they were asked to analyze simply called for examining present pesticide use policy to see where it might be perfected to minimize formerly unrecognized conflicts, and to assure the public that its interests are being well taken care of by experts, both those on the committee, others in the academy, and all those thousands of experts who have implemented the vast technical programs of modern agriculture.

This is a case where we suffer from the democratic notion that majority opinion is right per se, with "public relations" substituting for education. This stumbling block is evident in the makeup of the persons interviewed by the committee: nineteen more or less ecologically oriented witnesses were exactly counterbalanced by nineteen industry spokesmen whose job has been to produce and sell the technology that has gotten us into trouble. The other testimony came from three people in food processing, fourteen in public health (as yet an unecological field), and twenty-eight from agriculture, men who planned and directed our commitment to DDT!

This report does mark at least one important advance. Though its recommendations are altogether vacuous, it does recognize the damning evidence—but carefully buries it deep in the text, where few will read it. More research is called for, of course, which is always a good way to put off action; in this Age of Science, research is like absolutism to medieval man. If we stopped poisoning we could research more important things, and save life too, perhaps more than we know.

The other reliable roadblock to restrictive action is to insist, as this report does, that there are yet no satisfactory alternatives to DDT. It does not specify what it is that cannot be controlled by other means, or how important it is to control at all. Confront any man and he will be against sin—until the next time he wants to sin. And so we are all now, perforce, against pollution—except when it is profitable to pollute, whether with pesticides, oil, or what have you.

We have a right to expect more from the National Academy of Sciences—at least the recognition that given our contemporary illiteracy in ecology, this twenty-year pesticide controversy will not yield to consensus. Someone has to lead, to educate, to hold the mirror up to man.

WHERE RESPONSIBILITY LIES

Mr. HATFIELD. Mr. President, as common as the human tendency to pass the blame for wrongs is the human proclivity to pass the buck for the curing of ills. Such is often the case among the private and public sectors of our Nation.

Jack Sugg, president of the Associated Oregon Industries, recently brought this problem to light as it relates to the relationship between private business and Government regulation.

In his compelling commentary in the July issue of News Digest, Mr. Sugg reiterated the free enterprise approach to problems of and with industry and the practical approach to Government's role—as other than the cure-all and end-all of the problems of business and consumers.

It is with encouragement and with admiration for Mr. Sugg's appraisal of where responsibility lies that I ask unan-

imous consent that "We, Not They" be printed in the RECORD.

There being no objection, the article was ordered to be printed in the RECORD, as follows:

WE, NOT THEY
(By Jack Sugg)

It seems popular these days to look to government at all levels to remedy problems or dissatisfactions of the people. Government is the "they" in "They should do something," and the oft-sighed "There ought to be a law" wishes that "they" would act.

Most measures aimed at so-called consumer protection follow such lines of reasoning. Though contrary to the basis of our free market economy, they represent a limp-wristed desire of many people to substitute distrust and regulation of business for free choice and individual moxie.

It's always refreshing, therefore, to see examples of business constructively policing itself. Such an instance is found in "The Right Thing to Do," a comprehensive code of ethics recently endorsed by the National Association of Direct Selling Companies and the National Better Business Bureau, Inc. Sub-titled "A Credo of Business Responsibility," the principles apply to direct selling, verbal representations and advertising of commodities or services sold at people's homes or other places not on the premises of the supplier or seller. Faithful compliance, say the sponsors, "will increase public confidence in the direct selling industry and thereby help to protect the consumer and legitimate business from unfair and deceptive practices.

Listed under 16 headings, the standards demand accuracy, bona fide offers with adequate supplies to back them up, truthful advertising illustrations, and that customers receive copies of completed contracts and written orders or receipts showing the name and address and the seller. Contract cancellation is called for in case of fraud, misrepresentation or undue influence.

Guarantees must be explained fully as to scope, limitations and conditions, according to the code. Customers should be told whether price savings are compared to previous prices or to prices of other sellers, and when a contract may be sold or assigned to a financial institution.

The standards discourage use of "list" prices, "lifetime" guarantees, "free offer" gimmicks, superlative claims unless backed by fact. They urge that multi-level sales plans conform to existing law and avoid exaggerated earnings possibilities, and that salesmen refrain from attacking competitors or disparaging their products. And they prohibit pre-ticketing items with phony "original" prices, deceptive offers, chain referral selling, asking persons to sign blank contracts, and using false or misleading advertising in recruiting salespeople.

Such ethical standards, of course, always have been used by successful salesmen, for their success has depended upon goodwill and repeat customers. Despite popular sentiment that a vague government "they" should do something, the fact remains that a responsible free choice, free market system is the consumer's best watchdog.

"We" in business must preserve the trust that makes this a fact.

TRAILS EASY WAY TO EXPLORE
AMERICA

Mr. JACKSON. Mr. President, the National Park Service of the Department of the Interior on July 13 issued a press release pointing out that increasing numbers of Americans are following land and water trails this summer.

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the first-strike threat seems to be given less emphasis and the role of Safeguard in protecting our population against an accidental missile launch and a Chinese attack have been given greater attention.

I would like to discuss all three aspects of this issue: first, alternatives to Safeguard for the purpose of assuring the viability of our deterrent; second, the Chinese threat; and, third, the role of Safeguard in protecting against accidents.

Let me emphasize that the ABM advocates have presented no plausible evidence that the Soviets have the ability or intention to deploy strategic forces which could threaten the viability of our deterrent. A Soviet commitment to achieve meaningful strategic superiority over the entire array of our massive deterrent force would be the most costly, unrealistic, and misguided strategic decision they could make; and I believe they know this to be the case. But, even if prudence counsels one to accept the administration's dubious assertions that the Soviets are seeking a first-strike capability, the proposed Safeguard system seems to be a wholly inappropriate response. Alternatives to Safeguard exist which are less costly and more reliable. Most important, they can be implemented far more rapidly, thus allowing us to determine whether the Soviets are interested in reaching arms control agreements or in pursuing the arms race.

Thus, additional missiles might be deployed. Our land-based missiles might be placed in silos with greater resistance to the effects of a nuclear detonation. Bombers might be more widely dispersed and placed on air alert. A greater fraction of the Navy might be assigned the role of protecting our Polaris submarines. We might place Polaris missiles on the surface ships in a fashion which had only recently been advocated for the multilateral force and claimed as being strategically effective. We could even consider phasing out the supposedly vulnerable Minutemen while adding to the highly invulnerable Polaris submarine fleet.

The very great advantage of these alternatives is that no action is required now. We would be permitted time to gather definitive, certain evidence concerning Soviet intentions. We would avoid committing ourselves to a system of questionable reliability and great cost built as a response to an unproven highly speculative assertion. We would, at least, have attempted to forestall the expansion of the arms race which is quite certain to result from the Safeguard's deployment—deployment, which in conjunction with our MIRV program, could appear to the Soviets as an attempt by us to develop a first-strike capability against them.

The first alternative to Safeguard, procurement of additional missiles, is said by the administration to be provocative. My answer is that we can wait until 1971 before making a procurement decision. In the interim we can assess efforts to achieve arms control agreements and observe the trend of Soviet missile procurement.

Dr. Herbert York has testified that Minuteman missiles can be deployed on 2 years notice. Therefore, if in 1971 we make the decision to deploy Minuteman, even at the 1962 rate of one missile per day, we could have approximately 700 additional missiles, with 2,100 warheads operational by 1975.

If we decided to wait beyond 1971 to determine whether a threat were going to materialize in 1975, we could at a much later time implement a substantial airborne alert. Also, we could degrade any emergency threat to our Polaris submarines on very short notice by assigning a greater fraction of our surface fleet to their protection. Further, we can embark upon an intensive program to make our present land-based missiles less vulnerable to attack by constructing silos with more blast resistance. This would certainly be nonprovocative.

Therefore, even if one grants the administration's underlying presupposition that the Soviets are developing a first-strike strategy, there are responses other than Safeguard which better protect our security, which are far more economical, and which pose no danger to the progress of the forthcoming arms control efforts.

The administration also claims Safeguard is required to protect us against an irrational attack by the Chinese. This justification for the Safeguard system reveals how our ignorance, emotional bias, and lack of understanding of the Chinese prohibit truly responsible strategic planning. Gripped with the picture of millions of Chinese dutifully reciting incantations from the little red book that seem ludicrous to our analytical Western minds, we are quick to conclude that the Chinese are "irrational." Possibly possessing 20 to 30 ICBM's by the mid-1970's, they might launch them against us, we are told, knowing full well of our assured ability to destroy their country. The full force of our retaliatory power would leave no societal life there worth mentioning. It has been estimated that a mere 10 percent of our bomber force, for instance, could destroy 200 million Chinese. Yet, we are told that the Chinese would invite total retaliation since they seem to be thinking and acting in ways that are so unfamiliar and puzzling to us.

Even if one were to accept the administration's psychological diagnosis of the Chinese, the case for Safeguard is still not convincing. If the Chinese did possess such suicidal tendencies and were willing to inflict damage upon us, regardless of the cost to themselves, they would probably be able to do so whether we had an ABM or not. It is possible that the Chinese will have developed penetration aids for their ICBM's which would be effective in exhausting a portion of the area defense component of our ABM, allowing for some of their missiles to reach our cities. Furthermore, means other than missiles could be utilized for delivering nuclear bombs to several of our urban areas—means requiring much less sophisticated technology.

But, the central issue is that our "irrational", suicidal characterization of the Chinese is not justified. It is true

that the Chinese are gripped by an ideologically and idolatry that seem totally alien to our own patterns of thought. But all man has the instinct of self-preservation, including the Chinese. They understand the meaning of deterrence, and that is our only truly reliable defense against them—just as the administration admits it to be our only defense against the Soviets.

In all candor, the proposed ABM system will be viewed by the Chinese as our attempt to preserve our option of using nuclear weapons against them at will, without a fear of any successful retaliation. This is a first-strike capability, and the Safeguard is an attempt to maintain it against the Chinese. Whether this would in fact be a strategic certainty seems highly doubtful, as I have indicated. But the Chinese, spurred by their tendency to interpret all our actions as provocative and threatening, will conclude that the ABM is an attempt to preserve our undeterred ability to destroy them whenever we believed we were justified in doing so. This development would confirm in their eyes our belligerent, aggressive power and desire for dominance. Safeguard will deepen the tension, suspicion, and hostility between our country and China, denying the credibility of any overtures we may make for new patterns in our relations.

I reiterate that if the Chinese were suicidal they would be able to cause great destruction in the United States in spite of any defensive systems we deployed. Our devastating deterrent force is our protection against the Chinese; it is reliable, for it recognizes the Chinese will not willingly seek their complete destruction.

Moreover, if we believe ABM is vital to our security will not the Japanese, or other Asian nations, believe they too should have ABM systems? Such other nations might legitimately feel they were more threatened than we. If they become convinced of the desirability of their own ABM's, I venture to say that our attempt to prevent the spread of nuclear weapons is doomed—with predictably dire consequences.

Finally, I would like to consider the role of Safeguard in providing protection against accidents. First, I believe it is important to recognize that a system which offers protection against accidents must cover the entire country. It is virtually the same system which the previous administration called Sentinel. It is phase 2 of the system now called Safeguard. It is a system whose cost will be far in excess of \$10 billion. But if phase 2 deployment is required for protection against Chinese and accidental attack, how does Safeguard offer, in Mr. Laird's words, "added incentive for productive arms control talks?" Is the implication that in the absence of successful talks, we might go beyond phase 2 to build a heavy ABM system? Or is it that we recognize that even phase 2, in conjunction with our MIRV's, threaten the Soviet second-strike capability? Do they consider the claimed protection against a Chinese and accidental attack really a pretext for defense of populations against the current Soviet forces? The record is

ambiguous as to whether the administration would agree and stop deployment of the total system as part of an arms control agreement with the Soviets.

I would emphasize that an accidental missile launch is exceedingly unlikely. We are assured that one of our missiles could not be launched by accident and there is no reason to believe that other nuclear powers will be less careful.

Nevertheless, we should consider the kinds of accidents which could conceivably occur. First, there is the category wherein a single missile is accidentally fired. If this missile did not have penetration aids which allowed it to defeat the Safeguard system, if the system were in a sufficient state of readiness, and if Safeguard performed according to design, then the accidentally launched missile might very well be destroyed in flight. I, however, do not believe that there is sufficient probability of an accident of this type and that all—and I emphasize all—conditions for successful interception would be fulfilled to warrant deployment.

But even if the ABM would protect us against a single missile launched by accident, it is extremely unlikely to provide protection against other types of accidents. Suppose, for instance, many missiles were launched through a failure of the control system. Since the administration admits that Safeguard is not designed to protect our population centers against complex attacks, it is apparent that such a multimissile accident would penetrate the defense.

It is clear, then, that if we begin to construe unlikely accidents against which Safeguard might afford possible protection, we can also construe other equally implausible situations in which Safeguard would leave us defenseless.

Moreover, the likelihood of an accident is certainly related to the level of armaments. Since Safeguard is almost certain to stimulate the arms race, its mere existence will heighten the probability of an accident. The most effective way to limit the growth of the arms race.

Furthermore, we could work for an agreement to share information on safety procedures with other nuclear powers. Why would it not be possible, for instance, for all nuclear powers to install detonating devices which would prematurely destroy any missile in the event of accidental launch?

Should we construct the Safeguard system at a minimum cost of \$10 billion to provide highly questionable protection against a very limited number of improbable accidents? Or should we protect against all possible accidents by immediately implementing even more reliable precautions that could prevent them? The latter course would provide far greater safety for only a minute fraction of Safeguard's expense.

The thin shield required for protection against accidents is much like the Sentinel. Besides the cost being potentially enormous, our relations with China, as I explained, would be further strained, and our arms race with the Soviets would be provoked. Therefore, this final justification also fails to compel my support of the system.

Every Senator who has spoken in this debate has made clear his commitment to safeguarding our national security. We all share in this pledge. But what is the meaning of this much used term? What are the qualities that make us truly secure? From where are the threats that may jeopardize our security?

Throughout our postwar history, the apostles of national security planning constantly have alerted us to potential threats emanating from outside our borders. Turmoil, uprisings, and rebellions throughout the world often are interpreted as direct threats to the security of our country. Our Nation has equipped itself with the ideology and armed capacity to intervene in such conflict situations. This has required the devotion of a growing, excessive portion of our budget to defense expenditures, prohibiting sufficient funds, and resources for use to meet our domestic needs. Thus, conditions at home have deteriorated. Now we witness turmoil, uprisings, and rebellions in our own land. Obsessed with fighting revolutions in distant countries, we have spawned a revolution inside our own shores.

The turbulent events destroying the sinew of our Nation are far more direct and grave threats to our security than the remote contingencies in foreign lands that never cease to alarm our national security bureaucracy.

Threats to our internal security can be met only with a policy of "sufficiency"—that is, devoting a sufficient portion of our resources to meet the underlying causes of our social unrest, ferment, and alienation.

We face a revolutionary situation in our land. The question is whether this revolution will be channeled into peaceful avenues of constructive change or whether it will assume a more violent character. That, in my judgment, is of greatest relevance to the security and welfare of our Nation.

It is tragic that we define our security in exclusive terms of military protection, believing that building more weapons of destruction is the only way to insure our safety.

The late President Eisenhower once said:

Every addition to defense expenditures does not automatically increase military security. Because security is based upon moral and economic strength, as well as military strength, a point can be reached at which additional funds for arms, far from bolstering security, may weaken it.

Where are we placing our trust? The temptation is to believe that our armies are the ultimate guarantee of our livelihood, both as individuals and as a nation. Disruptive threats, many believe, must be quelled only through armed force, whether at home or abroad. Yet, it is this exclusive trust in the instrumentality of armed force that often deepens the tensions of conflict and leads to further violence.

The Old Testament Prophet Hosea spoke with profound insight into precisely this problem thousands of years ago. Speaking to the people of Israel he warned:

Because you have trusted in your chariots and the multitude of your warriors, therefore, shall a tumult arise among your people.

Those prophetic words have the same relevance to our people today. Excessive, exclusive trust in the instrumentalities of war leads us to war.

Our attitudes, beliefs, and faith, then, have a direct effect on our actions, as well as those of our potential adversaries. We must realize that our interpretation of intentions and future events is a primary force that actually shapes those events. Particularly in military and strategic matters, when speculative, prejudiced, and unfounded prophecies become the basis for our policies and actions, they can cause a reaction from the opponent that fulfills our predictions or creates further strategic tensions.

Let me illustrate. When the Soviets first began to build their limited ABM system, it was claimed they were commencing a major sophisticated effort to protect their population against attack. In response, we began deployment of our MIRV system. Since then, the Soviet ABM has not continued as expected and even former Secretary of Defense Clark Clifford questioned its significance in his posture statement of last January. But, nevertheless, our MIRV has still progressed. This will certainly produce a Soviet response as another step in the arms race.

If we choose to believe the worst about the Soviet intention, and conclude they are commencing on a first-strike strategy, our proposed ABM will only motivate the Soviets to further increase their missile production. Secretary Laird could then cite this as proof for the accuracy of his apocalyptic predictions.

Likewise, if we conclude that the Chinese are irrational and erect our ABM in part to preserve our first-strike capability against them, they will see proof of our assertive dominance and continue with their unmitigated rhetorical hostility. And, we will say we were right about them after all.

In Vietnam, when General Wheeler counsels that the month lull is not a peace sign from the North, but only preparation for further offensives, we may then continue with our maximum military pressure. When the enemy finally does respond to such intransigence on the battlefield with renewed operations, General Wheeler will say he was right.

Thus, our mere interpretation of the world actually shapes the world. Overpredicting and overreacting in national security affairs actually can erode, rather than further protect our security. Believing the most dire, threatening, and apocalyptic interpretation of events, and then overreacting to such fateful perceptions is not simply "erring on the side of strength." It is erring on the side of cataclysm.

There was a time when contemplating and planning matters of nuclear strategy was called "thinking about the unthinkable. As we are forced to indulge in the discussions of "overkill" and to calculate the number of millions of deaths it would take to cripple an-

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other nation, the actual horror—the unbelievable tragedy and holocaust that would result from a nuclear exchange—these somehow are no longer so vivid in our consciousness. In the process we can easily lose respect for the sacred worth of every individual human life. Today, the likelihood of peace may actually be increased by simply thinking and planning for it more.

Only a few days ago mankind lifted himself off his global home. As man stepped down onto a new world, we all experienced the wonder of stepping out from the confines of our planet.

With the universe now before us, perhaps we can gain a truer understanding of our earthly condition; perhaps we can realize our finitude, comprehend how provincial our perspective has been, and gain a new vision of what kind of world we should create.

What does one see when he looks back upon this earth from a quarter million miles away? Our world appears as a blue, tranquil sphere gliding peacefully through space.

But on the planet, 500 million people live in a state of constant hunger. Ten thousand die each day from starvation—not because the planet lacks sufficient food, but because all its inhabitants cannot partake in the plentiful food-producing capacity.

As the inhabitants of that planet increase at such rapid rates, the disparity grows between a few, living in one part of the globe, who have most of the food, wealth, and knowledge, and the many, living in another part, who suffer escalating hunger, poverty, and ignorance.

Yet, those who live on this beautiful blue sphere suspended in the universe have produced the means to destroy all human life. They have created what equals 15 tons of TNT for every living person. And, what is more, the privileged segments of those who live there keep increasing their ability to annihilate all humanity several times over.

That is the vision of our world from outside ourselves. It is, perhaps, even akin to the way our Creator sees us.

There have been those, including Secretary Laird, who have suggested that our success in placing a man on the moon is somehow further reason for proceeding with the ABM. I believe quite the opposite.

For the first time in his history, man has left his globe and now can see better than ever before the folly of his failure on earth.

As our Nation led in freeing man from his confinement, it can also now lead in freeing man from his fear.

To that end, we must reject the sterile, senseless search for security that relies only on technically innovative weapons systems as symbolized by the ABM.

We must discard the idea that security results from devoting ever-increasing portions of our resources to perfecting weapons of destruction while the deprivation and suffering of the majority of mankind continues to escalate.

It is the time to build a world that will serve man's needs rather than threaten his life. That, fundamentally, is the issue before us, and that is why I take my stand in opposition to the ABM.

Mr. JAVITS. Mr. President, will the Senator yield?

Mr. HATFIELD. I am happy to yield to the Senator from New York.

Mr. JAVITS. I was not privileged to hear all of the Senator's address, but I have been briefed on it by the Senator from Kentucky (Mr. COOPER), who has been here all the while. I did hear the concluding portion of it, and I appreciate very much the support which the Senator is giving to this side of the debate, considering his longstanding and very intelligent participation in these matters of armaments and arms control, and his very well known deep feeling for the future of our planet in terms of the encouragement of life rather than death.

I should like to ask the Senator a question which the general tone of his address inspires in me.

There is often an effort made to try to characterize those on this side of the ABM debate, either expressly or by implication, as "unilateral disarmers:" people who would naively relinquish the power which our own technology and our own resources give us, in some blind trust that the Kremlin's leaders will "see the light" and join us in freeing man from the dreadful overweening fear of the destructive power of the atom and hydrogen bombs.

I ask the Senator—since he is probably as likely as anyone on this side of the aisle to be subjected to that charge—two questions.

First, is this approach postulated upon any such theory as I have articulated, as the devil's advocate, so to speak?

Second, what does the Senator desire to accomplish with respect to the security of the United States, in adhering to his opposition to the Safeguard ABM request?

Let us, for the moment, lay aside the idealistic conception of freeing man, and let us be just as hardheaded as the pro-ABMers. I ask the Senator to tell me what he, as the Senator from Oregon, thinks he is doing in terms of enhancing the security of our country by the position he takes.

Mr. HATFIELD. Mr. President, in response to the questions of the distinguished Senator from New York, first, I do not predicate my comments upon a belief in unilateral disarmament. I do not support that proposition. I have no sympathy for the basis upon which unilateral disarmament is advocated.

Second, as far as what are the hard and cold facts of dealing with reality rather than theory, philosophy, or idealism, I would say, first, again based upon the very eloquent words of President Eisenhower, that we have to look to assess the total strength of this Nation—I mean the real strength of this Nation, as made up of its people.

Any nation's ultimate strength is in its people, not necessarily in its arms. I do not ask for abandonment of arms, nor do I ask for abandonment of continued research on the ABM. All I ask is for better balance, and recognition that the true strength of America is measured by the strength of its people: their physical strength, their moral strength, and their economic strength.

When I see the number of people who

have become increasingly disenchanted with the so-called American system, because they have not been permitted into the mainstream of American life, perhaps due somewhat to their own deficiencies, but to other forces as well, I say this is weakening the very heart and the very future of this country.

I would like to see a better balance. I do not call for the abandonment of any of the research projects. In fact, as the Senator knows, I headed a committee to study the whole program of military spending. We recommended, in our report, the continuation of funds requested for research and development. I support that, as to both the ABM and other weapons systems. But as the Senator from New York knows, because I have heard him say it many times, when we make a commitment to expend the people's resources in the name of security or any other name, we ought to have compelling and overwhelming evidence that there is going to be a return on that investment.

We have had experience with other weapons systems and specific items of military spending, where we have gone to great expenditures, and then have had to abandon them, because there had not been sufficient research to establish their merit or guarantee their production effectiveness.

These are the things I am asking for, and I think they are the things most of those on this side of the question have asked for: Not abandonment, but balance in terms of our resources, and recognition that America's true strength, real defense, and real security must be based upon healthy people—healthy because they have the necessary protein in their food, and because their medical needs are met; because they have adequate housing and adequate opportunities for education and jobs.

That is the kind of strength we are seeking to build in asking for a delay in actual deployment of the ABM and a further guarantee of its actual effectiveness through continued research and development.

Mr. JAVITS. One further question. I would assume that the Senator feels able to take this position because he is convinced that we are, in relation to the Soviet Union, in possession of sufficient deterrent strength so that the time required to fully explore the possibilities of negotiation to freeze this arms race where it is, is available to us without material jeopardy to our security.

Mr. HATFIELD. I would agree with that, and would add the further point that we have, according to the Defense Department's figures, 4,200 deliverable warheads. This places us in a ratio of three to four times that of the deliverable warheads of the Soviet Union, and in a superior position to that extent.

We hear about the need to go to the conference table to discuss arms limitations with strength, and from a powerful position. I say that we have that position now. We have diversity, with our Polaris submarines, our intercontinental bombers, and our other nuclear weapons in Europe. We have that kind of superiority now. We have the ability to deal from strength. We are not endangering our national security.

I fought in World War II, as many other people have fought. I am not a pacifist. I believe in the role of the military. I am willing to see our military used as it should be used, to defend our Nation. But what I am saying is that there is a point at which we should seek to find balance in meeting our other needs on the domestic front, the needs of our people. I think we have reached that place in our spending policies at this time.

I did not need to recite the well-known statistics that, when President Eisenhower left office, our national defense budget was at \$40 billion, and it is now approaching \$80 billion.

We hear terms that are not defined, as the Senator from New York knows, such as "adequacy" or "sufficiency." What do they mean by that? We have not heard those terms clearly defined, and until we do, I am not persuaded that this additional expenditure and commitment at this time is one we should make.

Mr. GOLDWATER. Mr. President, may I ask a question for clarification? The Senator from Oregon has correctly quoted the size of the military budget, and correctly compared it with the budget in the year President Eisenhower left office. But if we take the slightly over \$30 billion that the Vietnam war is costing us—which is not an Eisenhower war—from that figure, we are actually spending less than we have spent since World War II on the military.

The figure of \$78.5 billion roughly is occasioned by \$2.6 billion a month plus the \$44 billion or \$45 billion we have to spend for housekeeping.

Mr. HATFIELD. That is a very good point that the Senator makes. I would respond by saying that the very fact we are in Vietnam has been used in many instances as an argument in support of the escalation of our military spending and new, additional weapons, even if we were to end the war in Vietnam today.

There is a shopping list in the Pentagon, with which I am sure the Senator from Arizona is quite familiar, of new weapons that are being held in reserve as far as funds are concerned that would far exceed 30 billion.

It is not purely a question of the 80 billion. I think that our whole policy of military spending is in question here. I think there is no question that once the war ended, we would find the Pentagon coming forth with a number of requests that they have been holding back on until the war was concluded.

Mr. GOLDWATER. Mr. President, the inventory of the military because of the war in Vietnam is very sadly depleted. We are looking at a loss of 6,000 aircraft that some day we will have to decide whether we will replace.

Frankly, if we can reduce the Armed Forces by 1 million men as a result of ending the war in Vietnam, we are looking at a saving of \$10 billion.

I say as a member of the Armed Services Committee that there will be tremendous savings, savings in the nature of \$20 billion or \$25 billion for quite a few years after the war in Vietnam ends.

I think the Senator should feel quite pleased with the efforts of the Armed Services Committee this year in that they have already cut \$2 billion off the already reduced budget we received from President Nixon.

I feel quite confident that we can cut more from the budget in fields that we have not even discussed as yet.

Mr. HATFIELD. I am very grateful to the Senator from Arizona for this effort. I think it is a step in the right direction. At the same time we are not jeopardizing our security as far as military spending is concerned.

I do feel, however, that the ABM in question here would encourage and have an effect on other expenditures in our military budget, making it very difficult for the Armed Services Committee or other committees to make cuts even if the war in Vietnam were to end.

I think we are committing ourselves down the road to something far more than the budget for this year or for next year once we embark upon the deployment of the ABM at this time.

Mr. JAVITS. Mr. President, I would not wish to abort that branch of the discussion except to point out that I think one of the big issues at stake in the ABM debate is the determination of many Members of the Senate to really interest themselves in substantive evaluation of our whole defense and security posture.

I join with the Senator from Oregon in saying to the Senator from Arizona that we, of course, appreciate the common purpose of the members of the Armed Services Committee. We add to that an additional purpose, that each of us intends to perform his own responsibility in a way in which we have not performed it before, by coming to an individual and independent judgment, uninhibited but impressed by the recommendations of our military authorities as to what is really proper, not just desirable, for the security of our Nation in terms of weapons systems and of the pattern of organization and deployment.

Mr. President, I should like to ask the Senator one other question on which it occurs to me he might have an interesting view.

The opponents of the ABM are told, "What do you fellows really beat your breasts about? The President has asked for Safeguard. He must want to succeed in the SALT negotiations—the negotiations for the limitation of nuclear armament—as much as any Senator wishes who is aligned with the Senator from Kentucky (Mr. COOPER), the Senator from Michigan (Mr. HART), the Senator from Oregon (Mr. HATFIELD), and I. That is one side of the negotiations. So, if the President says he wants the Safeguard and he wants to succeed as much as any Senators do in respect of the negotiations, then he must know what he is doing. And why not give it to him?"

Then, they point to the Russians and they say, "The Russians have made it very clear that they are not going to refrain from negotiating because we deploy Safeguard. They will go right ahead with the negotiations. Indeed, for all we know, they might even revive the Golash sys-

tem or might move up their MIRV or MRV capability or accelerate work on their SS-9. And we are not going to refuse to negotiate on that ground. So, as long as everybody has his hand in the cookie jar with respect to increasing armaments, what are you fellows arguing about?"

I would greatly appreciate the view of the Senator on that matter, because I hold to one proposition that it is not just the leaders who will negotiate. It will be the whole world and the people of both countries that will be bringing their impact on them. And they may not appreciate themselves what agreement they are capable of coming to with that kind of pressure, rather than if they are left in the conventional pattern in which we deploy Safeguard and the Russians go ahead and do something else to keep pace with us.

Can the Senator comment on that point?

Mr. HATFIELD. Mr. President, I think the Senator from New York has certainly raised a very pertinent question.

I would say in reference to the second part of the question that the Senator is actually posing a question as to whether America should lead or react.

We have great problems in the world, and they are problems in need of solution. I feel that the United States has been, you might call it, on the defensive and reacting on many of these issues rather than analyzing them and trying to do what is best for our Nation and for what we consider to be the cause, the ideals and principles we are committed to. Then, with respect to that leadership which may not be easy to define or find within the present environment, but which is what all humanity is calling for because there is tremendous need, we could stay in the same cookie jar, as the Senator remarks, and out-produce the Russians or some other country on arms. However, at what point do we come to the realization that here are these millions of people who are hungry and in need, and recognize history tells us that revolutions are not born out of passion for bloodletting, but are born out of impatience with injustice and misery?

We can either take the leadership in trying to get at the causes of these great international differences—injustice, poverty, and ignorance—or kid ourselves and say that we will only deal with the results of these forces and use force to suppress or quell or control.

It is a question of leadership or reaction.

I think the United States has to take the leadership. Second, there is a question of how we put the priorities with respect to our production. We have the resources to double our arms production. However, in so doing, we have to realize that we are neglecting the other areas of needs, to which I referred earlier—housing, education, food, medicine, and so forth—and that in the long run by producing more guns we are weakening America by not producing more houses, schools, and hospitals.

I prefer to think that the leaders are contributing far more to our general

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security and to the security of the world when we show this leadership—a leadership of inspiration and new priorities.

On the second part of the Senator's question as to President Nixon, the Senator knows that I am not a mindreader. I do not know how to respond to the question except to say that I believe the President of the United States is a very sincere man. I think he is totally and without reservation committed to his position on the basis of sincerity. But I also believe that people can be sincerely wrong, and I take the position on the ABM question that the President is wrong. We might say, "Doesn't he have more expertise and more great authorities on these military needs than we in Congress?" But the Senator from New York has been in the Senate a sufficient number of years to have seen instances in which administrations and the Pentagon and agencies of the Government, as well as Congresses, have been wrong. We are still elected by the people to make judgments and evaluations and to weigh evidence.

I think one of the great things out of this ABM debate is the very thing the Senator from New York has pointed out—that we have brought ourselves to the point where we are personally responsible to make independent, individual judgments on these military expenditures. I think the weight of the evidence that I have heard in the debate and have read in the military committee reports, and from those who serve on the military committees, indicates that there is sufficient doubt; and when we consider the vote, which was very close in the two major committees that have been dealing with this subject, I do not believe all the expertise is on one side.

Mr. JAVITS. Finally, does the Senator feel himself any less a loyal Republican because he opposes the ABM than if he favored it? And does not the Senator feel that it is just as much the duty of a loyal member of his party to keep the President from making a mistake as it is to support him in what he wishes to do?

Mr. HATFIELD. To my very good friend I would say, having known the Senator for many years, he would join me in saying that I am concerned about being a loyal American and doing the things which I believe are far more important to my country as a whole than necessarily just to my party; but there does not necessarily have to be a conflict.

In this instance, I feel a staunch and strong loyalty to both my country and to my party in taking this position. Furthermore, I would base it upon the outstanding example of the President of the United States, Mr. Nixon, when he was Vice President of the United States during the Eisenhower administration. The Senator will recall that there were instances when Mr. Nixon, as the Vice President felt, through his own convictions and judgments, that he had to take issue and was on the other side of a question with the President of the United States, with whom he was a more intimate associate than we, as Members

of the Senate, are with the executive branch.

So I think there is ample evidence in the great annuals of American history to show that there can be loyalty to party, loyalty to country—which is more important—and still have differences of opinion within as well as between the parties.

Mr. JAVITS. I thank my colleague. I think he has answered in a manner which all of us know to be highly characteristic of him throughout his service to the people of his State and to the Nation.

Mr. COOPER. Mr. President, will the Senator yield?

Mr. HATFIELD. I yield.

Mr. COOPER. Mr. President, it has been said by some proponents of the ABM in the last week that the debate is valueless, that all of us are repeating old arguments. But I should like to say, for all of us who have heard the Senator from Oregon today, that he has made a most valuable contribution to this debate. His analysis of the main elements of this complex issue, and his appeal to the Senate and to the country to use their gift of reason to come to a judgment—a judgment that must be made by the Congress and the people.

The Senator has pointed out correctly, and as clearly as anyone else has, that the central purpose of those who oppose deployment is to determine if it is possible to reach an agreement with the Soviet Union, either formally or tacitly, which will limit and control the arms race rather than expand it.

Is that not the chief purpose of those who oppose the decision to deploy at this time?

Mr. HATFIELD. The Senator is correct.

Mr. COOPER. In a very informed way, one which I believe is unanswerable, the Senator also has shown that in the event we are not able to reach an agreement and the Soviet Union continues to build and to deploy weapons which might threaten our security, there is ample time for us to take countermeasures to protect this country. I do not believe the Senator can be answered in the arguments he has made. The best intelligence this country has obtained, supports his analysis.

The Senator from Oregon quoted President Eisenhower. I recall that President Eisenhower spoke, in one of his speeches, about the necessity to control nuclear weapons. "We should never cease in this attempt," he said. It was in a speech delivered in a radio address on May 25, 1960. President Eisenhower then said, and it is applicable today:

All of us know that, whether started deliberately or accidentally global war would leave civilization in a shambles. This is as true of the Soviet System as of all others. In a nuclear war there can be no victors—only losers. Even despots recognize this. Mr. Khrushchev stated last week that he well realizes that general nuclear war would bring catastrophe for both sides. Recognition of this mutual destruction capability is the basic reality of our present relations. Most assuredly, however, this does not mean that we shall ever give up trying to build a more safe and

hopeful reality—a better foundation for our common relations.

The substance of his whole statement was that we were not doomed to inevitably and inexorably bring about our own destruction and the destruction of life and civilization. Rather that reason could prevail. That is the position that we who oppose the development of the ABM at this time have taken.

I think one of the great contributions the Senator from Oregon has made today has been to call the attention of the Senate and of the country to the higher purpose at this moment in history—to see if, in reason, in a rational way, we can find the means to halt and to control this oppressive and dangerous nuclear arms race. We have now an opportunity to resist unfounded fears and unreasoned beliefs that we have to build more and more nuclear weapons systems to protect ourselves, when in fact they are not now necessary nor would they add to our security.

Mr. HATFIELD. Mr. President, I thank the Senators from New York, Kentucky, and Arizona for this colloquy. I yield the floor.

The PRESIDING OFFICER (Mr. HOLLINGS in the chair). What is the pleasure of the Senate?

Mr. MONTROYA. Mr. President, I suggest the absence of a quorum.

The PRESIDING OFFICER. The clerk will call the roll.

The bill clerk proceeded to call the roll.

Mr. MONTROYA. Mr. President, I ask unanimous consent that the order for the quorum call be rescinded.

The PRESIDING OFFICER. Without objection, it is so ordered.

ARM: EFFECTIVE DETERRENCE OR BILLIONS FOR INSECURITY?

Mr. MONTROYA. Mr. President, I have heard the observations made by the Senator from Oregon, and I have heard him articulate his position on this very vital issue. I express my congratulations to him for the viewpoints upon which he has expounded and which he has so ably conveyed to the Senate.

We are debating this very important issue in the Senate, and we have had testimony presented as well as expert opinion on both sides of the matter. At the outset, I wish to say that I do not question the motives of the proponents or the opponents, because I believe they are sincere individuals who are trying to convey their true viewpoints and are trying to do things, in their espousal or their opposition, in the way which will best serve the interests of the country in their opinion, as the case may be.

Mr. President, today I wish to offer my comments on the decision of the administration to deploy the Safeguard anti-ballistic-missile system (ABM). In the past few weeks I have listened to and read the testimony of many of my colleagues in the Senate, read numerous articles, studied several scientific papers, both pro and con, on the subject of whether or not to deploy an ABM system.

Never before has a Pentagon budget request been so carefully scrutinized.

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During my lifetime and for the first time in the history of the nuclear age the heretofore "untouchable" military budget, bearing the label of "national security," has been seriously questioned.

My colleague, the Senator from Missouri (Mr. SYMINGTON) has pointed out that more than \$23 billion in Government expenditures have gone for missile systems development that quickly became obsolete, and in many instances were never even operative. Thus, our past failure to carefully examine and evaluate defense spending has permitted an incredibly large amount of taxpayers money to be wasted.

Mr. President, I believe we are witnessing the beginnings of a new era of congressional responsibility. Whatever the vote on the ABM, the debates and testimony of the past weeks have renewed the prerogatives vested in us by our Founding Fathers. In the future our very grave constitutional responsibilities as guardians of the taxpayer's money must be exercised, in this instance by and a careful review of all budget requests for defense programs should be conducted. No longer can we afford the luxury of a dole to our Pentagon strategists. I do want to make it very clear that I am not suggesting we lower the importance of defense spending for our national security. On the contrary, in this age of the nuclear warhead, it becomes even more important to protect the American people from attack by seeking the counsel and advice of scientists and diplomats. To this end we should continue to support research programs designed to shed additional light on sophisticated weapons systems capabilities. Only in this manner can we decide wisely.

Because of the advent of the nuclear age, however, a new dimension has been added to our strategy of defense. And this is that beyond a certain point in our arms buildup additional military expenditures for sound military defense purposes may not necessarily improve our national security posture. Instead, it may create a serious escalation in the arms race and place America in the tragic and paradoxical position of increasing the uncertainty of the balance of nuclear power in the world. Arms control talks between the Soviet Union and the United States depend largely upon the ability of nations to calculate the missile strength of the other. By deploying the ABM and provoking the Soviets into developing their own multiple independently targeted reentry vehicle—MIRV—we will only increase uncertainty—further provoking each side to develop more and more missiles, and thereby creating an endless and dangerous world military instability that can only heighten the future prospects for a nuclear holocaust.

Much has been said in the Congress recently about the Pentagon's principal reasons for wanting to deploy the Safeguard system. I would like to recount briefly the Pentagon's reasons and offer some of my own thoughts on why I believe the ABM system should not be deployed.

The Pentagon has said there are three principal reasons for deploying the Safeguard. They are as follows:

First, to protect land-based deterrent forces—ICBM's and strategic bombers—from a Soviet first strike.

Second, to protect the entire United States against a possible Chinese attack.

Third, to protect the entire United States from the accidental or irrational launching of a small number of nuclear warheads by any nation.

The Pentagon has also indicated what the ABM is not supposed to accomplish.

First, it is not to provoke the Soviet Union into reacting, and thereby escalating the arms race.

Second, it is not intended to undermine in any manner our chances of reaching an agreement with the Soviet Union on arms control and limitation.

Third, it is not a defense for American cities against an all-out attack, for this is beyond our present technological capabilities.

Let us examine first what defense officials say the ABM will not do. As I have said previously, any increase in our missile program will create an uncertainty about the balance of nuclear power and will certainly provoke an escalation in the arms race. A key factor controlling the arms race is the knowledge held by the countries concerned that there is in fact a balance. The statement by the Defense Department that ABM will not undermine the chances of an arms control agreement is nonsense. How can one negotiate for arms control while at the same time promoting the deployment of additional missiles? Could we expect the Soviet Union to respond favorably to an arms control proposal? The answer is "No."

Another contention by the Defense Department—that the ABM is not to be a defense of our cities—has some very serious implications. If the Russians and/or Chinese chose to attack us they would go after our major cities, and not the Minuteman sites the Pentagon wants to protect in Montana and North Dakota. Even if all the proposed ABM sites were deployed as proposed they would still not be able to protect our major population centers. Knowledgeable scientists contend that it would be a relatively easy matter to decoy the Spartan missiles and render them ineffective against a nuclear attack. Sprint, the other major component of ABM, would not protect adequately the population because the proposed sites are entirely outside their range. To me this evidence suggests the critical lack of defense capability—and therefore ABM as a deterrent.

There are those proponents of ABM who contend that the system is designed to guard against a first strike threat by the Soviet Union. This position is highly questionable.

First, the national intelligence estimate—a consensus view of the intelligence community—is that the Soviets are not planning for a first-strike capability. Second, the Soviets know they do not have the capacity to destroy our retaliatory ICBM's. Even if the U.S.S.R.

did launch a massive first strike it is inconceivable that we would rely solely on the Sprint defense to protect the Minuteman missile sites. Secretary Laird said the ABM was needed in the event of a surprise attack when the President of the United States did not have sufficient time to order a retaliatory attack. It is very hard to believe our present retaliation system is so slow that we would allow 100 or 1,000 Russian nuclear warheads to land on U.S. soil before clearing the Minuteman silos.

The third major reason for the Pentagon's desire to deploy the ABM system is to guard against accidental or irrational nuclear attacks. I believe the possibilities of this occurring are unfortunately very real. However, the deployment of ABM for this reason is open to several serious questions. First, any Soviet attack at the United States would be suicidal on their part. Our retaliation would so annihilate the Soviet Union or any nation that only an all-out effort by an enemy nation would be a more likely reality. If, however, there was an irrational small attack, the only city potentially protected by Sprint would be Washington, D.C. The Spartan, dubious in capability at best, would not be the primary protection in the event a missile was launched toward a U.S. city by accident.

A critical question in the debate over deployment of the ABM system is whether the proposed system will in fact work. Will the ABM disarm or render ineffective enemy missiles? The last five science advisers to the President and the President's Science Advisory Committee have raised very serious doubts as to ABM's ability to do what its supporters say it can do. The questions they raise are still unanswered. Also, most scientists concede we could render any Soviet ABM system ineffective. If that is true, it is reasonable to assume that the Soviets and eventually the Chinese would develop similar countermeasures to our ABM system. That would leave the United States with a billion dollar boondoggle of the most tragic proportions, an even larger defense budget, an escalated arms race, and millions of disenfranchised American citizens.

Mr. FULBRIGHT. Mr. President, will the Senator from New Mexico yield at that point?

Mr. MONTROYA. I am happy to yield to the Senator from Arkansas.

Mr. FULBRIGHT. First, I congratulate the Senator on a most perceptive statement. I was not intending to interrupt until that paragraph, which I think emphasizes a point which many of us who are opposed to the ABM have not been, perhaps, so alert to make as the Senator is making it, when he says how ineffective it is and even if we build it, it would merely leave us with a billion-dollar boondoggle.

I have heard all the testimony before our committee by some of the best scientists we have. They do not say that in peacetime conditions, under laboratory conditions, where there is no war, that we could not make a system work that would shoot down a missile which was

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anticipated coming, in any case, under ideal conditions. I think we can make it. Thus, it makes it difficult to say that we cannot make a system that will cut a missile down.

However, under wartime conditions, unexpectedly, where a missile would come in unexpectedly and we would not know where it could come from, or when, or whether there would be a precursory explosion, or whether there would be any attempt to jam the radars, under those conditions, I think that the Senator is absolutely correct. There is very little evidence that this would work under those circumstances. So, when I said that I do not think they would work without proper qualifications, I was immediately attacked by some of our colleagues who said that if we can go to the moon, we can build an ABM system. I think we could build an ABM system that would function under the conditions of going to the moon—that is, with no opposition; no opposition other than from nature herself. But the Senator is quite right, a very important point is that it cannot be made, I do not believe, to work, under the circumstances which we anticipate.

One other point I will say to the Senator is that we are having, this afternoon, at 4:30, a hearing in the Committee on Foreign Relations—a briefing, I should say, in which a movie made by the General Electric Co. will be shown to prove how easy it is to overcome an ABM system with MIRV's. I invite the Senator to come, if he has time.

Mr. MONTROYA. I will be looking forward to doing that.

Mr. FULBRIGHT. It will, I believe, support what the Senator is saying here. I believe that the Senator has presented very concisely and very persuasively the most significant aspects of this problem.

Mr. MONTROYA. I thank the Senator from Arkansas.

Mr. LONG. Mr. President, will the Senator from New Mexico yield?

Mr. MONTROYA. I am happy to yield to the Senator from Louisiana.

Mr. LONG. May I ask the Senator this: What difference does it make whether an ABM can overcome a MIRV, or the MIRV overcome an ABM if we do not have either one and the enemy has both? If we feel that way, we would never have had a hydrogen bomb, we would never have had the atom bomb, or the ABM, or an MIRV. All we would have now would be the bow and arrow.

I ask the Senator, What difference does it make whether MIRV can overcome the ABM or the ABM can overcome the MIRV? What the Senator is saying, in effect, is that he wants us to be absolutely defenseless; that there will be no war because we will not be able to fight. So why not send a message to the Soviet Union and say, "Come and take our country in peace. Not a shot will be fired to defend it." That is the logical conclusion to such an argument.

Mr. MONTROYA. My answer to the statement just made by my good friend from Louisiana is—

Mr. LONG. Is the Senator for the MIRV?

Mr. MONTROYA. I might state to the Senator from Louisiana that I do not think there is one Senator in this body who is against providing an adequate defense to promote the security of this country. Most of those who oppose the ABM feel that we should be meditative in our research and our development and not plunge into an expenditure of billions of dollars, such as expenditures which have been made on other parallel missile situations, which have been rendered obsolescent or useless. I think that is the main thrust of the opposition in this particular debate, that we should proceed methodically with adequate research and planning, geared toward coming out with an ABM system that will protect us. If it is resolved that it will not protect us adequately to justify the investment in such a system, then we can abort our progress in that particular field and go into something else.

Mr. LONG. Let me answer the Senator. Let us see if I can understand his position. We must have either a MIRV or the ABM if we are going to wage war successfully against what they have. He says if we can defend ourselves against what they have, we still would not be able to defend ourselves against something they might develop. As I understand it, the Senator is against defending ourselves against what they do have or will have in the future. If I understand the Senator's position, he is saying he is against defending ourselves against what they have even now.

Is the Senator in favor of developing something so that we can destroy them if they decide to destroy us?

Is the Senator in favor of having no defense, just leaving us to their mercy?

Mr. MONTROYA. I think that I have made—

Mr. LONG. Not to me.

Mr. MONTROYA. I think that I have made my position clear to the Senator, that the main thrust of the opposition is that we should provide the funding for continued research and development but not for deployment until we are in a position to know that we can adequately safeguard the security of this Nation.

Mr. LONG. May I say this: If we proceeded on that basis, we would never have had an atomic bomb, we would never have had a supersonic bomber, or a bomber that could break the sound barrier, either because many people did not think it would work or for fear that it might be objectionable to a potential aggressor.

I served in World War II, the Senator from New Mexico did also. With some of the guns we were given we could not hit anything at first. After we had been shooting for a while, we improved so that we could hit the targets—airplanes—pretty well, after we had learned how to use them.

Is the Senator in favor of unilateral disarmament? Is the Senator in favor of giving everything away, so that we cannot win? Is that the Senator's program?

Mr. MONTROYA. I should like to answer that question by asking the Senator another one: Does not the Senator

know about all the missiles which have become obsolete in the past? I recall another ABM system, in 1956, the Nike-Zeus—

Mr. LONG. That has certainly not become obsolete.

Mr. MONTROYA. Yes, it has.

Mr. LONG. My answer to the Senator is that it has not become obsolete.

Mr. MONTROYA. After we spent \$1½ billion on it.

Mr. LONG. I have in mind the latest missiles in use by both sides. The 1956 missiles were not obsolete in 1956 just as the 1969 missiles are not obsolete in 1969 altho they will probably be obsolete in 1989. By that time we should have something better, unless Congress refuses to provide it.

Someone said that the atomic tests rendered the defense impotent. That was probably because the transistors were subject to radiation. Today we have better transistors the ones we are using on ABM systems are to be far superior to the early ones. That is one reason why, after they had tried them out, we went to work to improve on them.

Put yourself in the position of developing a missile that can shoot down MIRV and by that time the Russians may have a MIRV.

Hopefully you should have by that time both a better defense missile and a better offense. As I understand it, the Senator wants to fix it up so that we cannot defend ourselves while they can defend themselves. Therefore, I presume the Senator is what I would call a pacifist in saying that we will do nothing to offend the Soviet Union because it might mean war.

Would the Senator agree with Mr. Goodwin's argument when he said the mistake President Kennedy made was to permit the Army to acquire the ability to fight a conventional war because had it not been for that, there would have been no war in Vietnam? The same man is against us acquiring the ability to fight any other kind of war. That is pacifist philosophy. Why does not the Senator take a white flag to Moscow and say, "Here we are boys. Come and take our country. There will be no resistance."

Mr. MONTROYA. Let me say to my good friend from Louisiana that I have served in Congress for 14 years, and I have voted for every appropriation that was geared to build up the security of this Nation. I have voted for materiel for our GI's in Vietnam and all over the world. I have done everything possible as a patriotic American, and I certainly look with disfavor upon the Senator's trying to cast reflection upon my patriotism and what I have done to promote the security of this Nation.

Mr. LONG. What I would like to know is, Senator, what are you for? You tell us that we cannot defend ourselves against MIRV.

In fact, I think the Senator is saying we cannot defend ourselves against what they have now, and he is against defending ourselves against what they have now and even trying to defend ourselves against MIRV or building MIRV's so we strike back even if we cannot defend our-

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selves against an attack by them. What is the Senator for? Surrendering?

Mr. MONTROYA. Mr. President, I will continue with my statement. I think the Senator and I have had enough dialog to reveal our divergent viewpoints.

Mr. LONG. Or is the Senator in favor of giving it away, like foreign aid, without ever appropriating for defense?

The PRESIDING OFFICER. The Senator from New Mexico refuses to yield to the Senator from Louisiana.

Mr. MONTROYA. Mr. President, the basic issue is whether or not Safeguard is necessary to deter a massive Russian first strike at the United States. I believe the evidence shows conclusively the answer is "No." Our deterrence depends on the unquestioned ability to retaliate on a massive scale. We now have that ability.

Mr. LONG. Mr. President, will the Senator yield?

Mr. MONTROYA. I refuse to yield, Mr. President. Some 645 strategic bombers, 41 missile-launching submarines carrying a total of 656 weapons, and 1,054 land-based ICBM's are now part of our operational defense. Each one of these forces can inflict devastating damage on the Soviet Union or China. Approximately 22 of the 41 Polaris submarines are stationed in different parts of the world within striking distance of the U.S.S.R. Twenty-four hours a day, every day of the year the giant Strategic Air Command—SAC—bombers are on full alert, ready to take off on a moment's notice to defend our Nation. Day and night, long-range, early-warning radar systems scan the skies for the first indications of an enemy attack.

Why does not the Soviet Union attack us? The answer is because of a certain knowledge—deterrent knowledge—of the ability of the United States to inflict a fatal blow to their country. The Russians have this ability also, and hence the balance is there. The ABM system threatens to alter this balance drastically; it threatens to escalate the arms race to a point where we would be contributing to instability in the world instead of working toward arms control and world peace.

Any government or business endeavor costs money, and the ABM system is no exception. If the ABM deployment caused the expected Soviet military reaction—we would have to expand into an even more expensive, and heavier Safeguard system. The estimated \$7 billion initial cost would run into the hundreds of billions of dollars. The prospects for even higher taxes and additional inflationary trends would be increased. Mr. President, this would be an unnecessary burden on the already overburdened taxpayer. Our dollar continues to lose its buying power, domestic social ills mount, and the poverty and hunger in America that so urgently requires our attention will continue to be neglected—a pawn to the overblown defense budget. Eventually our own internal disorder and neglected domestic social ills will act as a measure of national insecurity.

Today a measure of our tax dollars should definitely be for defense; however, only when the defense programs

planned show evidence that they will work and they will contribute to our national security, and not insecurity.

Mr. FULBRIGHT. Mr. President, will the Senator yield?

Mr. MONTROYA. I yield.

Mr. FULBRIGHT. I do not like to interrupt the Senator too much, but I wish to refer to some comments that have been made. Neither the Senator from New Mexico, nor I, nor the Senator from Tennessee, nor any other Senator, is proposing anything like what the Senator from Louisiana suggests—unilateral disarmament, and so forth. The evidence is very clear that this country possesses today a substantially greater number of nuclear weapons and a substantially greater number of weapons that are necessary to destroy the Soviet Union completely, all of its major cities, and so forth.

The issues the Senator from Louisiana raised are not the issues at all, in my opinion. We have plenty of defense. This testimony comes from the Department of Defense, from the highest officials both in the military and in the intelligence community. So I think the comments of the Senator from Louisiana were completely irrelevant to the point the Senator from New Mexico is making.

I do not want to interrupt the Senator further, but I want to compliment him. I think he especially deserves a compliment because his State happens to be the State in which the development of some of our missiles have taken place. It is my understanding that the principal proving ground for the Sprint missile is in New Mexico, if I am informed correctly.

Mr. MONTROYA. That is correct.

Mr. FULBRIGHT. So the Senator, in my view, is not only exercising discriminating judgment in seeking to bring the great military establishment back under some degree of supervision by the civilian branch of government, more particularly the Senate; I think he has performed a great service to the Senate and to his people. I congratulate him on his political courage and on his discrimination in taking the position he has.

Mr. MONTROYA. I thank my good friend from Arkansas. May I state that I did not arrive at my position lightly. I attended many briefings at the Pentagon. I have read a great deal on the subject. I have read the testimony of others. I have read and listened to the scientists on both sides of the issue. I arrived at my decision because I felt that this is the position that I should take in good conscience.

Mr. FULBRIGHT. If the Senator will yield further, I am quite certain that is true. When the Senator, at the very beginning of his speech, stated that one of the principal issues in this debate and concerning the ABM is whether or not the Senate of the United States is capable of exercising a degree of supervision, a degree of examination and criticism of a military budget, I point out that it has not been done since I have been here on the floor of the Senate. I do not mean to criticize the committee. I am sure the committee has gone over that. But never before in 25 years—I believe the Senator

from New Mexico has been here 12 years—have I ever seen a debate like this. I thank the Senator for the great service he has rendered.

Mr. MONTROYA. I would like to add further that because the Senate has decided to assert its right of deliberation and decide its prerogative of surveillance over national defense expenditures, the country is now well informed on this issue and it can support any judgment made by any Member of this body.

Mr. GORE. Mr. President, will the Senator yield?

Mr. MONTROYA. Yes, I yield to the Senator from Tennessee.

Mr. GORE. I have listened intently to the address of the distinguished Senator from New Mexico. In my opinion, he has delivered and is delivering one of the most learned addresses on this subject that this great debate has afforded in the Senate. He has demonstrated a degree of study and acquaintance with the basic problems and the scientific principles involved that few have shown. I wish to express my gratitude and my admiration for the speech and to him for having made it.

In the context of security and who is for the security of the country and who is for surrender—I regret the terms that have been introduced into the debate—to return to the question of security, is not the goal of every Senator, in the view of the junior Senator from New Mexico, the security of the United States?

Mr. MONTROYA. There is no question about that. As I stated at the beginning of my talk, I did not question the motives of Senators here who were on either side of the issue with respect to whether or not they were for or against the security of our Nation or for or against maintaining it. I believe every one of them is motivated in the same direction.

Mr. GORE. True; and those of us who sincerely reached the conclusion that the deployment of the ABM system as proposed would lessen rather than increase the security of our country are entitled to respect for our judgments.

Again with respect to security, is not the security which we seek the avoidance of nuclear war?

Mr. MONTROYA. That is the greatest security that we seek.

Mr. GORE. And with two nations, great and powerful as they are, each with the power to destroy the other several times over, is not the real security for us, as well as for them, avoidance of war; and if avoidance of war is the goal, and our strategy in trying to avoid war is one of deterrence, is it not axiomatic that if ABM missiles were necessary to use to try to combat a nuclear attack upon the United States, then the strategy of deterrence itself would have failed, and the security that we seek in the avoidance of nuclear war would indeed have been breached? Does the Senator agree with that?

Mr. MONTROYA. Yes; I agree with the Senator from Tennessee on that point.

Mr. GORE. So if what we are really seeking here is a formula of security to avoid a nuclear war, then the question is, Will deployment of an antiballistic

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missile nuclear weapons system lessen or increase our security?

I submit that the real measure of security is avoidance of nuclear war, and that avoidance of nuclear war can best be achieved by an understanding between the United States and Russia on the limitation of the deployment and the use of nuclear weapons.

If that be true, then the question is, Will deployment of the ABM system make it easier to achieve such an understanding, or more difficult to achieve such an understanding?

I have reached the conclusion that it would make it more difficult; indeed, it might make an understanding impossible; and I think I am entitled to reach that conclusion without being accused of waving a white flag of surrender.

I thank the Senator. I recognize him as one of the patriots and one of the able men in the U.S. Senate. He is making a very learned address, to which respect is due and attention is directed.

Mr. MONTOYA. I thank the Senator from Tennessee.

Mr. STENNIS. Mr. President, is it convenient for the Senator to yield to me briefly on one point?

Mr. MONTOYA. I yield to the Senator from Mississippi.

Mr. STENNIS. I appreciate the Senator's yielding to me particularly at this time, because I have a pending matter, and I shall be quite brief.

If I may point it out, on page 1 of the Senator's talk, which I have before me, the Senator made the following reference:

My colleague the Senator from Missouri (Mr. SYMMINGTON) has pointed out that more than 23 million dollars in government expenditures have gone for missile systems development that quickly became obsolete, and in many instances were never even operative. Thus, our past failure to carefully examine and evaluate Defense spending has permitted an incredibly large amount of taxpayers money to be wasted.

Mr. President, first a wish to say to the Senator that I think he has made a splendid presentation here on this subject matter, and that it is an important contribution to the debate. I know he is sincere, and I do not believe that anyone accuses the Senator from New Mexico, or any other Senator, of being otherwise.

Mr. MONTOYA. Mr. President, may I also say to my good friend from Mississippi that I have listened carefully to his many presentations on this subject, and I have nothing but great respect for him, even though we differ in viewpoint on this matter.

I wish to say that I do not question his motivation or his sincerity, because I know he is a sincere man and a conscientious man, and I respect his position on the vital issue before us.

Mr. STENNIS. I thank the Senator very much, and look forward to working with him in the future.

On this \$23 billion item, I call to the attention of the Senator from New Mexico and other Senators that on July 2, just as soon as we got this bill written up, I undertook to answer 5 or 6 months of charges of various kinds that had been leveled against that same \$23 billion,

and, in a presentation to the Senate beginning on page S7466, I gave what might be called a speech—it is really a documentation—of all the major items that go to make up that \$23 billion.

I respectfully call it to the Senator's attention, and hope that he will look at it, and, if I may, I shall just briefly refer to a few of these items that are alleged by some, though not the Senator from New Mexico, to have been waste, but alleged by him to be items that "quickly became obsolete and in many instances were never operative."

First, as to those that were never operative, there is a list on this page that I have already referred to of these various missiles, in which those that never became operative are listed first, and they total \$4.1 billion. That list goes back as far as 1945, or perhaps earlier, on through the year 1965, and represents a large number of efforts to get missiles—many of them small missiles—that never did come through, so to speak. They never were perfected, due to various wrong starts or misconceptions of the proper starts.

Many of them, however, without going into details, became really the original, first generation of those that were later highly successful.

I refer to one here, the mobile Minuteman, charged here with \$108.4 million. One principal sponsor of that item was none other than Dr. Wernher von Braun. I remember hearing his testimony about how our bombers put him out of business so many times in World War II, and he thought it made a very great difference. He had to keep on the run all the time. He wanted a mobile Minuteman. I think that is the first type that we envisioned and merely, in effect, authorized the research on; but it did not turn out that way. It developed in another direction, and the Minuteman became our first major solid fuel weapon. I hear a rumor every once in a while that they may want to go back and try to make it mobile again, but that was years and years ago, that that decision was made.

I refer to another item. Here is the Skybolt. That was one thing that was quite hopeful at first, and it turned out that it got mixed up in some bad company, maybe, or they got into a hassle about it some way. Anyway, it was finally cancelled out, but we learned a great deal from it, and it has been displaced by other families of weapons now.

Now dropping down to the ones I consider to have been outstandingly successful, in this other list, we have the old Redstone. That was one of the most successful missiles we have ever had—not one of the larger ones, but when we were thrashing around, looking for something to try to put up a little Sputnik, when we were on the small end of things, it was this old Redstone missile that we finally turned to put that little old pellet, more or less, in size, in orbit; and it was the standby, for a long time, as one of the most important missiles of the Army.

Here is the Polaris, listed as now no longer deployed, with an investment of \$1.132 million. Waste? Let us see what its history is.

By the way, there was no missiles sys-

tem that was more unpromising, in the beginning, than the Polaris.

I remember going down to Florida because I had doubt and disbelief. When I looked over what they had then, I had more disbelief. It blossomed, however, into the most successful one we perhaps have ever had—Polaris I and Polaris II, the next generation.

We are now going into the Poseidon. We have these submarines on the seven seas, as the Senator knows, with those marvelous weapons. That goes with it. It is all based upon the basic concept of Polaris I. However, in some way that item got thrown in here and has been charged to waste. The Senator made reference to that.

Atlas D, E, and F cost \$5 billion of that \$23 billion the Senator mentioned.

The old Atlas stood there with all of its might and was the only thing we had for years to span that gap when we were threatened.

The Titan would still be our principal defense in this way had we not perfected the Poseidon and the Minuteman that we think are better. Even today, we still have the old Titan missile. The Titan I is listed here as being one of those that were of questionable value and is now no longer deployed.

I will not detain the Senator any more. I appreciate his yielding to me.

Here is a list of what I believe has a full explanation of all the major items on the list.

Mr. MONTOYA. Mr. President, I appreciate that the Senator from Mississippi has furnished me with that list. I failed to find the list heretofore. I did ask for a breakdown of the \$23 billion, and I was unable to get it up to the last minute. However, as the Senator knows, I ascribed this \$23 billion figure to the Senator from Missouri (Mr. SYMMINGTON), who mentioned it on the floor.

Mr. STENNIS. I am not blaming the Senator.

Mr. MONTOYA. Mr. President, I should also like to add to the list, if the Senator does not have it on the list, the following reference with respect to the other missile development.

I mentioned a few minutes ago the development of an ABM system beginning in 1956 with the Nike-Zeus. This program terminated in 1965, after we had spent \$1.4 billion.

Secretary McNamara said in 1967 that if the Nike-Zeus had been completed and deployed, it would have cost about \$13 billion to \$14 billion and that most of it would have been torn down and replaced by new missiles of the Nike X system long before it became operational.

The Nike X system was begun and was modified as research and development progressed. That missile was replaced by Spartan. The investment cost in research and development, according to McNamara, would have amounted to \$16 billion.

In 1966 Secretary McNamara estimated that it would be around \$24 billion over a 5-year period. By 1969 the estimate was up to \$40 billion.

Significantly, Secretary McNamara argued against its deployment because it

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could easily be rendered ineffective at that time in his opinion.

Mr. STENNIS. Mr. President, the \$40 billion was an estimate. That was not an expenditure.

Mr. MONTOYA. The Senator is correct. I did say that.

Mr. STENNIS. There is a long history behind this effort by Soviet Russia and the United States of America. This has not been an easy, primrose path.

I remember that the old Nike program began with Ajax and Hercules. We are still using them. We finally went into the Zeus. However, that did not work out well. Therefore, it was dropped as such.

I would have added this explanation, but getting together the bill and the hearings kept all of us very busy. I wanted the matter to be fully researched.

May I refer to one other item. The Senator referred here, on page 2, to the question about the chances of arms control and the fact that the ABM is just nonsense, and he argued that it does not have a place here.

With all due deference to the Senator, I have come to the belief that perhaps the best hope against a nuclear war is for the Soviet Union and the United States of America both to have an effective weapon and for each to know that the other has it.

That will be the greatest achievement, I believe, in avoiding a nuclear war. And I am awfully concerned that if one ever starts, it will be too late.

Mr. MONTOYA. I think that is where an equal division of Senators occurs, on whether it would accomplish that objective.

Mr. STENNIS. I think that if we both had something that was effective and each knew the other had it, that would come close to stopping trouble.

Mr. MONTOYA. Mr. President, I believe, because of what I have said, that my position on the ABM is sound. I believe, however, that there should continue to be a vigorous and carefully planned research and development program to answer the many scientific and technological questions still unanswered about the ABM. The amendment offered by Senators COOPER and HART—S. 2546—and amended in a joint statement on July 23, 1969, offers a constructive alternative to deployment, and I intend to support their measure. Under this amendment none of the funds could be used for deployment of any component or element of the proposed Safeguard system at any proposed deployment site. There should be no premature and dangerous commitment to deploy anti-ballistic missiles, and we should pass legislation to insure that.

In summary, Mr. President, I will vote against the deployment of the ABM missile system, but intend to support continued scientific and technological research in this area.

Mr. HART. Mr. President, will the Senator yield?

Mr. MONTOYA. I yield.

Mr. HART. Mr. President, I rise simply to join the other Senators in thanking the Senator from New Mexico for the soundly reasoned comments he has voiced. I believe the Senator to be right.

I hope that none of us doubt the desire on the part of each of us to be right. And I am delighted that the Senator from New Mexico came to the conclusion he did.

Mr. MONTOYA. I thank the Senator from Michigan.

Mr. MANSFIELD. Mr. President, will the Senator yield?

Mr. MONTOYA. I yield.

Mr. MANSFIELD. Mr. President, I had an opportunity, thanks to the distinguished Senator from New Mexico, not only to hear part of the speech, but also to read it in its entirety.

I join with the distinguished chairman of the Committee on Armed Services, the senior Senator from Mississippi (Mr. STENNIS), and all others who have spoken on the floor this afternoon in commending the Senator from New Mexico for the thoughtfulness and the study and the detail into which he has gone to explain his position on this most important question. It is perhaps the most important question which may come before this particular Congress, because so much hinges on it in so many ways.

I have known the Senator since he served in the House of Representatives on the House Appropriations Committee and since he came to the Senate, where he now serves on the Committee on Appropriations and I believe on some committees which have to do with defense matters.

I wanted the Senator to know that I thought his speech was statesmanlike. I commend him for the care which went into it and assure him that it was a pleasure for me to listen to the Senator make arguments that I would have been honored to join him in making.

It was a statesmanlike speech. I commend the Senator.

Mr. LONG. Mr. President, will the Senator yield?

Mr. MONTOYA. I yield.

Mr. LONG. Mr. President, may I point out to my good friend, the Senator from New Mexico, that the point he makes about waste brings me back to something I heard when I first came to the Senate about 20 years ago.

At that time we were trying to defend ourselves against Russian aggression. We were talking about whether we were satisfied that these expenditures to beef up our defense would be wise expenditures or would be wasteful.

As one military officer said to me at that time, "Senator, you ought to hope that every nickel you spend on the defense of this Nation will be wasted. You ought to hope you will never have to use any of those weapons to defend our country. You ought to hope that every cent of it will be wasted."

However, I cannot for the life of me see that we would be wise to rely in the future upon weapons that by that time will become obsolete, because they all become obsolete in time if better weapons are developed to save this country, when a competitor is developing better weapons and more sophisticated weapons which can totally destroy the weapons which are today modern weapons.

For that reason, I find myself believ-

ing that, in defense of a great nation such as this, we must be at least as good, and hopefully better, with the best of weapons, particularly when confronting countries that outnumber us by as much as 4 to 1 in population. They will proceed with the development of the most sophisticated weapons. There is no way to keep them from doing it.

It seems to me that the money spent on research would be wasted unless you are going to go ahead and build the weapons. Even when you build them, you never know how good they are until you have tried them, but for that matter neither will your adversary.

The Senator has used the illustration of our supreme achievement, putting a man on the moon. We put a man in space and then a man orbited the earth several times. We then put several men in space and they orbited the earth, and then we proved we could orbit and dock the orbiting missiles together.

After that, we proved that we could reach the moon, that we could orbit the moon, that we could put two vehicles up there, separate them, and bring them together again. So we proved everything before the final stage of landing and re-entry from the moon.

I am certain the Senator saw the supreme achievement of this country, which is the pride of our generation. I think it is the finest technical achievement of our time. It was done step by step.

For the life of me, I cannot see how one could hope to improve on his way of doing business unless he first went into business. We have developed the capacity to build the best missiles, make supreme achievements to outcompete the other fellow. But if we do not begin to build missiles and to follow through with it and to prove that they will work, how can the Senator hope, by merely doing research on something and not building it, ever to be able to defend, when the other fellow not only is doing the research but also is building them and trying them out under field conditions? How can one go into business 20 years behind the other fellow and hope to overcome him on the day of going into business?

For example, trying to shoot down incoming missiles requires several things. First, it requires the electronics, it requires the missile, and it requires somebody who knows how to aim it. If he never has tried it, he will not be a very good shot. Compare that to a hunter shooting ducks. If he has never tried it before, he will not be a very good duck hunter.

You have to try it in order to find out where you fail and where you succeed. If you never build the thing, never put it into place, never begin to implement it and improve on it, how would you know whether you have achieved anything? How does one know he cannot succeed unless he tries it?

Mr. MONTOYA. I do not think the Cooper amendment discourages that.

Mr. LONG. The Senator says he would not put anything in place; he would not start building the defense. If an enemy knows you have no defense and he wants to attack you, he knows he can do that pretty much with impunity, because you

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have no defense. If you have a defense, at least he is taking a chance. Your defense might work and you are striving to improve it.

I have not followed the entire debate. Some of it was not very enlightening and some of it made a lot of good sense. I read a newspaper story the other day in which someone said that on an atomic test, for 800 miles the defenses would not work. I assume that would be because at that particular time we did not—at that time—have a transistor which could resist radioactivity. We have that now, so we have overcome it. That problem, I believe, has been solved. We will move on to the next problem.

Mr. MONTROYA. Is the Senator aware that under the Cooper amendment, research, development, and testing would be permitted?

Mr. LONG. I understand that, but the point is that there would not be anything with which to defend ourselves.

Mr. MONTROYA. The Cooper amendment really is designed to prevent deployment and prohibit the expenditure of money for hardware until the research, development, and testing indicate to Congress that it would be a sound investment.

Mr. LONG. To me, it would be like saying, "Please, mother, may I go out to swim?" and receiving the reply, "Yes, but don't go near the water."

If a man is coming at you with a loaded rifle and you have a beautiful rifle on the drawing board, what good are those blueprints going to do you when the other fellow is using a rifle on you?

I recall my own experiences—sometimes one is prejudiced by that—back in the days when we were trying to defend ourselves against enemy aircraft. We were very poor to begin with. After a while we got so that we were bringing a lot of them down. Suddenly our side developed a projectile that had a proximity fuse on it. At that time, our anti-aircraft fire was absolutely brutal murder on the German airplanes. They had no chance.

One may develop something which leaves something to be desired, but we never can tell what day someone will come up with the final solution.

Let us compare it with what the North Vietnamese have done to our airplanes. When they first put their SAM missiles against our planes, they were very ineffectual. But as they used them and gained more experience and overcame the defects, they became very effective. That is what our planes will be competing with if they try to invade the Soviet Union—all the experience of Russian missiles employed against our planes, with Russian advisers, with North Vietnamese at the trigger. They are very effective, but they were not effective at first.

If you never build the hardware, it will never do you any good. Sometimes all you need is a few technical changes to make the thing work.

It seems to me that the Russians are a great deal ahead of us in missile defense. It is dangerous to permit them to get any further ahead unless one takes the view that some take—which the great White House adviser Richard Goodwin

seems to have—that there will be no war if we are not able to defend ourselves. I do not think the Senator shares that view.

Mr. MONTROYA. I do not subscribe to that view, because in this case we have the Safeguard and the deterrent of having the SAC bombers on alert and the Polaris submarine with the Poseidon missile—we will have it—with the multiple warhead. I do not think Russia would ever risk sending an offensive missile to destroy our cities or to do harm to our landscape, for fear that our effective retaliation would be set in motion.

Mr. LONG. All these things become obsolete as the enemy improves his defense. It can be compared to any game, whether it is football, baseball, or anything else. As the other fellow improves his defense, your attack becomes ineffective unless you improve your attack. Any team or any army which can attack but cannot defend cannot win a war against an army which can do both effectively.

In view of that, for the life of me, I cannot see how we could hope, by failing to have a good missile defense, to advance this national interest.

I believe we have wasted a great deal of money in some instances. I once served on the Committee on Foreign Relations. Hearings against this missile are being developed by that committee. Having served on that committee, I must say that in the past we have spent a great deal of money and have given our resources away to foreign nations, without getting anything in return. Much of this was utter waste, and we have no hope of ever getting anything in return, except perhaps some good will. In many instances, the countries hate us now, despite all the money they have received from us. This country has been strong enough to defend itself and to remain at peace with all the major powers. Admittedly, we have had to contest our position with some of the minor powers.

But we have never had to fight a major war because they knew we were strong and we knew they were strong; we respected one another for what we were.

Mr. President, I think the Senator made a statesmanlike presentation but I hope he considers the feeling of some of us that we must defend our Nation effectively.

Mr. MONTROYA. Mr. President, I want the Senator from Louisiana to know that I thoroughly respect his position on this matter. I have never questioned his position and I have never questioned his motives. I stand on that.

Mr. LONG. Mr. President, the same compliment goes both ways. I thank the Senator.

Mr. MONTROYA. I yield the floor.

MESSAGE FROM THE HOUSE

A message from the House of Representatives by Mr. Bartlett, one of its reading clerks, announced that the House had passed a bill (H.R. 13080) to continue for an additional 15 days the existing rates of income tax withheld at source, in which it requested the concurrence of the Senate.

EXTENSION OF THE SURTAX

Mr. MANSFIELD addressed the Chair. The PRESIDING OFFICER (Mr. GURNEY in the chair). The Senator from Montana is recognized.

Mr. MANSFIELD. Mr. President, what is the status of the bill from the House of Representatives which is at the desk?

The PRESIDING OFFICER. The message has just been received from the House of Representatives and is at the desk.

Mr. MANSFIELD. Mr. President, what is the next move?

The PRESIDING OFFICER. It can be referred or a Senator could ask that it be laid before the Senate for its first reading.

Mr. DIRKSEN. Mr. President, a parliamentary inquiry.

The PRESIDING OFFICER. The Senator will state it.

Mr. DIRKSEN. Normally, Mr. President, we could have first reading; but after the second reading I think that would be the appropriate place to ask that it go on the calendar.

The PRESIDING OFFICER. The Chair can lay it before the Senate and have first reading under the rule, but a second reading has to be requested by the Senate.

Mr. MANSFIELD. Mr. President, has first reading been had?

The PRESIDING OFFICER. The Chair lays before the Senate a message from the House of Representatives, which the clerk will read.

The ASSISTANT LEGISLATIVE CLERK. A bill (H.R. 13080) to continue for an additional 15 days the existing rates of income tax withheld at source.

Mr. MANSFIELD. Mr. President, to keep the record straight, have we now had first reading?

The PRESIDING OFFICER. We have had first reading.

Mr. MANSFIELD. Mr. President, after discussing the matter with the Senator from Louisiana (Mr. LONG) and others, we would have no objection to having the bill placed on the Calendar in the ordinary course of events rather than to delay action by endeavoring to refer it to the Committee on Finance, or by entering an objection which would force the measure to lay over for a day, which in turn would place it on the Calendar tomorrow, but by the same token would not make it available for consideration until the next legislative day. That would take us beyond midnight tomorrow, the time at which the present surtax law expires.

The position of the Democratic Policy Committee and the Democratic members of the Committee on Finance has not changed one bit, but in an effort to further accommodate those who are so desirous that this matter be rushed into, we have decided that this would be the best way to face up to it.

Mr. DIRKSEN. Mr. President, to reserve all rights, I would normally, I think, interpose an objection after the second reading. Then, the bill would go to the calendar. But before I do so—

The PRESIDING OFFICER. It would have to wait until after—

Mr. DIRKSEN. That is correct. I understand.

The PRESIDING OFFICER. Does the Senator from Illinois ask for a second reading now?

Mr. DIRKSEN. I could ask for it, but I shall withhold now because I do wish to address an inquiry to the distinguished majority leader.

Normally, they had in mind that the bill go to the Committee on Finance for further consideration. In that event, it would have to be reported back. My whole hope was to have immediate consideration and if that were appropriate I could ask for immediate consideration of the proposal that is now before us. I would anticipate there might be objection, but if it is in order to make that request at the moment, I think I shall do so. I do not know whether that comes after the second reading or before.

The PRESIDING OFFICER. The Chair advises the Senator he could ask for second reading or he could ask unanimous consent that the bill be considered immediately.

Mr. DIRKSEN. I make the latter request.

Mr. MANSFIELD. I object.

The PRESIDING OFFICER. Objection is heard. Does the Senator from Illinois wish the bill to be read a second time?

Mr. DIRKSEN. Yes.

The PRESIDING OFFICER. The bill will be read the second time.

The ASSISTANT LEGISLATIVE CLERK. A bill (H.R. 13080) to continue for an additional 15 days the existing rates of income tax withheld at the source.

Mr. MANSFIELD. Mr. President, a parliamentary inquiry.

The PRESIDING OFFICER. The Senator will state it.

Mr. MANSFIELD. Mr. President, does this mean that the bill now goes on the calendar?

The PRESIDING OFFICER. If there is an objection to further proceedings then, yes, it would go on the calendar under the rule.

Mr. DIRKSEN. I would have to make that objection.

The PRESIDING OFFICER. Objection is heard. Under rule XIV, paragraph 4, the bill will be placed on the calendar.

Mr. MANSFIELD. Now, Mr. President, before that bill will become liable for action on the part of the Senate it would have to lay over 1 legislative day. Is that correct?

The PRESIDING OFFICER. The Senator is correct.

Mr. MANSFIELD. And that on tomorrow it does become liable for some action.

The PRESIDING OFFICER. It would be in order to take it up tomorrow.

Mr. MANSFIELD. Mr. President, in explanation to the Senate, may I say that even in the field of accommodation one can go too far, and that was the reason I had to most respectfully and reluctantly object to the unanimous-consent request of the distinguished Senator from Illinois.

Mr. DIRKSEN. I understand the position of the majority leader. At the same time I would like to make abundantly clear the problem that confronts us and the administration.

I thought I made it abundantly clear on yesterday, in pursuance of the memorandum that was submitted by the majority members of the Committee on Finance and the Majority Policy Committee that there would be acceptability of a 5-month extension of the surtax, provided the administration accepted and provided that the majority leadership accept it.

Last night some time after 8 o'clock the President was contacted in Asia. The telephone call was made by the Vice President. I was not privy to that conversation. Therefore, I do not know in what detail they discussed the matter. But in any event, on the basis of the President's reply a statement was made this morning to the effect that it was not acceptable to the President; and he had hoped that perhaps the Senate would proceed with H.R. 12290, presently on the calendar, which came out of the House on the 30th of June and which came out of the Committee on Finance of the Senate on July 17. That is the five-package bill, taking care of those at the impoverished levels, taking care of the excise taxes, the surtax, the investment tax credit, and I think one other item.

We have gone through that lesson book and we could very well call up H.R. 12290 and satisfy the administration by discussing and disposing of the bill, because that is quite consonant and quite in line with the request the administration made in its tax message to the Congress.

Now, today, by a 3-to-1 vote, the House of Representatives has passed the so-called 15-day extension. However, it deals only with the question of withholding rates and nothing more. Fifteen days takes it, roughly, about to the point of the agreed midsummer recess which begins on August 13. At that point, of course, the extension bill is then payable. From then on, the complications develop for industry, business, and for every other enterprise in the country.

I mentioned only a little while ago that not the least of the headaches, of course, will be in the case of employees on whom withholdings have been made where probably not enough was withheld, in which event, at the end of the calendar year, they would be owing a larger sum of money, provided the surtax was finally continued. That would be an unhappy state of affairs, and they would be grouching all over the place.

But I see a greater crisis and a greater danger, Mr. President, than all that. Those are probably the inconveniences of the moment. What frightens me a little, first, are the gyrations of the market which reflect not only domestic thinking but also the thinking abroad. We have a tendency to forget that there are \$40 billion in money and in short-term securities mainly in the hands of European bankers. Our gold supply is only about \$10 billion and there are \$40 billion in obligations abroad. Every time the Chairman of the Federal Reserve Board, every time the Secretary of the Treasury in this and prior administrations went abroad and undertook to get a report, it was the same old story.

Always and always those who were the stewards of the fiscal welfare of these countries on the other side of the Atlantic have constantly said to us, "Are you going to face up to your responsibility, or aren't you?"

Now that followed a policy of restraint and is causing us no undue difficulty up to this point; but if, on the other hand, they decide that this body in its entirety—and I have to include the House—will not face up to this problem in the terms and under the conditions prescribed by the administration, then what?

Suppose they undertake a massive liquidation. Who do we think will get hurt? We are going to get hurt. We shall be hurt in a great big way before we get through. That is what bothers me.

Thus, I had hoped that we could go along and probably extend that surtax a little longer.

I should observe that one objection I had to the November 30 cutoff date was merely that they tell me from a practical standpoint it does become too operable. I presume by that they mean the administrative difficulties that somehow ensue.

I pretend to be no expert in that field. I am content to rely upon the observations of others who have some knowledge of it as to whether it is really operable without undue inconvenience. They say, "No." I am content to abide by their judgment. That is the reason I took exception to it. I did say yesterday—and I was quoted correctly—that it was an old rule with me that if we cannot get a whole loaf of bread, then let us take whatever bread we can get because we cannot always be a chooser in this world.

Had this been extended to December 31, I think, because of the fiscal year indication as well as the calendar year indication, it would have been easier than it is now. But evidently at least there has been no indication that this will be done. Had an amendment been offered or had this proposal submitted by the joint Finance and Majority Policy Committees been offered, let us say, either as a substitute or as an amendment to the 15-day extension bill, we probably could have made something of it.

I think there is an inclination toward restraint here in not loading up the measure that came along with extraneous or even germane amendments, in the hope that action can be had. But there is no hint, there is no clue, that that will be the case.

I allude to only one other thing, that there has been such a passionate expression about tax reform—meaningful tax reform—comprehensive tax reform. I think it was a disposition to believe that it was one of those vague and nebulous things that was in the offing somewhere. I am advised now, this afternoon, that the tax reform bill will be filed in the House of Representatives this afternoon. It means that the Ways and Means Committee in that body have certainly been diligent. They are about 10 days ahead of their timetable.

In view of that fact, that tax reform is on the threshold, is there any reason

Subcommittee of the Committee on Labor and Public Welfare, I announce hearings on S. 2453, a bill to further promote equal employment opportunities for American workers. The hearings will be held at 10 a.m., on August 11 and 12, 1969, in room 4232, New Senate Office Building.

Any person who wishes to testify or submit a statement for inclusion in the hearing record, should communicate as soon as possible with the Labor Subcommittee, room G-237, New Senate Office Building.

NOTICE OF RESCHEDULING OF HEARINGS ON VETERANS EDUCATION, TRAINING, AND MANPOWER BILLS BEFORE THE VETERANS' AFFAIRS SUBCOMMITTEE

Mr. CRANSTON. Mr. President, on July 23, 1969, I announced that the Veterans' Affairs Subcommittee, of which I am chairman, of the Labor and Public Welfare Committee would be holding hearings on July 30 and 31 on four bills pertaining to veterans education, training, and manpower. Unfortunately, I find that these hearings must unavoidably be postponed.

I am therefore announcing at this time, for the information of Senators, that the Veterans' Affairs Subcommittee will hold hearings on S. 1088, S. 2506, and a proposed amendment to it, S. 2668, and S. 2700 on August 8 and 12 at 9:30 a.m.

AGM

RADAR—THE ACHILLES HEEL IN THE SAFEGUARD SYSTEM

Mr. SYMINGTON. Mr. President, recently, my office received a brochure from the Committee To Maintain a Prudent Defense Policy, an organization with headquarters here in Washington, entitled "Safeguard: Does the Supposed 'Softness' of the Radars Render Safeguard Vulnerable?" This pamphlet is indeed an extraordinary document.

Yesterday, on the floor, I stated that Mr. Clifford J. Hynning was the author. I now find that is not accurate. The report was prepared by an unidentified "individual committee or staff member," and I hasten to make this correction.

I ask unanimous consent that this pamphlet in its entirety be printed in the RECORD at the conclusion of my remarks.

The PRESIDING OFFICER. Without objection, it is so ordered.

(See exhibit 1.)

Mr. SYMINGTON. Mr. President, now let me present to the Senate why I believe the information contained in this pamphlet with respect to the radars is wrong.

The author opens his remarks by stating:

Many opponents of Safeguard hold the view that the system is inordinately vulnerable because its radar is less than one-tenth as hard as the missile silos it is designed to protect.

As one of the "opponents" I share this view, but my objections are based on four additional criticisms which pertain to the radar of the Safeguard. These are as follows:

First. There is only one radar to protect an "entire site" of more than 100 missiles.

Second. The MSR radar is exceedingly expensive—between \$150 and \$200 million each—many times as much as that of each of the Minutemen it defends.

Third. The total number of interceptor missiles protecting the site is "exceedingly small."

Fourth. Only a fraction of even this small number of interceptor missiles protecting each Minuteman site has enough range to protect the radar.

The author claims that since the Sprint missiles defend the radar, the fact that it is soft does not matter. This is only true if the defense was "infinitely reliable" and if there were an "unlimited number" of interceptor missiles deployed for defending the radar.

It is the essence of the deterrent role of Minuteman that even if some silos are destroyed the rest are available to retaliate. By basing the entire defense on a single radar we make sure that if this one radar is hit the entire defense will collapse. All the enemy has to do is to dedicate a few of his missiles to exhaust that fraction of interceptors which defend the radar—then the entire Safeguard system is dead; and all Senators who have studied the classified information know how small is the number of interceptors.

Moreover, in order to destroy the radars, the Soviets would not have to use the SS-9's, those missiles which the proponents say are of sufficient power and accuracy to endanger Minuteman. We know they could either exhaust, or penetrate, the protection around the radars by using their smaller and less accurate SS-11 missiles, of which the Soviets now have some 800.

Here then the question of the "softness" of the radar comes in, because on this basis the destruction of the radar would not necessarily even subtract from any of those missiles which some estimate the Soviets are building in order to threaten Minuteman.

The PRESIDING OFFICER. The time of the Senator has expired.

Mr. SYMINGTON. Mr. President, I ask unanimous consent to proceed for 3 minutes.

The PRESIDING OFFICER. Without objection, it is so ordered.

Mr. SYMINGTON. In fact, and based on this extraordinary pamphlet, it would appear that the writer has not really examined the Safeguard system, because he says:

The radars are hardened to the efficient level required to give an extremely high probability that an incoming warhead will be intercepted and are located so that a single warhead could not destroy more than one of them.

Does not he know there is only one radar per missile site?

A radar supporting the defense of Minuteman would not have to be as hard as the Minuteman silos if first there were many such radars—say one radar per only a few Minuteman silos, and second, if these radars were less expensive than the missiles they defend.

In that case the radars need only be sufficiently hard so that if one radar were

destroyed the neighboring one would not suffer; and as a consequence the price of admission for a Soviet attacker would be greatly raised if the cost per silo defended is low enough.

Experts in this field hope that such a system can be developed, and developed quickly, by deploying many more, and less complicated, radars.

Actually the Safeguard radar meets very few of the requirements which one would hope to have in effort to achieve "a proper defense" of hardened silos.

The remarks made in this brochure would appear to reflect a Magnot Line philosophy, about which I have already expressed my deep apprehension. It is proposed to employ exactly one radar as the eyes of the entire system; and then defend that one radar to the hilt.

If this defense is too thin, however, or has even the slightest flaw to the point where one enemy missile "leaks" through, the entire defense system then collapses; and in this connection, we know just how thin the Sprint coverage is—would this information be made public—and how few things in this world are perfect.

I agree with the sentiment that, in the long run, increased hardening of silos will not assure their survival against the increasing accuracy and number of attacking warheads. Sooner or later, therefore, our fixed land-based missiles will become obsolete unless either:

First. We defend them with a system of multiple small radars and interceptors designed as proper for the job, or

Second. Replace them by a land-mobile system along with reliance on our moving Polaris submarine fleet, or

Third. Reach some "meaningful agreement" so as to halt the destructive race of military technology toward increased accuracy and multiple nuclear warheads.

In summary, Mr. President, we will never prevent obsolescence of the Minuteman force by protecting it with a defense which can be defeated before it is even built.

EXHIBIT 1

PAPER NO. 2—SAFEGUARD: DOES THE SUPPOSED "SOFTNESS" OF THE RADARS RENDER SAFEGUARD VULNERABLE?

(By the Committee To Maintain a Prudent Defense Policy; with the compliments of Dean Acheson)

Does the supposed "softness" of the radars render Safeguard vulnerable?

No. Many opponents of Safeguard hold the view that the system is inordinately vulnerable because its radar is less than one-tenth as hard¹ as the missile silos it is designed to protect. This view, while having a certain surface plausibility, reflects a fundamental misunderstanding.

That there is a difference in the hardness of the silos and radars is undeniable. That this difference is critical to the defense of the radar, however, is not true, and overlooks the central fact that the radar is defended primarily by interceptor missiles.

To say that a target is soft or only moderately hard is not the same as saying that a target can be easily destroyed.

(1) The radars in the Safeguard system are, in fact, hardened to a considerable degree.

(2) The radars are also actively defended by Sprint missiles.

¹ "Hardness" is the term used to indicate relative blast resistance and is generally measured in terms of overpressure (PSI).

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amendment to \$50 a month for single persons and \$75 for couples.

Section 3, repeals the \$105 a month limitation on a wife's benefits.

Section 4, amends the retirement test to provide (a) a \$2400 annual exempt amount, and (b) a \$200 monthly exempt amount, and (c) a \$1 reduction in benefits for each \$2 in earnings above \$2400.

Section 5, modifies prohibition on payments for routine physical examinations to permit one comprehensive physical examination each year for each enrollee.

Section 6, repeals provisions preventing payments for eye care (including glasses) dental care (including dentures) and hearing aids (including examinations for hearing aids).

Section 7, provides that beneficiary shall pay 1/3 of the cost of Medicare provision and government shall pay 2/3.

Section 8(a), provides that when the CPI rises by at least 2 per cent over the index for January 1970 benefits for the third month following the month in which the 2 per cent rise occurred, and for subsequent months, shall be increased by an amount equal to the percentage rise in the CPI. Only 1 increase may take effect in a 12 month period.

(b) The increase is applicable to all persons on the benefit rolls in the month in which the increased benefits are first payable.

(c) Requires the Secretary of HEW to report to the Congress whenever a cost-of-living increase is to be made, its effect on the actuarial status of the trust funds, and recommendations for meeting the cost of the increase.

Section 9, provides general tax revenues to be used in social security benefit payments.

General revenues will be contributed as a percentage of all social security taxes collected each year, on the following bases: (a) 6% for fiscal year 1970, (b) 12% for fiscal year 1971, (c) 18% for fiscal year 1972, (d) 20% for fiscal year 1973, (e) 25% for fiscal year 1974 and each year thereafter.

Section 10, extends Medicare provisions to include payment for prescription drugs. Establishes a Formulary Committee to determine for which drugs and biologicals reimbursement is to be made.

Reimbursement is to be based on lowest priced generic drug available, consistent with high standards.

Formulary Committee shall disseminate, once a year, to doctors and pharmacists, an alphabetical list of each drug or biological by established names, and include listing of brand name equivalents with prices.

Applicable only to prescription drugs.

ADDITIONAL COSPONSORS OF BILLS

S. 1781

Mr. BYRD of West Virginia. Mr. President, at the request of the Senator from West Virginia (Mr. RANDOLPH), I ask unanimous consent that, at the next printing, the name of the Senator from Wyoming (Mr. MCGEE) be added as a cosponsor of S. 1781, to amend title II of the Social Security Act to eliminate the reduction in disability insurance benefits which is presently required in the case of an individual receiving workmen's compensation benefits.

The PRESIDING OFFICER. Without objection, it is so ordered.

S. 2518

Mr. HARTKE. Mr. President, I ask unanimous consent that, at the next printing, the name of the Senator from California (Mr. CRANSTON) be added as a

cosponsor of S. 2518, to amend title II of the Social Security Act so as to liberalize the conditions governing eligibility of blind persons to receive insurance benefits thereunder.

The PRESIDING OFFICER. Without objection, it is so ordered.

S. 2674

Mr. BYRD of West Virginia. Mr. President, in behalf of the Senator from Hawaii (Mr. INOUYE), I ask unanimous consent that, at the next printing, the names of the Senator from North Carolina (Mr. ERVIN), the Senator from New York (Mr. GOODELL), the Senator from South Carolina (Mr. HOLLINGS), the Senator from Rhode Island (Mr. PELL), and the Senator from Alaska (Mr. STEVENS) be added as cosponsors of S. 2674, to amend title 37, United States Code, to provide for the procurement and retention of judge advocates and law specialist officers for the Armed Forces.

The PRESIDING OFFICER. Without objection, it is so ordered.

S. 2689

Mr. BYRD of West Virginia. Mr. President, at the request of the Senator from Hawaii (Mr. INOUYE) I ask unanimous consent that, at the next printing, the names of the Senator from Nevada (Mr. BIBLE), the Senator from Oregon (Mr. MATFIELD), the Senator from Washington (Mr. JACKSON), the Senator from New York (Mr. JAVITS), and the Senator from Alaska (Mr. STEVENS), be added as cosponsors of S. 2689, to amend the Internal Revenue Code of 1954 to provide the same tax exemption for servicemen in and around Korea as is presently provided for those in Vietnam.

The PRESIDING OFFICER. Without objection, it is so ordered.

S. 2691

Mr. PROXMIRE. Mr. President, I ask unanimous consent that, at the next printing, the name of the Senator from Indiana (Mr. HARTKE) be added as a cosponsor of S. 2691, to amend Public Law 87-849, approved October 23, 1962, to strengthen provisions relating to disqualification of former Federal officers and employees in matters connected with former duties and official responsibilities, and for other purposes.

The PRESIDING OFFICER. Without objection, it is so ordered.

SENATE RESOLUTION 226—RESOLUTION TO EXTEND THE AUTHORITY OF THE COMMITTEE ON LABOR AND PUBLIC WELFARE TO INVESTIGATE PROBLEMS OF EDUCATION OF AMERICAN INDIANS

Mr. MONDALE, from the Committee on Labor and Public Welfare, reported an original resolution (S. Res. 226) to extend the authority of the Committee on Labor and Public Welfare to investigate problems of education of American Indians, which was considered and agreed to.

(The remarks of Mr. MONDALE when he reported the resolution appear later in the RECORD under the appropriate heading.)

SENATE RESOLUTION 227—RESOLUTION TO AUTHORIZE THE EXPENDITURE OF FUNDS BY THE COMMITTEE ON LABOR AND PUBLIC WELFARE—REPORT OF A COMMITTEE

Mr. MONDALE, from the Committee on Labor and Public Welfare, reported an original resolution (S. Res. 227); which was referred to the Committee on Rules and Administration, as follows:

S. RES. 227

Resolved, That the Committee on Labor and Public Welfare hereby is authorized to expend from the contingent fund of the Senate, during the Ninetieth Congress, \$1,500, in addition to the amounts, and for the same purposes, specified in section 134(a) of the Legislative Reorganization Act, approved August 2, 1946, Senate Resolution 141, agreed to July 17, 1967, and Senate Resolution 276, agreed to May 9, 1968.

Sec. 2. Section 4 of Senate Resolution 80, agreed to February 17, 1969 is hereby amended by striking out "\$72,000" where it appears therein and inserting in lieu thereof "\$93,000".

AUTHORIZATION OF APPROPRIATIONS FOR FISCAL YEAR 1970 FOR MILITARY PROCUREMENT, RESEARCH AND DEVELOPMENT, AND FOR THE CONSTRUCTION OF MISSILE TEST FACILITIES AT KWAJALEIN MISSILE RANGE, AND RESERVE COMPONENT STRENGTH—AMENDMENTS

AMENDMENT NO. 108

Mr. PROXMIRE submitted amendments, intended to be proposed by him, to the bill (S. 2546) to authorize appropriations during the fiscal year 1970 for procurement of aircraft, missiles, naval vessels, and tracked combat vehicles, and research, development, test, and evaluation for the Armed Forces, and to authorize the construction of test facilities at Kwajalein Missile Range, and to prescribe the authorized personnel strength of the Selected Reserve of each Reserve component of the Armed Forces, and for other purposes, which were ordered to lie on the table and to be printed.

(The remarks of Mr. PROXMIRE when he submitted the amendments appear later in the RECORD under the appropriate heading.)

ADDITIONAL COSPONSOR OF AMENDMENT NO. 107

Mr. PROXMIRE. Mr. President, I ask unanimous consent that, at the next printing, the name of the Senator from Montana (Mr. METCALF) be added as a cosponsor of amendment No. 107 to S. 1782, the military procurement bill.

The amendment calls for annual disclosure of high ranking former civilian and military Pentagon officials who go to work for the major defense contractors.

The PRESIDING OFFICER. Without objection, it is so ordered.

NOTICE OF HEARINGS ON S. 2453

Mr. WILLIAMS of New Jersey. Mr. President, as chairman of the Labor

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Whether they are sufficiently hardened so that active defense of them will give us high enough confidence that they will survive an enemy attack is the critical question. They are in fact hard enough, and making them harder in the face of the improvements in missile accuracy expected in the 1970's would incur considerable costs without corresponding benefits in the form of a higher probability of survival under attack. With such missile accuracies, the offense can destroy with a high probability, either radars or silos if there is no active defense to stop it.

The chosen hardening is the modest level necessary to enable the defense to intercept an incoming warhead at relatively close range in order to get more than one shot at an incoming warhead. If the first Sprint fired at an incoming warhead should fail, there is sufficient time to fire another and even a third. Were the radars softer than they are, such a tactic—which has the effect of dramatically increasing the probability that interception will succeed—would not be possible. If, on the other hand, the radars were hardened beyond their planned level, no such improvement in the likelihood of interception would result. The critical point is that the radars rely for their defense not solely on hardening (which is a losing proposition in this period of rapidly improving accuracies) but on active intercept by Sprint and Spartan missiles.

While hardening alone is no longer adequate for the protection of our land-based missiles, it does play an important role in conjunction with the active defense provided by the Safeguard system. The missile silos are hardened so that a single enemy missile cannot destroy more than one Minuteman. The radars are hardened to the efficient level required to give an extremely high probability that an incoming warhead will be intercepted, and are located so that a single warhead could not destroy more than one of them.

THE COMMITTEE TO MAINTAIN A PRUDENT DEFENSE POLICY

Chairman, Dean Acheson; Vice-Chairman,² Albert Wohlstetter; Treasurer, Clifford J. Hynning.

Original members, Prof. Armen Alchian, Gordon Arneson, Max Ascoli, Ross N. Berkes, Amb. Charles Bohlen, Dr. Donald G. Brennan, Dr. Peter Clark, Dr. Joseph Cropsey, Dr. Paul Davis, Hon. Arthur Dean, Dr. Michael J. Deutsch, Dr. Freeman J. Dyson, Hon. Fredrick Eaton, Hon. Henry H. Fowler, Prof. Harry Gelber, Prof. William Griffith, Dean Edmund A. Gullion, Christian A. Herter, Jr., Dr. Charles M. Herzfeld, Prof. Jack Hirschleifer, Prof. Morton Kaplan, Lawrence R. Kegan, Amb. Foy Kohler, Irvin Kristol, and Dr. Harold Lampert.

Ernest Lefever, Dr. Willard F. Libby, Dr. David A. Little, Hon. Robert A. Lovett, Prof. Gordon MacDonald, Prof. C. Burton Marshall, Prof. William G. McMillan, Amb. Livingston Merchant, Dr. Lawrence H. O'Neill, Franz Oppenheimer, Prof. Paul Ramsey, Prof. Richard N. Rosecrance, Prof. Robert Scalapino, Prof. Paul Seabury, Dr. Frederick Seltz, Prof. Harold Smith, Philip Sporn, Robert Sprague, Sr., Dr. Kenneth Watson, Dr. John A. Wheeler, Frederick Bernays Wiener, Prof. Eugene P. Wigner, Prof. Aaron Wildavsky, and Prof. Ciro Zoppo.

Mr. FULBRIGHT. Mr. President, will the Senator yield?

Mr. SYMINGTON. I yield to the distinguished Senator from Arkansas.

Mr. FULBRIGHT. I want to ask the Senator, who is a member of the Armed Services Committee, what is the explanation of why there was almost no

² Paul H. Nitze withdrew from active service as vice-chairman of the Committee, effective June 26, when he was appointed consultant to the Department of Defense on SALT.

evidence taken, as far as I can find, with regard to the blackout effect of a radar by an atomic explosion in the vicinity—in other words, not having to hit the radar establishment itself? Why was there no evidence as to the blackout? I have heard before that this is a very important matter. I think I read in the press that in some of the tests over Kwajalein the communication system was out for quite a long time following an atomic explosion. I was wondering why there was no evidence taken on that point by the Armed Services Committee.

Mr. SYMINGTON. I know the Senator wants me to be frank. Without any implied criticism of anybody, I honestly do not know the answer to the question.

Mr. FULBRIGHT. It is inconceivable to me that a committee which is proposing a system which could run into \$10 or \$20 billion or more did not take any substantial evidence on the question of what would be the effect of an explosion in the vicinity of a radar. Our radars, as I understand, depend upon electromagnetic impulses for their operation. There is no wire. It is in the nature of radio.

Mr. SYMINGTON. Speaking in terms of electricity, it is a flux, not a current—a wave would be a better characterization.

Mr. FULBRIGHT. If blackout is a substantial problem, I cannot imagine why no testimony was taken on it.

Mr. SYMINGTON. My apprehension about this system has to do primarily with the working of the five major components; their working together after they are put together; and even more, the two chief objections I have to deploying it now instead of developing it further are, first, nobody has put up any logical argument of any kind that this radar which was designed for the Sentinel system, is the right radar for the Safeguard system. Second, nobody has answered the fact that a relatively small addition to the production of Soviet missiles would nullify almost in entirety any defense protection the United States would obtain from the Safeguard, even if the system worked perfectly.

Mr. FULBRIGHT. Tomorrow afternoon the Committee on Foreign Relations will hold a hearing which is intended to go into this matter. I am not at all certain that it will be as thorough as it should be, but it will seek some information about the effect of a blackout or of radioactivity upon communications, and will also include a briefing on the ease with which an ABM system can be knocked out by multiple weapons.

The PRESIDING OFFICER. The time of the Senator from Missouri has expired.

Mr. GORE. Mr. President, I ask unanimous consent that the Senator from Missouri may proceed for an additional 3 minutes.

The PRESIDING OFFICER. Without objection, it is so ordered.

Mr. GORE. Mr. President, will the Senator yield?

Mr. SYMINGTON. I am glad to yield to the able Senator from Tennessee.

Mr. GORE. Mr. President, tomorrow morning at 9:30 the Subcommittee on

Disarmament will examine some classified reports that have recently become available. I do not propose to suggest a secret session of the Senate to discuss this material, but I do take this opportunity to invite any Senator either to sit in on the examination of the reports tomorrow morning or to come later to the committee room, where he will be permitted to take from the vault the reports and the colloquy and examine them to his own satisfaction.

Mr. President, will the Senator yield once more?

Mr. SYMINGTON. I am glad to yield.

Mr. GORE. In addition to the facts cited by the distinguished junior Senator from Arkansas that electronic and radio communication was knocked out for a period of hours in an area of some 800 miles in diameter as a result of tests in Eniwetok, one other matter to which Senators might wish to give some consideration is that test animals placed on ships at varying distances from the center of the explosion suffered some dire consequences. Rabbits on a ship 200 miles away were blinded. When we consider defending or undertaking to defend America by exploding nuclear bombs over our heads, we are considering matters having dire consequences.

On this question of possible first strike capability or first strike attempt, I wonder if the able senior Senator from Missouri has contemplated the effects of westerly wind currents and the possible danger to all other nations in the Northern Hemisphere from an all-out attack upon the United States, from fallout.

Mr. SYMINGTON. Mr. President, the distinguished senior Senator from Tennessee is a member of the Joint Committee on Atomic Energy, and therefore an expert on this subject. To be frank, it is not a subject that I feel competent to discuss. I presented today facts with respect to this extraordinary statement issued by one of the various groups organized in favor of the Safeguard, because I believe I do understand the radar aspects of the situation, and because it was explained to us what would happen if the Soviets increased slightly their production of missiles. On this particular subject of the effects of atomic blast the Senator—and I hope he will develop it to his satisfaction and that of the Senate—is a far better expert than I.

The PRESIDING OFFICER. The Senator's time has expired. The Senator from Rhode Island is recognized.

Mr. PELL. Mr. President, in connection with the last exchange, the Senator from Tennessee may recall that a panel of scientists before his subcommittee agreed that the Northern Hemisphere would be uninhabitable by man if there were any full exchange of nuclear weapons.

MESSAGE FROM THE HOUSE

A message from the House of Representatives, by Mr. Hackney, one of its reading clerks, announced that the House had passed the following bills and joint resolutions, in which it requested the concurrence of the Senate:

H.R. 2. An act to amend the Federal Credit Union Act so as to provide for an independ-

ent Federal agency for the supervision of federally chartered credit unions, and for other purposes;

H.R. 6947. An act to amend the Act of October 13, 1964, to regulate the location of chanceries and other business offices of foreign governments in the District of Columbia;

H.R. 9551. An act to amend the act of July 11, 1947, to authorize members of the District of Columbia Fire Department, the U.S. Park Police force, and the White House Police force to participate in the Metropolitan Police Department Band, and for other purposes;

H.R. 9553. An act to amend the District of Columbia Minimum Wage Act to authorize the computation of overtime compensation for hospital employees on the basis of a fourteen-day work period;

H.R. 12671. An act to amend the act of May 29, 1928, to facilitate and encourage the employment of minors in the District of Columbia between the ages of 14 and 16 during the summer and other school vacation periods, and for other purposes;

H.J. Res. 236. A joint resolution authorizing and requesting the President of the United States to issue a proclamation designating the week of August 1 through August 7 as "National Clown Week"; and

H.J. Res. 614. A joint resolution authorizing the President to proclaim the week of September 28, 1969, through October 4, 1969, as "National Adult-Youth Communications Week."

HOUSE BILLS AND JOINT RESOLUTIONS REFERRED

The following bills and joint resolutions were severally read twice by their titles and referred, as indicated:

H.R. 2. An act to amend the Federal Credit Union Act so as to provide for an independent Federal agency for the supervision of federally chartered credit unions, and for other purposes; to the Committee on Banking and Currency.

H.R. 6947. An act to amend the act of October 13, 1964, to regulate the location of chanceries and other business offices of foreign governments in the District of Columbia;

H.R. 9551. An act to amend the act of July 11, 1947, to authorize members of the District of Columbia Fire Department, the U.S. Park Police force, and the White House Police force to participate in the Metropolitan Police Department Band, and for other purposes;

H.R. 9553. An act to amend the District of Columbia Minimum Wage Act to authorize the computation of overtime compensation for hospital employees on the basis of a 14-day work period; and

H.R. 12671. An act to amend the act of May 29, 1928, to facilitate and encourage the employment of minors in the District of Columbia between the ages of 14 and 16 during the summer and other school vacation periods, and for other purposes; to the Committee on the District of Columbia.

H.J. Res. 236. A joint resolution authorizing and requesting the President of the United States to issue a proclamation designating the week of August 1 through August 7 as "National Clown Week"; and

H.J. Res. 614. A joint resolution authorizing the President to proclaim the week of September 28, 1969, through October 4, 1969, as "National Adult-Youth Communications Week"; to the Committee on the Judiciary.

SENATOR KENNEDY

Mr. PELL. Mr. President, I rise at this time to publicly express my belief that the senior Senator from Massachusetts should not resign. And my advice to the

citizens of that great Commonwealth would be to do my best to urge Senator KENNEDY not to consider resigning.

In speaking as a friend of his and as a Member of this body, I would add that the sooner he returns, the better off I think we are. I believe he is needed and wanted right here.

NIXON FUMBLES IN BANGKOK

Mr. PELL. Mr. President, I am disturbed at the tenor of our President's remarks made in Bangkok as he accepted the key to the city.

I ask unanimous consent that his remarks be inserted in the RECORD at this point.

There being no objection, the remarks were ordered to be printed in the RECORD, as follows:

[From the New York Times, July 29, 1969]

EXCERPTS FROM NIXON'S TALKS

(NOTE.—Following are statements made by President Nixon shortly after his arrival in Bangkok today. The first is an excerpt from extemporaneous remarks made by the President as he accepted a key to the city. The second is the text of a statement prepared by the traveling White House on the flight to Thailand and distributed here in the President's name.)

As we drove in through the streets from the airport and saw the thousands of people gathered there, including many of the schoolchildren, we were reminded again of the association between the American people and the Thai people, association in war and association in peace.

We were reminded too of that when we came by the SEATO treaty building, and realized that the SEATO organization has its offices here. That leads me to say that everyone knows that Thailand and the United States are signatories of that treaty. We are bound together by that treaty.

A treaty can have many meanings. It can be just a scrap of paper with no meaning at all. But as far as Thailand and the United States are concerned, a treaty means far more because we share common ideals.

What we want for Asia and the world is the right of freedom which Thailand enjoys for all peoples here.

The treaty that we have with Thailand means that it is not just another treaty, not just another piece of paper, but that it is one that has a significance far beyond that—a significance which I have indicated time and again in public statements, and I indicate today in my first public statement as I visit Bangkok and this country.

We will honor our obligations under that treaty. We will honor them not simply because we have to, because of paper, but because we believe in those words, and particularly believe in them in the association that we have with a proud and a strong people—the people of Thailand.

We have been together in the past, we are together at the present and the United States will stand proudly with Thailand against those who might threaten it from abroad or from within.

Mr. PELL. I am concerned for two reasons. First, I do not believe that any treaty should ever be referred to as "just another treaty" or "just another piece of paper." Any treaty to which the United States adheres should have greater meaning than that.

Second and more important from the viewpoint of our national interest, is President Nixon's statement that the United States "will stand proudly with

Thailand against those who might threaten it from abroad or from within."

The most careful reading of the SEATO treaty gives no support to the views that, beyond consultation we have any obligation whatsoever to defend Thailand from enemies within. The most meticulous, careful, precise and, yes, Russian interpretation of the treaty would not give support to this thesis. Accordingly, what the statement of our President has done I believe, is, either to have enunciated a new policy for the United States in pledging protection of the Government of Thailand from domestic insurgency or to have publicly stated support for a private commitment that has already been made to this effect.

I deeply hope neither of these eventualities is true.

Even more important, so that those around the world may not misinterpret what our policies are—and, misinterpretation is more often the cause of crisis and war than is correct interpretation—I hope the President will straighten out the record in this regard.

He can do this either by saying he overspoke. Or he can say we indeed have such a newly visible policy vis-a-vis Thailand, in which case I would urge my colleagues to do all that we can to dissuade our Chief Executive from such a policy and seek to change it. It is certainly a policy inconsistent with the Senate commitment resolution passed a few weeks ago and with the words of President Nixon in Guam last week.

Mr. GORE. Mr. President, will the Senator yield?

Mr. PELL. I yield.

Mr. GORE. Perhaps it would be well for the RECORD of the Senate's proceedings today to show that the U.S. Senate has not approved the secret agreement between the United States and Thailand.

The PRESIDING OFFICER. The Senator's time has expired.

Mr. PELL. I ask unanimous consent that I may have 3 additional minutes to yield to the Senator from Tennessee.

The PRESIDING OFFICER. Without objection, it is so ordered.

Mr. GORE. This secret agreement was entered into between Thailand and the United States by the previous administration. It was not approved by the Senate or by Congress during the previous administration. This secret agreement was reaffirmed by Secretary Rogers earlier this year on his trip to Thailand. Such reaffirmation has not been approved by the elected representatives of the people. The President, past or present, is without the power or authority to make a binding agreement upon the United States without the approval of the representatives of the people, the U.S. Senate.

The insurgency in Thailand is not a new political phenomenon. It has existed for more than a decade. I do not wish the insurgency well, but I am not sure that it is proper for the United States to intervene in a domestic insurgency, in civil strife within a small country. This is, indeed, primarily what we did in Vietnam. What President Nixon has done in Thailand is to invite another Vietnamese situation for the United States, and I

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burst of conservation legislation that emerged from Congress during the Johnson years. The Wilderness Act was only one of dozens that reflected an increasing environmental uneasiness—the scenic rivers bill, antipollution laws, establishment of new parks and others.

In the courts as well, the values of wilderness have begun to get a hearing. A federal appeals court ruled in 1966 that scenic, historic and recreational values had to be taken into account by the Consolidated Edison Company in its proposal to build a nuclear power plant on the Hudson River. A 1967 U.S. Supreme Court decision on the Hells Canyon dam issue introduced the same ideas into an order remanding the question to the Federal Power Commission, where it remains.

Industry itself has begun to show some long-absent sensitivity to conservation. Public relations men go to elaborate lengths to avoid offending the wind-kissers. Some firms have subsidized conservation studies, others have donated parks or wild land to local governments. This kind of thing cuts no ice with Brower, however. He calls it "cosmetics for rape." He is, of course, incorrigible.

Along with the growing power of the conservationists has come a change in the character of the movement. The wind-kissers, in fact, are in decline. The scientists, more specifically the ecologists, are increasingly important. Nowadays a stand of trees or a piece of sageland is worth preserving not necessarily for its beauty or its opportunity for solitude; it is more likely defended as vital to the balance of nature, the "chain of life" in a given area, or as a natural laboratory containing potentially valuable secrets. The ecologists talk less about the romance of wilderness and more about "ecosystems," distinctive networks of relationships between land and water, vegetation and wildlife.

This has led to some peculiar gyrations. Some scientists are trying to "quantify," in the good new American way, the values of wilderness. This is a ploy born in desperation. For decades developers have been able to show, in dreary charts of "cost-benefit ratios," what *specifically* might be gained from whatever project they have in mind—read: dollars. In reply the conservationists have fiddled with their fingernails and talked about beauty. Now they are groping for figures to fight the developers on their own terms; hence graphs that measure "scale of valley character" and assign numerical values to a view of a mountain or the presence of a bear.

"What it comes down to is this," says Brower. "If you can't measure a thing, measure it anyway for those who won't know anything about it unless you do."

The ecologists are running the palace, all right, but the troubadours are still skulking around outside in the high grass, practicing birdsongs, comparing backpacks, listening, frowning when they hear an airplane. Udall thinks the two sides, conservationists and developers, now have "a kind of parity of influence," but most conservationists disagree. "There's very little conservation legislation coming forward these days," says one congressman. "The logging and power interests are still damned strong. I'm pessimistic."

The one huge, dark fact dominating the entire question of land preservation is continued population growth. Any question of conserving space leads ultimately to a question of limiting the people with claims on that space. Most defenders of the wilderness are, at bottom, pessimistic about their chances, and spiraling population is the reason. It seems the final, ironic fruition of the "more is better" philosophy—to simply outgrow our resources. Nothing riles conservationists more than the celebration of growth for its own sake—ceremonies saluting

the arrival of the 200 millionth American, the National Park Service's breathless releases on rising attendance figures. A Sierra Club poster is only about 20% facetious when it suggests that man, like the bald eagle or the flamingo, is now an "endangered species."

Another dark shadow on the future of wilderness is the state of public ignorance. Despite the growth of interest in the outdoors, most Americans remain urban, motorized and oblivious to the physical and spiritual wonders of the wild. The major recreation phenomenon of the past few years is the growth of trailers and camper trucks, motel rooms on wheels with names like Tear-drop, Week-N-Der, Six-Pac, Rolls Royal and CharAkee. Most camper drivers get no closer to the wild than a national park campground.

On the other hand, though most Americans may personally feel no urge to tramp the back country, they are enchanted by the idea of its existence. The camper truck may become an outdoors teaser: as he sees a little of raw, splendid America, the driver may want to see more; he may even recognize that the easiest way is not necessarily the best way—but that's getting giddy.

For the men who draw up "master plans" and "long-range policy," then, there is this difficult series of questions: what does the majority want, open country or scenic overlooks? Do you strike a balance between tourist development and wilderness preservation and, if so, how? Is *everything* that remains worth saving, or just some of it? (When conservation pioneer Bob Marshall was asked how much wilderness was enough, he replied, "How many Brahms symphonies are enough?" He was incorrigible too.) How do we develop an ecological conscience in America? Through education, but why haven't we done so? Why aren't children taught to respect all living things? Wilderness is peculiar among American possessions in that it is not susceptible to compromise. To take some wilderness is still to take wilderness. Roads cannot be unbuilt.

The men who worry about these questions have come up with a few suggestions. (No ideas or initiatives have come from the new Administration, except for the President's creation of an Environmental Quality Council. "We're trying to steer clear of the controversial ones right at the start," says a high Interior Department official.) Here are the proposals:

The National Park Service is considering eliminating cars from some parks and operating campgrounds on a reservation system, as opposed to the present first-come, first-served method.

Some conservationists have urged that tax relief be granted to encourage the preservation of open space. Pay landowners, in effect, not to develop their land.

Udall suggests that "environmental mediators" could arbitrate disputes between developers and conservationists in the manner of labor mediators.

Brower would like to see a sort of Fair Conservation Practices Commission, an independent nongovernmental agency with authority to review projects before and after construction.

Biologist Garrett Hardin proposes that access to wilderness be limited to those "of great physical vigor," willing and able to walk and to take the risks of the wild, and that wilderness and park areas be established at graded levels of difficulty according to ability.

Hardin's intriguing idea recognizes the final paradox: as more people learn to know and appreciate wilderness, more will want to experience it. Ultimately, their numbers might destroy it just as effectively as would highways or snack bars. It could be cherished to death.

AUTHORIZATION OF APPROPRIATIONS FOR FISCAL YEAR 1970 FOR MILITARY PROCUREMENT, RESEARCH AND DEVELOPMENT, AND FOR THE CONSTRUCTION OF MISSILE TEST FACILITIES AT KWAJALEIN MISSILE RANGE, AND RESERVE COMPONENT STRENGTH

The PRESIDING OFFICER. The time for morning business having expired, the Chair lays before the Senate the unfinished business, which will be stated.

The ASSISTANT LEGISLATIVE CLERK. A bill (S. 2546) to authorize appropriations during the fiscal year 1970 for procurement of aircraft, missiles, naval vessels, and tracked combat vehicles, and research, development, test, and evaluation for the Armed Forces, and to authorize the construction of test facilities at Kwajalein Missile Range, and to prescribe the authorized personnel strength of the Selected Reserve of each Reserve component of the Armed Forces, and for other purposes.

The Senate proceeded to consider the bill.

Mr. BYRD of West Virginia. Mr. President, I suggest the absence of a quorum.

The PRESIDING OFFICER. The clerk will call the roll.

The assistant legislative clerk proceeded to call the roll.

Mr. BYRD of West Virginia. Mr. President, I ask unanimous consent that the order for the quorum call be rescinded.

The PRESIDING OFFICER. Without objection, it is so ordered.

Mr. McCARTHY. Mr. President, I commend the efforts of the Senator from Michigan (Mr. HART) and the Senator from Kentucky (Mr. COOPER) and those who have worked with them over the last year in carrying the issue of the antiballistic-missile system to the Senate, and, beyond that, to the American people.

The matter of antiballistic missiles is one that has been before the country and before the Senate for nearly 10 years. Presidents Eisenhower and Kennedy both considered anti-ballistic-missile systems. They both decided against the deployment of the Nike-Zeus, although subsequently President Kennedy initiated development of the Nike-X system, which was never recommended for deployment, but from it developed the Sentinel and, more recently, what is called the Safeguard system.

Nearly 2 years ago, in September 1967, former Defense Secretary McNamara announced that the United States would deploy an anti-ballistic-missile system. Since the September 1967 announcement, the reasons given for the deployment have continually been changed.

At one time, in the first presentation by Secretary McNamara, we were told that we needed it because of the Chinese threat. Secretary of Defense Laird, the current Secretary, now stresses the Russian threat.

The Defense Department's public report of a new and expanded Russian threat followed the decision to deploy the ABM rather than preceded it. We were told, also, that it would provide protection in case of an accidental

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launch of missiles, and other incidental arguments were given.

It was also argued that deployment would not have a significant impact on the strategic arms race with the Soviet Union or upon our efforts to control that race. This was in 1967. Now we are told that deployment would have a significant effect upon the effort to bring about some kind of disarmament, in almost direct contradiction to the arguments which were made roughly 2 years ago, when the first presentation was made.

We have also changed the name of the system. The Nixon administration, having concluded that the Sentinel evidently was unacceptable, revised the name, changed its mission to some extent and offered it to us again as the Safeguard system. But, it is pretty much a matter of old wine in new bottles and old programs under new titles.

As I see it, the case against the deployment of this system is based on at least four points, all of which have been discussed at some length in recent debate in the Senate and, of course, developed over the years.

The first is the scientific and technical challenge. Repeatedly, scientific and technical witnesses have challenged the capability of the Safeguard system to perform under attack or, indeed, of any ABM system to add very much to our security. The best examination of this point that I have seen is that of Prof. Robert Axelrod, of the University of California at Berkeley, who raises these three points:

First, he says the argument that the Soviet's deployment of the new SS-9 missile is a threat to American security is only true if the worst of a range of possibilities comes true on each of seven factors. These factors are the size of the payload of the SS-9, the accuracy of the missile, the yield/weight ratios the Soviets can achieve, the number of warheads on each booster, the number of boosters deployed, the Soviet political intent, and the vulnerability of both the Polaris system and our B-52 force. He says that if any of these factors are not as bad as Secretary Laird has been assuming, then the SS-9 is not a serious threat, and its existence and deployment would not justify the deployment of the ABM system. Professor Axelrod states:

I believe none of them are probably as bad as he has been supposing they just possibly might be.

Second, Professor Axelrod says that the Safeguard system in its first stage of deployment is meant to protect Minute-man missiles from a sophisticated attack. Yet, the components of the system were specifically designed to protect cities against an unsophisticated Chinese attack. At least, this was the explanation 2 years ago. As far as we know, the major components, such as the Spartan missile and the radar, have not been changed, and therefore we must assume that, if what we were told 2 years ago was true and accurate, they are not suitable to the new and sophisticated mission for which or against which they supposedly are now directed.

The third point he raises is that the second phase of the Safeguard system is meant to protect cities. If this mission is to be taken seriously, extensive civil defense preparations would have to be undertaken to protect against fallout. The Defense Department has chosen to tell Congress and the public about this need later rather than sooner, and no significant effort is being recommended or carried out in the area of civil defense.

The second general consideration, I think, is an economic one and one which should be considered as we attempt to deal with the question of the surtax. This has now become the great point at issue, through which inflation is to be controlled and the economy put back in balance.

The fact is that we anticipate a \$2 billion surplus in the Federal budget, but that is not particularly important; it is not a question of a balanced budget or a \$1 or \$2 billion difference but, rather, a question of whether or not Government expenditures are for productive purposes. We could raise another \$9 billion and have the surplus run to \$10 or \$11 billion; but if we are going to spend \$30 or \$40 billion on wasteful military expenditures which contribute nothing to the balance in the economy between consumption and production, pouring purchasing power in through salaries and payments on contracts, but do not produce anything on the other side to meet that real and effective demand, then we are going to have inflation and we are going to have, along with it, a kind of depression.

So to say that the surtax is the great issue relating to stability of the economy in this country, without taking into account the actual purposes of Federal expenditures, is, it seems to me, to oversimplify greatly the judgments that have to be made with reference to our economy.

In the last few years we have seen a kind of maturity in our own economic and capitalistic system. The old idea that Marx pronounced, that you had to have war in order to stimulate economic growth, is no longer true in this country. Every time there is now a rumor of peace, the stock market improves and all the indicators tend to lead up; whereas, if there is a rumor of expansion of the war—which was not true in Korea, in World War I, or in World War II—the indicators all go down.

In 1967 we had the automobile strike. It used to be that if you had an automobile strike, the stock market would drop, but in that case it went up. The only explanation is that the automobile industry was competing for the same materials, the same financing, and the same manpower that the war was competing for. I suppose if Marx were to write another book, he would add a chapter in which he would say that to keep the economy going, you have to have either war or the automobile industry; and from the economic point of view, there would be some substance to it.

We need to look, therefore, not only at the military aspect, which is subject to

severe question, but also at the economic aspect of the ABM.

Dr. George Kistiakowsky of Harvard pointed out to the Foreign Relations Subcommittee chaired by Senator Gore: . . . had the deployment of the Nike-Zeus been authorized in 1960-61, we would have just about now the full system in operational readiness, after spending what was then estimated as \$20 billion and could have been, judging by analogy with other large weapon systems, twice as much.

I think his projection was on the conservative side.

Considering the current numbers and sophistication of offensive missiles now being deployed by the super powers, it is technically certain that the Nike-Zeus ABM system would now be of little value. It would be obsolescent or even obsolete, judging by the fact that the probably somewhat more modern Soviet ABM defenses around Moscow are rated of little value to the Soviet Union by our competent military experts.

The eventual cost of a "thick" ABM system has been estimated, for example by Dr. Herbert York, former member of President Eisenhower's Science Advisory Committee, at up to \$100 billion.

The third consideration is psychological. To seek to deter aggression and at the same time prepare to limit damage at home is inconsistent. As Dr. George Rathjens of Massachusetts Institute of Technology stated in the April 1969 issue of *Scientific American*:

To the extent that one accepts the action-reaction view of the arms race, one is forced to conclude that virtually anything we might attempt in order to reduce damage to ourselves in the event of war is likely to provoke an escalation in the race. Moreover, many of the choices we might make with damage-limitation in mind are likely to make preemptive attack more attractive and war therefore more probable. The concurrent development of MIRV's and ABM systems is a particularly good example. . . . Hard choices must be made between attempting to minimize the chance of war's occurring in a time of crisis and attempting to minimize the consequences if it does occur.

The danger of the action-reaction phenomenon and the chain of escalation it produces has, in my judgment, been repeatedly demonstrated. For example, when the United States thought that the Soviet Union was going to install some 70 ABM's, even though they had not yet done so, we made the decision to proceed with MIRV's which, if continued, will give us some 7,000 warheads.

We are witnessing today, in the case being made for the ABM system, a demonstration of the rule that when one thinks defensively the threat always rises to the level of the deterrent and then surpasses it.

One observer has said that we are the first nation to have a Department of Defense. It might be better to call it the War Department. Or perhaps we might have two platoons, the Department of Offense and the Department of Defense. However, once you begin to think about the limits needed to be secure, a situation is arrived at where no matter how many preparations are made, it is like the Kafka animal in the burrow that is always apprehensive because he hears the scratching sound.

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Secretary Laird says that our military policies and programs should not be based on what our intelligence indicates the enemy is doing, but should be designed to offset their capacity to do all that they can do. The next step, of course, would be to build a defense of sufficient strength not only to offset all that they can do, but to offset all they would do if they could. Thus we are approaching a complete reversal of the classical Clausewitz theory that war is an extension of politics, and in its place we will have a theory that politics is an extension of military program.

Finally, the argument comes down to the diplomatic and political which I think is most important and it is that aspect I wish to emphasize today.

No matter what the technicians or scientists may say about how good or bad the ABM system would be—it might be better if it did not work, and that might be the best argument for it. But whether it does or does not work, the diplomatic consideration is most important.

We have been told that we must approve the Safeguard system because the President needs it for a "card in his hand" in any forthcoming arms limitation talks with the Soviet Union. We are told that we must go into such talks with strength if they are to be successful.

But the whole history of arms control negotiations since World War II refutes this claim. The Soviet Union has never been willing to enter into discussions, much less agreements, except in a situation of approximate equality. As far back as the days of the Baruch plan, when we alone had nuclear weapons and were willing to give them up if agreements could be reached, the Russians were unwilling to talk. They agreed to meet only when they, too, had developed nuclear weapons.

There has never been any evidence that the Soviet Union could be forced to the conference table or to agreements by the superiority of our force. In fact, the contrary appears to be the case. We tried, for example, to initiate strategic arms limitation talks with the Soviet Union at the end of 1966, at which time we had a considerable superiority in weaponry over the Russians. They agreed to talk only in July 1968, when they had reached a position of relative equality. The idea of "superiority" is meaningless in a situation where each side has the capacity to destroy the other several times over.

In connection with the Soviet agreement to enter the arms limitation talks, it has been claimed several times that the vote in the Senate last year on the Sentinel system influenced the Soviet decision. This is unproven and, in my judgment, unprovable. The joint U.S.-U.S.S.R. announcement was made 3 days after the Senate vote, but we are all aware that joint announcements by the United States and the Soviet Union do not materialize overnight. The joint announcement had actually been the subject of discussion for some time prior to the Senate vote and, although the fact was not yet public, it was known during the debate that the Russians were willing to go into talks.

Finally, we cannot ignore the evidence from the history of the arms race that it is much more difficult to stop a development once it is started than to head it off. It seems clear that ABM deployment by the United States now, as well as continued MIRV development, will make it much more difficult to reach any worthwhile agreement with the Soviet Union on arms control.

Rather than Safeguard being helpful to the President, I believe that the President would be much more free to negotiate if we do not agree to deploy the ABM system.

I, therefore, hope that the Senate will vote against the deployment of this system and support the amendment offered by the Senate from Michigan (Mr. HART) and the Senator from Kentucky (Mr. COOPER).

(A this point Mr. HUGHES assumed the chair.)

Mr. HART. Mr. President, will the Senator yield?

Mr. McCARTHY. I yield.

Mr. HART. Mr. President, this is my first opportunity to state on the Record my regret that my seatmate and good friend has concluded he will not seek to return to the Senate at the conclusion of his term. Let me get that on the Record first.

His remarks this afternoon, I think, are an indication of why I am sure all of us have that feeling of disappointment. He is talking about a rather technical subject, and yet he has been able in the course of a very few minutes to highlight some of the arguments that I have heard made before in a fashion and style that have distinguished him and brought him to the attention of the Nation.

He commented, as an example, that Safeguard is old wine in a new bottle. My impression has always been that old wine is good wine. Is that correct? That is not necessarily correct? My impression is that somehow or other old wine in new bottles is as good as old wine in an old bottle. It was good wine, whether in a new bottle or old, it would not hurt it. The point I make is that—

Mr. McCARTHY. We will straighten that out later. [Laughter.]

Mr. HART. What I mean is that it would not work in an old bottle labeled "Sentinel."

Mr. McCARTHY. That is right.

Mr. HART. Or in a new bottle labeled "Safeguard." The only thing we could be sure of is that it will cost an awful lot of money, whichever bottle is used.

In the style of the Senator from Minnesota, he has made that point so vividly that I rise to thank him.

Mr. STENNIS. Mr. President, will the Senator from Minnesota yield?

Mr. McCARTHY. I yield.

Mr. STENNIS. Mr. President, with reference to the observation made by the Senator from Michigan about the recently announced intentions of the Senator from Minnesota—

Mr. McCARTHY. I think I should warn the Senator that he does not want to say too many good things about me because I might have to reconsider and I may use anything said about me, but

with restraint, of course. I am glad to yield to him on that basis.

Mr. STENNIS. I was going to say that I am not happy about that announcement. It does recall some very pleasant and delightful experiences that I have had with the Senator from Minnesota, as well as the valuable counsel, advice, and assistance which he has given me over the years. I am glad to tell him again that I appreciate it.

Mr. McCARTHY. I thank the Senator very much.

Mr. STENNIS. Wait a minute now—just yield to me a little further now—[laughter]—with all deference to the two Senators and their allusion to the biblical quotation, I do not want to make any had suggestions but I hope that the Senators are not so tangled up regarding the missiles and the ABM as they were on that quotation. I know that the Senators from Michigan and Minnesota are experts in this field or they would not have ventured out into it.

Mr. McCARTHY. The question is whether new wine in old bottles is any worse than old wine in new bottles. It all depends on the wine.

Mr. STENNIS. Anyway, the reference here that the Senator makes, in all sincerity, I know, to the diplomatic or to the international implications of the ABM, the exclusion or the inclusion of the items in the bill, I do think that is a highly important point. It seems to me just the commonsense of it and the ordinary reasoning, that if the President of the United States—having determined that he wants this defensive weapon in his arsenal, and having determined that he is going to negotiate about the whole subject matter of arms—is sent over there stripped of one of his main positions, with his left hand at least tied behind him—

Mr. McCARTHY. I hope that the whole box of—

Mr. STENNIS. It would decrease his effectiveness and his position at that conference. I may be wrong. Will the Senator point out where I am wrong?

Mr. McCARTHY. I would hope that the whole box of moon rocks which the President is taking with him would be more helpful to him than the missiles, would not the Senator think? We would have to see how effective they are. The President has promised one to President Suharto in Indonesia. Apparently, he is going to give them out as he goes about his trip. This is a new weapon in the arsenal that he did not have when he proposed the Safeguard. He might use them to negotiate with the Russians.

Mr. STENNIS. I venture to say that the best thing that could happen to both the Soviets and the United States is to have an effective ABM system. If each country knew the other had it, they would come nearer to the stage—

Mr. McCARTHY. I think I quite agree. If we were to develop an effective ABM system and give it to the Russians, we would both have an effective ABM system. Then we would both have Maginot Lines and we could be certain that we were at about the same level. The projection of it now is that it would give us an advantage, since the Russians could not be effective against us. That seems

to me to create a continuing imbalance which could only make the Russians suspicious and intensify both their defensive effort and their offensive effort.

As I recently have been challenging the President, I have some reservations about how much power Presidents should have. In another 3 or 4 months, I may have that same respect for the executive department that the Senator from Mississippi has just spoken of. I am in a transition phase right now.

Mr. STENNIS. I thank the Senator for yielding to me and appreciate his further discussion of this subject.

Mr. GORE. Mr. President, will the Senator from Minnesota yield?

Mr. McCARTHY. I yield.

Mr. GORE. Does not the Senator recall how quick the Pentagon was to give assurance to the Senate, upon learning that the Soviets were deploying an ABM system around Moscow, that they could quickly saturate it, that it provided no real defense of Moscow and no major interference with the offensive capability?

Mr. McCARTHY. I recall that.

Mr. GORE. Or could it be that the Russians have stopped deployment of the ABM around Moscow because they, too, have discovered that it could easily be saturated and was really ineffective?

Mr. McCARTHY. I think that is quite possible.

Mr. GORE. Could it be that the French would have saved themselves from a false sense of security and an ineffective defense system had they realized that the maginot line could be flanked?

Mr. McCARTHY. There is no question.

Mr. DOMINICK. Mr. President, will the Senator from Minnesota yield on the point the Senator from Tennessee just brought up again?

Mr. McCARTHY. I yield.

Mr. DOMINICK. I think that we have already shown, both in the closed session and the open session which is not secret, that the Soviets have not stopped the construction of their ABM system, but they are still continuing. I think that point should be made clear.

Mr. GORE. Mr. President, will the Senator from Minnesota yield?

Mr. McCARTHY. I yield.

Mr. GORE. I invite the Senator from Colorado to come to the committee room of the Foreign Relations Committee, and I will be glad to go with him and show him the testimony.

Mr. DOMINICK. I have already seen the testimony in our own Armed Services Committee.

Mr. HART. Mr. President, I notice that the Senator from Mississippi has left the Chamber for a moment. I wanted to ask the Senator from Minnesota to develop a little more fully his theory with respect to the suggestion that the Senator from Mississippi made; namely, that the President of the United States has told us he wants this system. In addressing the Senator from Minnesota, the Senator from Mississippi made that point. It occurred to me that, for the record, either now or later, all of us would be benefited by having the thoughts of the Senator from Minnesota with respect to the infallibility of Presidents.

Mr. McCARTHY. I did, in somewhat an indirect and theoretical way, talk about this in the course of the campaign last year, not just about military weapons but other powers. It is necessary to have a proper distribution of these powers and some control over all the powers of Government that the Constitution attempts to distribute among the three branches of Government. They are at least reasonably well distributed. Congress, and the Senate generally, accepts that we should not give the President everything he wants in the domestic field. For example, there is no real disposition to say that we should give him whatever tax program he wants, but we should review it. There is no disposition that we should give him whatever he wants in the way of a foreign aid program. All of these are instruments of administrative and Presidential power, to some extent, but are shared with the Senate and with the House.

It seems to me that when we move into the important area of military action and defense, it is even more important. It involves the largest item in the budget and actions which are likely to have the greatest bearing on the welfare of this country and its influence on the world. At that point we ought to do even more and be more restrictive and harsher in our judgments of the President's requests which come to us and also more willing to fulfill our responsibility under the Constitution.

I think in the case of the ABM we have what is not really a basic military question; it is a question not as much of military policy as it is a question of diplomatic or foreign policy. It is a question of how we want to deal with other nations in the world.

For those reasons, leaving out all considerations of science and technology, the Senate ought to put a "hold" on this by its action in the next few weeks.

CONGRESS MUST RECONCILE MILITARY SPENDING WITH DOMESTIC NEEDS

Mr. PROXMIRE. Mr. President, the great concern over the size of the military budget has at least reached the level of a full-fledged congressional debate. Most encouraging is the fact that the discussions are being conducted in the context of competing nonmilitary priorities. I consider this to be the most significant debate of public policy in my career as a U.S. Senator.

For years the shibboleth of "national security" has served to obscure the real military needs of this country while at the same time sacrificing its domestic needs. The common assumption has been that any increase in military spending represented an increase in national security. The enormous size of the military budget today—almost \$80 billion—is a testament to the success of the purveyors of this assumption. Yet recent disclosures suggest that we would have more national security if we spent less on defense.

MILITARY INEFFICIENCY

For one thing, we have learned about the enormous inefficiencies within the

military establishment. There is inefficiency in procurement, in the purchase of weapons systems. There is inefficiency in defense production. There is inefficiency in the management of Government-owned property. There is inefficiency in the use of manpower. Many are asking why these inefficiencies should be allowed to continue.

Why should the taxpayer have to foot the bill for huge cost overruns such as the \$2-billion overrun on the C-5A and the more than \$3-billion overrun on the Minuteman program? Why should we be spending billions of dollars on weapons systems which are canceled before they are ever deployed because they do not work or for other reasons? The Manned Orbiting Lab is only the most recent example of this kind of boondoggle. Why is the military allowed to spend \$1.2 billion on the Sheridan/Shillelagh tank, hundreds of which are now in storage because they are defective?

Mr. TOWER. Mr. President, will the Senator yield?

Mr. PROXMIRE. I yield.

Mr. TOWER. The Senator is aware, is he not, that NASA has announced it is going to orbit a laboratory, and therefore there might have been duplication in that effort? Probably the NASA-sponsored effort would accomplish the same thing. I am sure the technology gained is of some value to NASA.

Mr. PROXMIRE. I presume that proposal by NASA will be reviewed by the Congress. I hope we look it over very carefully.

Mr. TOWER. I meant to say "proposal."

Mr. PROXMIRE. No doubt there are many benefits from any kind of proposal by NASA or the Defense Department, but we have to put it in the context of other demands, including our economy and the inflated budget and that we need to cut back spending wherever we can without serious consequences. I think this is one area where we can and should.

In addition, serious questions have been raised about the basic assumptions underlying our military policy. These questions range from the definition of American vital interests and the nature of our foreign commitments, to the size of our general purpose forces, to the need for individual weapons systems. Perhaps the most basic of all assumptions now being questioned is the assumption that this Nation must be prepared to fight in two major wars and one minor war simultaneously. This is the so-called 2½-war contingency, and I must say, judging from discussions with my colleagues, the very existence of this assumption came as a revelation to some of the most distinguished and knowledgeable Members of the Senate when it was first discussed publicly a few months ago. Obviously, the 2½-war contingency has tremendous budgetary implications.

NO CHALLENGE OF MILITARY SPENDING

The unhappy fact is, however, that while inefficiencies and military policies are being questioned today, they have been allowed to develop in the past without serious challenge from those outside the Military Establishment.

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tion, the Treasury Department has added further recommendations. The distinguished chairman of the House Ways and Means Committee (Mr. MILLS) and the next ranking majority member of the committee and majority whip (Mr. BOGGS) and the ranking minority member of the committee (Mr. BYRNES) have given their assurances that a tax reform bill would be before the House before the August recess. The committee has taken testimony from over 600 witnesses to date on tax reform proposals. It has been meeting almost daily in executive session and has reached tentative agreement on many difficult and far-reaching amendments to present tax laws. I note that the Ways and Means Committee plans to have its tax reform bill completed by Friday of this week and to bring the bill before the House the following Wednesday, August 6.

I know from mail and from talks with constituents that there is a strong opinion in my State and in the country that our tax laws should be reformed and made more equitable and that Congress must act this year to do so. I have no doubt that Congress will act and act responsibly.

EXTENSION OF AUTHORITY OF THE COMMITTEE ON LABOR AND PUBLIC WELFARE TO INVESTIGATE PROBLEMS OF EDUCATION OF AMERICAN INDIANS

Mr. MONDALE. Mr. President, I am sending to the desk an original Senate resolution unanimously reported from the Committee on Labor and Public Welfare this morning which would extend the authority of the Committee on Labor and Public Welfare to investigate problems of education of American Indians, and ask unanimous consent for its immediate consideration.

I have cleared this matter with the majority and minority leaders and with the distinguished chairman of the Committee on Interior and Insular Affairs (Mr. JACKSON) and the Committee on Rules and Administration (Mr. JORDAN of North Carolina).

The PRESIDING OFFICER. The resolution will be stated.

Mr. MONDALE. Mr. President, I ask unanimous consent that the reading of the resolution be dispensed with.

The PRESIDING OFFICER. Without objection, it is so ordered. Is there objection to the present consideration of the resolution?

There being no objection, the Senate proceeded to consider the resolution.

Mr. MONDALE. Mr. President, this resolution will allow the Indian Education Subcommittee an additional 3 months within which to file its final report, and will allow the continued expenditure of the funds for the work of this subcommittee which have been previously authorized. This time is needed so that the Senators on the committee may themselves have the opportunity to fully consider and evaluate the record of hearings which have been held by the subcommittee and to arrive at such recommendations as may be appropriate to bring before the Senate.

The PRESIDING OFFICER. The question is on agreeing to the resolution.

The resolution (S. Res. 226) was agreed to, as follows:

S. RES. 226

Resolved, That Senate Resolution 80, Ninety-first Congress, approved February 17, 1969, is amended as follows:

- (1) In section 2, strike "July 31, 1969" and insert in lieu thereof "November 1, 1969".
- (2) In section 3, strike "July 31, 1969" and insert in lieu thereof "November 1, 1969".

ORDER OF BUSINESS

Mr. MANSFIELD. Mr. President, I had expected to be engaged in a colloquy at this time, but events over which I have no control have intervened; so I yield to the distinguished Senator from Colorado, and express the hope that when he completes his remarks, we can get underway.

AUTHORIZATION OF APPROPRIATIONS FOR FISCAL YEAR 1970 FOR MILITARY PROCUREMENT, RESEARCH AND DEVELOPMENT, AND FOR THE CONSTRUCTION OF MISSILE TEST FACILITIES AT KWAJALEIN MISSILE RANGE, AND RESERVE COMPONENT STRENGTH

The Senate resumed the consideration of the bill (S. 2546) to authorize appropriations during the fiscal year 1970 for procurement of aircraft, missiles, naval vessels, and tracked combat vehicles, and research, development, test, and evaluation for the Armed Forces, and to authorize the construction of test facilities at Kwajalein Missile Range, and to prescribe the authorized personnel strength of the Selected Reserve of each Reserve component of the Armed Forces, and for other purposes.

Mr. ALLOTT. Mr. President, there will be one virtue in my remarks. They will be on the subject which is the matter of debate on the Senate floor, the Safeguard anti-ballistic-missile system.

Mr. President, as with most Senators who are charged with the responsibility of making the final decision regarding the wisdom of deploying an ABM system at this time, I try to follow the debate as closely as I can here on the floor. When other responsibilities have kept me from the floor I read the RECORD of each day's debate with the closest of attention in order to fully inform myself with regard to the progress of the information which is being imparted for the benefit of the Senate, indeed, of the country.

Thus, it was with a great deal of interest that I read the statements contained in the colloquy between the Senator from Arkansas (Mr. FULBRIGHT) and the distinguished chairman of the Armed Services Committee on Friday, July 25, beginning at page S8600 and continuing over to S8601 in the CONGRESSIONAL RECORD. I noticed that the subject was mentioned again in yesterday's RECORD. They alluded to the possible effects of radiation upon radars, electrical communication systems, computers, and their mutual interaction in fulfilling the command and control function for Safeguard.

I believe that the distinguished Senator from Arkansas was referring to the effects of the electromagnetic pulse or, EMP. EMP is created when gamma rays and X-rays from an exploding thermonuclear warhead strike electrons in the air, causing them to rapidly move away from the burst. The overall effect is somewhat like that caused by a flow of electrons accelerating in only one direction.

I should like to point out that this phenomenon is not unique to the ABM. It is, in fact, probably much more relevant to offensive ICBM's and it relies on the same basic mechanism by which the Spartan missile neutralizes incoming warheads.

For many years the effects of radiation on missile systems have been openly discussed in the technical and nontechnical literature. For instance, the January 2, 1967 issue of Technology Week states:

Growing concern over the vulnerability of U.S. missiles to X-rays from nuclear warheads of anti-missile missiles is leading to new specifications for ICBM guidance systems.

The May 26, 1967 issue of Time magazine stated:

Nearly 80% of the energy released by the explosion of the new warheads, believed to be in the one-megaton range, is in the form of high-energy X-rays.

This article continues:

Even if the shock wave fails to set off the warhead's conventional explosive, it can damage electronic components or cause sufficient changes in the critical shape of internal cavities within the warhead to prevent a nuclear explosion.

In addition to these radiation effects which are now well known, weapons designers recognized some time ago that they had to contend with the EMP phenomenon. Although EMP has not received the notoriety that has been accorded to X-rays, neutrons, and some other effects of thermonuclear explosions, it is extremely important. In its issue dated November 29, 1968, Time magazine stated further:

EMP produces powerful currents in any electrical conductor it crosses . . . these induced currents are strong enough to blow fuses or melt wiring and other metallic components in ground installations and aircraft. They would probably have the same effect on the missile and guidance firing systems.

This article goes on to point out that electronic defenses and offensive missiles are susceptible to EMP.

Mr. President, I believe the Senator from Arkansas referred to the fact that under the Nuclear Test Ban Treaty, "it is not easy to conduct a nuclear explosion in the air to test its effect upon communications."

This is manifestly apparent, of course. As Senators will recall prior to the ratification of the nuclear Test Ban Treaty the Russians detonated their so-called superbomb with a yield in the neighborhood of 100 kilotons. The argument was made then, not without a great deal of merit, I believe, that the United States should postpone ratification of the Test Ban Treaty until this country has had a chance to detonate a similar high-yield nuclear device. Such a detonation was

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suggested merely for the purpose of studying the myriad phenomena of such a high-yield nuclear explosion, including, of course, the EMP phenomenon.

Those Senators who argued against such a postponement carried the day, the treaty was ratified, and the United States has since been precluded from studying the radiation and EMP effects in an atmospheric environment.

Thus, Mr. President, it is not inconceivable to this Senator that the Russians may have learned a great deal more than we now know with regard to this EMP problem. It must be pointed out, of course, that our Minuteman sites and ICBM forces in their present silos depend on communications systems which were developed and tested 10 years ago, long before the EMP phenomenon was clearly understood. Perhaps this is not the case, but if it is a matter which is of an unclassified nature, I would like to have the Senate informed on this question. But, clearly the EMP problem raises some serious questions with regard to our assured second-strike capability.

Recognizing this danger to our missiles, the United States has developed large machines in order to realistically simulate the phenomena induced by electromagnetic radiation. It is well known from unclassified sources that the Defense Atomic Support Agency—DASA—views this as a critical problem about which more information is needed.

In summary, EMP is undoubtedly an important problem. It is not a new one; it is not one which has suddenly appeared with the ABM. It is probably most important, however, in its potential to degrade the second-strike capability of our offensive, land-based ICBM's. This is because many of our offensive missiles were deployed before the full importance of EMP was recognized and because there are many more offensive missiles than planned defensive ABM's. Last year Senator HENRY JACKSON stated that despite 5 years of research, EMP still poses a serious problem to the Nation's communications, radar, and the missile systems. I believe this, rather than mitigating against ABM deployment, furnishes additional reasons for approval of Safeguard. Safeguard gives the defense one more option in keeping a credible second-strike capability, by providing one more way of protecting our missile sites from the EMP produced by thermonuclear explosions.

Mr. MANSFIELD. Mr. President, I suggest the absence of a quorum.

The PRESIDING OFFICER. The clerk will call the roll.

The assistant legislative clerk proceeded to call the roll.

Mr. MANSFIELD. Mr. President, I ask unanimous consent that the order for the quorum call be rescinded.

The PRESIDING OFFICER. Without objection, it is so ordered.

Mr. MANSFIELD. Mr. President, I understand that the distinguished Senator from New York (Mr. JAVITS) desires to speak for not to exceed 2 or 3 minutes.

ABM

PETITION FROM AD HOC COMMITTEE OF NEW YORKERS AGAINST ABM

Mr. JAVITS. Mr. President, there was presented to me today by Representative REMP, of Westchester County, N.Y., and by Representative BINGHAM, of Bronx County, N.Y., a petition signed by 10,000 individuals throughout the State of New York, expressing from the depths of their being their conviction on the deployment of the anti-ballistic-missile system. It is so spontaneous a movement, so individual in its character and so profound in its conviction, that I wish to call it to the attention of the Senate. The petition, which is signed by these thousands of individuals, reads as follows:

We the undersigned citizens, protest the Administration's recent decision to deploy an Anti-Ballistic Missile System for the following reasons:

1. Such deployment would waste many billions of dollars of the taxpayers money;
2. The ABM system is of unproven effectiveness. Most scientific testimony indicates that it probably would not work;
3. Deployment of the ABM would accelerate the nuclear arms race;
4. Deployment of the ABM would seriously endanger nuclear disarmament talks between the United States and Russia.

We urge the Congress to take appropriate measures to insure that this unfortunate decision is not implemented.

The petition, signed with the names and addresses of 10,000 persons from all over the State of New York, was gathered by a highly responsible committee. Any Senator is invited to examine the petition.

Mr. GORE. Mr. President, will the Senator yield.

Mr. JAVITS. I yield.

Mr. GORE. Mr. President, I have not had the pleasure of examining the petition. It is indeed voluminous. The voice, through the signature of 10,000 citizens of the State of New York, is eloquent indeed.

I note that the petition expresses doubt as to the workability of the ABM, even if deployed and even if needed. Would not the senior Senator from New York agree that in the event that it should become necessary to detonate ABM's in an attempt to defend against incoming nuclear missiles, it would indicate our policy of deterrence would have already failed?

Mr. JAVITS. The Senator is correct. I think that is the deep feeling from their hearts that these thousands have expressed.

Mr. GORE. So the question of its workability, however fraught with doubt that is, is a secondary matter indeed. The real question for the country is what action it can take that would most likely lead to an agreement on nuclear arms limitation. This is true, because the only measure of security between the two major nuclear powers, each possessing the power to destroy the other, is the avoidance of nuclear war.

So the first question is whether ABM

is necessary, whether it will contribute to an arms limitation agreement, or, conversely, whether it will interfere, hinder, make more difficult the achievement of an arms limitation.

Mr. JAVITS. I agree with the Senator.

Without imposing on the time so graciously granted by the Senator from Montana, I only say that this does not inhere in what the parties may momentarily think they will do. They will do a lot more if we do not deploy than if we do.

AMENDMENT OF FEDERAL AVIATION ACT OF 1958, AS AMENDED

Mr. MANSFIELD. Mr. President, I ask the Chair to lay before the Senate a message from the House of Representatives on S. 1373.

The PRESIDING OFFICER laid before the Senate the amendment of the House of Representatives to the bill (S. 1373) to amend the Federal Aviation Act of 1958, as amended, and for other purposes, which was to strike out all after the enacting clause, and insert:

That the Federal Aviation Act of 1958, as amended, is further amended as follows:

SECTION 1. Section 407(b) (49 U.S.C. 1377 (b)) is amended by adding the following additional sentence: "Any person owning, beneficially or as trustee, more than 5 per centum of any class of the capital stock or capital, as the case may be, of an air carrier shall submit annually, and at such other times as the Board may require, a description of the shares of stock or other interest owned by such person, and the amount thereof."

Sec. 2. Section 408 (49 U.S.C. 1378) is amended by striking subsection 408(a) (5) in its entirety, and inserting in lieu thereof the following:

"(5) For any air carrier or person controlling an air carrier, any other common carrier, or any person engaged in any other phase of aeronautics, or any other person, to acquire control of any air carrier in any manner whatsoever: *Provided*, That the Board may by order exempt any such acquisition of a noncertificated air carrier from this requirement to the extent and for such periods as may be in the public interest."

Sec. 3. (a) Section 408 is further amended by deleting the first sentence of subsection 408(b) and substituting in lieu thereof the following: "Any person seeking approval of a consolidation, merger, purchase, lease, operating contract, or acquisition of control, specified in subsection (a) of this section, shall present an application to the Board, and thereupon the Board shall notify the persons involved in the consolidation, merger, purchase, lease, operating contract, or acquisition of control, other persons known to have a substantial interest in the proceeding, and the Attorney General of the time and place of a public hearing."

(b) Section 408 is further amended by inserting in the third proviso of subsection 408(b) after the words "determines that no person disclosing a substantial interest" the following: "or the Attorney General".

Sec. 4. (a) Section 408 is further amended by adding the following new subsection 408 (f):

"Presumption of control

"(f) For the purposes of this section, any person owning beneficially 10 per centum or more of any class of the capital stock or

SECRET

JOURNAL

OFFICE OF LEGISLATIVE COUNSEL

Monday - 28 July 1969

25X1

1. [redacted] On Saturday, 26 July, Dorothy Fosdick, Staff Director of the Subcommittee on National Security and International Operations, said that during the Senate ABM debate on 25 July Senator Fulbright had claimed that U.S. defense spending exceeded by 25 or 30 percent that of the Soviet Union. Miss Fosdick said Senator Jackson would like to be briefed on this subject. I said I was sure we could arrange this, but thought possibly Senator Jackson had been present at one of our earlier presentations regarding Soviet and U.S. military expenditures. She said if the Senator wanted to pursue the matter she would let me know.

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2. [redacted] met with Senator Stuart Symington in response to his query regarding [redacted] Also present was Mr. Pat Holt, Consultant of the Senate Foreign Relations Committee. Senator Symington asked if I preferred to deal with the matter orally. I said I did because it was a sensitive matter which could be properly dealt

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[redacted] Symington said this was perfectly alright with him but the questions contained in his letter to us were formulated by Messrs. Pincus and Paul, staff investigators of his Subcommittee, and it would be much more useful for us to brief them upon their return from their Far East trip than to brief the Senator. He said for this reason he did not think it necessary for [redacted] to come over and brief him, although he asked that his personal greetings be conveyed to [redacted] It was agreed that we would meet with Pincus and Paul to clear up the matter soon after their return (date still undetermined).

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3. [redacted] Attempted to call Chairman Rivers, House Armed Services Committee, regarding Representative Clement Zablocki's request that we testify concerning the Soviet MIRV program before Zablocki's Subcommittee on National Security of House Foreign Affairs Committee. Since Rivers was not available I referred the question to Mr. Blandford who called back later to say that he had taken the matter up with Rivers who would neither approve nor disapprove our complying with Zablocki's request, but would recommend that we take up the problem with Speaker McCormack since it raised a jurisdictional question.

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unanimous consent, the second time, and referred as follows:

By Mr. MUNDT (for himself and Mr. McCLELLAN):

S. 2701. A bill to establish a Commission on Population Growth and the American Future; to the Committee on Government Operations.

(The remarks of Mr. MUNDT when he introduced the bill appear earlier in the RECORD under the appropriate heading.)

By Mr. MONDALE:

S. 2702. A bill for the relief of Mrs. Rose May Fang-Yen; to the Committee on the Judiciary.

By Mr. HARRIS:

S. 2703. A bill for the relief of Antonia Galicia Rodriguez; to the Committee on the Judiciary.

By Mr. PROXMIRE:

S. 2704. A bill to provide incentive for devotion of nonresidential reuse project land, to low- or moderate-income housing; to the Committee on Banking and Currency.

(The remarks of Mr. PROXMIRE when he introduced the bill appear later in the RECORD under the appropriate heading.)

By Mr. GORE:

S.J. Res. 141. A joint resolution proposing an amendment to the Constitution of the United States extending the right to vote to citizens 18 years of age or older; to the Committee on the Judiciary.

(The remarks of Mr. GORE when he introduced the joint resolution appear earlier in the RECORD under the appropriate heading.)

S. 2704—INTRODUCTION OF A BILL RELATING TO SITES FOR LOW-INCOME HOUSING

Mr. PROXMIRE. Mr. President, one of the critical problems in building housing for low- and moderate-income families is the lack of suitable sites. The unavailability of land in our large central cities makes it extremely difficult to build housing for the poor. When land is available, developers are frequently forced to resort to monolithic high-rise structures in order to bring the rents within the reach of low-income families.

One excellent source of land for low-income housing is the urban renewal program. The Douglas commission on urban problems has pointed out that over one-half of the land on urban renewal sites is vacant. It would be a simple matter to use some of this land for low- and moderate-income housing sites.

The problem with this approach is that much of this land is classified for eventual commercial reuse. The resale value of the land is, of course, higher when the reuse is classified as commercial as opposed to residential. Therefore, if cities were to reclassify the land on the existing urban renewal sites from commercial to residential, land values would drop and net project costs would increase.

In order to remove this barrier and provide our cities with an incentive to use more urban renewal land for low- and moderate-income housing sites, I am introducing a bill to amend the Urban Renewal Act. The bill would make it possible for the Federal Government to reimburse cities for any added cost entailed by reclassifying urban renewal land so as to provide for more low- and moderate-income housing sites.

HUD has already shifted its urban renewal priorities from commercial proj-

ects toward building residential housing, particularly for low- and moderate-income families. The bill I have introduced would effect a similar reordering of priorities for urban renewal projects already in the pipeline. The bill is entirely in keeping with the goals set forth in the 1968 Housing Act of solving our housing problems within the next decade.

I ask unanimous consent that the bill be printed in the RECORD.

The PRESIDING OFFICER. The bill will be received and appropriately referred; and, without objection, the bill will be printed in the RECORD.

The bill (S. 2704) to provide incentive for devotion of nonresidential reuse project land to low- or moderate-income housing, introduced by Mr. PROXMIRE, was received, read twice by its title, referred to the Committee on Banking and Currency, and ordered to be printed in the RECORD, as follows:

S. 2704

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That Section 103 of the Housing Act of 1949 is amended by adding at the end thereof the following new subsection:

“(e) Notwithstanding any other provision of this title, for any urban renewal project under contract for capital grant on the date of enactment of this subsection, involving real property which is to be devoted to non-residential use pursuant to the applicable urban renewal plan existing on the date of this subsection’s enactment, and, which, by urban renewal plan changes adopted after this subsection’s enactment, is to be devoted to residential use, the Secretary is authorized to increase the capital grant otherwise payable by an amount equal to one-third (or one-fourth in the case of an urban renewal project on a three-fourths capital grant basis) of the difference between the disposition proceeds of any such real property sold or leased pursuant to section 107(a) and the estimated fair value, as determined by the Secretary, of such real property as of the date of this subsection’s enactment.

“The local public agency shall not be required to provide any additional local grant-in-aid due to the increase in capital grant authorized by this subsection.”

ADDITIONAL COSPONSORS OF BILLS

S. 2667

Mr. DIRKSEN. Mr. President, on behalf of the Senator from Colorado (Mr. DOMINICK) I ask unanimous consent that, at the next printing, the name of the Senator from Utah (Mr. BENNETT) be added as a cosponsor of S. 2667, to provide additional penalties for the use of firearms in the commission of certain crimes of violence.

The PRESIDING OFFICER. Without objection, it is so ordered.

S. 2691

Mr. BYRD of West Virginia. Mr. President, on behalf of the Senator from Wisconsin (Mr. PROXMIRE) I ask unanimous consent that, at the next printing, the name of the Senator from Ohio (Mr. YOUNG) be added as a cosponsor of S. 2691, to provide for the establishment of a National Academy of Medical, Dental, and Allied Sciences within the Department of Defense.

The PRESIDING OFFICER. Without objection, it is so ordered.

SENATE RESOLUTION 224—RESOLUTION COMMENDING THE APOLLO 11 ASTRONAUTS ON THEIR SUCCESSFUL LUNAR EXPEDITION

Mr. MANSFIELD (for himself and Mr. DIRKSEN) submitted a resolution (S. Res. 224) commending the Apollo 11 astronauts on their successful lunar expedition, which was considered and agreed to.

(The remarks of Mr. MANSFIELD, when he submitted the resolution, appear earlier in the RECORD under the appropriate heading.)

AUTHORIZATION OF APPROPRIATIONS FOR FISCAL YEAR 1970 FOR MILITARY PROCUREMENT, RESEARCH AND DEVELOPMENT, AND FOR THE CONSTRUCTION OF MISSILE TEST FACILITIES AT KWAJALEIN MISSILE RANGE, AND RESERVE COMPONENT STRENGTH—AMENDMENT

AMENDMENT NO. 107

Mr. PROXMIRE. Mr. President, on behalf of myself, and Senators CASE, COOK, YOUNG of Ohio, and MONDALE, I submit today a disclosure amendment, intended to be proposed by us, jointly, to the pending military procurement bill, which would affect three classes of persons. Specific annual disclosure statements would be required from former high-ranking military officers and all former military procurement officers who go to work for major defense contractors.

The amendment would also apply to former high-ranking civilian officers and all former civilian procurement officers who work for the major contractors.

Finally, it would apply to former employees of defense contractors who come to work for the Pentagon.

Let me outline the major provisions.

RETIRED MILITARY OFFICERS

The amendment would require retired officers of the rank of colonel or Navy captain and above and procurement officers and former military plant representatives of lesser rank who work for companies doing more than \$10 million a year business with the Pentagon, to disclose certain facts to the Secretary of Defense, by March 1 of each year. This would include their name, the title and description of their work during the 3 years prior to retirement, the date of their retirement, the date of employment with the contractor, and the title and description of their work with the contractor. In addition the amendment would require a declaration of any work on planning, research, or decisionmaking on any product, contract, weapon system or component in which the officer was involved while at the Pentagon and in which his employer has a substantial interest.

Mr. President, much of the information this amendment seeks from former officers is now submitted by retired officers under a statement of employment—Defense Department form 1357. What this amendment does is to require additional information about the nature of their work while they were at the Pentagon with special reference to the details of any procurement work they

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were involved in in which their civilian employer has a substantial interest.

Of course this requirement would apply only to those high ranking officers and procurement officers of lower ranks who go to work for defense contractors.

FORMER CIVILIAN OFFICIALS

The amendment calls for disclosure of the same information from former civilian employees of the Pentagon of grade 15 or above. It also calls for disclosure by former civilian officials of whatever rank who were involved in procurement and who work for or represent companies doing more than \$10 million a year business with the Pentagon. The amendment would apply not only to former high ranking civilians who work directly for the contractors, but also to those who "represent" them in any transaction for services or materials. Its intention is to require disclosure by lawyers and others who are involved in procurement.

If a former Assistant Secretary of the Air Force, Army, or Navy left the Pentagon and went into private law practice he could be required to report under this amendment.

If he represented the contractor on an income tax or a bond issue matter, he would not have to report. But if he was retained to represent, or did represent, the contractor on a matter involving a weapons system or services or materials to the Pentagon, he would be required to report.

The test is whether he is retained by and represents the contractor in a transaction.

If a contractor retains him and he makes a phone call to the Pentagon or takes an admiral to lunch or plays golf at Burning Tree Country Club on behalf of his client contractor, the former high ranking official would have to file an annual disclosure statement so long as his services were retained.

I think such a requirement is long overdue. And in fairness to former high ranking military officers, it is just as important if not more so to require disclosure from former high ranking civilians.

FORMER CONTRACTOR'S EMPLOYEES

The amendment calls for similar disclosure by present Pentagon civilian employees who previously worked for a contractor doing more than \$10 million in business with the Pentagon. It requires disclosure by them of any work by them on specific products, research, weapon systems or components in which his previous employer had a substantial interest, in order that conflicts may not develop.

FREEDOM OF INFORMATION

The amendment requires that the information be open to inspection by the press and public at the Pentagon.

The amendment also calls for the Secretary to make an annual report to Congress by May 1 of each year giving the information in an organized and tabulated form. While the reporting requirement in the bill has been written in general terms, in order to avoid requiring an excessive amount of data, it is nonetheless the intent of this provision that the pertinent information be provided or summarized.

SUNLIGHT IS A GREAT DISINFECTANT

Mr. President, while I believe that it is extremely important that the very weak conflict of interest laws now on the books should be strengthened, I also believe that disclosure can be of great help. There is an old saying that sunlight is a great disinfectant.

Furthermore, this amendment is appropriate to this bill while the proposal I made yesterday for tightening the conflict of interest laws would apply to the Government as a whole and should properly have hearings to consider them before they are passed.

Basically what my amendment does is to require more detailed information from high ranking officers and all former procurement officers and plant representatives who go to work for the big companies than is now required. As I have said, much but not all of the information is now in the hands of the Pentagon.

But the major change is to require the same detailed data from the former civilian employees. This, I think, is a very proper requirement and is long overdue.

But more important is the fact that the amendment requires the Pentagon to make the data open to inspection by the press and the public, which they have formerly refused to do. In addition, it requires that an annual report be made to the Congress. This, I believe, will make it possible for Congress and the public to gain an overall view of the situation.

REGULAR FLOW OF INFORMATION

Mr. President, what my amendment would do is to make information available on an annual basis which, in the past has been available only when insisted upon by Members of Congress.

In 1969 I asked for and received from the Pentagon a list of high ranking former military officers now employed by the 100 largest defense contractors. The list given to me totaled 2,124 former officers in the employ of the 100 largest contractors. Ten companies alone employed 1,065 or over half of them.

It has been 10 years since similar information has been made public. In 1959, during the hearings on the Renegotiation Act, former Senator Paul H. Douglas asked for and received similar details. In that year there were 721 former high ranking officers employed by the top 100 companies—88 out of 100 reporting.

In the meantime, efforts by the press and public to get such information from the Pentagon failed even though the Pentagon had such information available from the data from the statement of employment it requires each retired officer to make and to keep up to date.

My amendment will regularize what I think is a proper disclosure practice. In addition, it will extend disclosure requirements to civilian as well as former military officers.

The PRESIDING OFFICER. The amendment will be received, printed, and will lie on the table.

ADDITIONAL COSPONSOR OF AMENDMENT NO. 101

Mr. HART. Mr. President, I ask unanimous consent that the name of the Sena-

tor from Wisconsin (Mr. NELSON) be added as a cosponsor of the pending amendment (No. 101).

Through inadvertence, his name was omitted both from the initial and the modified amendments when they were submitted.

The PRESIDING OFFICER. Without objection, it is so ordered.

NOTICE OF HEARING

Mr. McCLELLAN. Mr. President, the Committee on Government Operations has scheduled a hearing on S. 1707, a bill to establish a Commission on Government Procurement, for July 31, 1969. The hearing will begin at 10 a.m. in room 3302, New Senate Office Building.

The purpose of the hearing is to receive testimony from the Comptroller General and officials of the executive branch with respect to the bill. Statements from other interested parties will be received for inclusion in the hearing record.

NOTICE CONCERNING NOMINATION BEFORE THE COMMITTEE ON THE JUDICIARY

Mr. DIRKSEN. Mr. President, the following nomination has been referred to and is now pending before the Committee on the Judiciary:

David A. Brock, of New Hampshire, to be U.S. attorney for the district of New Hampshire for the term of 4 years, vice Louis M. Janelle.

On behalf of the Committee on the Judiciary, notice is hereby given to all persons interested in this nomination to file with the committee, in writing, on or before Friday, August 1, 1969, any representations or objections they may wish to present concerning the above nomination, with a further statement whether it is their intention to appear at any hearing which may be scheduled.

ONE GIANT LEAP FOR MANKIND—NOT ONE BACKWARD STEP

Mr. ANDERSON. Mr. President, more than 100 years ago, the celebrated science fiction writer, Jules Verne, wrote a book entitled "From the Earth to the Moon." In it, he had three intrepid explorers take a trip in a capsule to the moon. Although some of his facts were wrong, this Frenchman unhesitatingly selected America as the country that would undertake such a mission. That was the image America had 100 years ago: Vital. Growing. Enterprising. Building. Willing to undertake new things. Restless to explore new horizons.

Jules Verne was right. Americans have gone to the moon. But the question is: "What does America do now?"

Here is what Jules Verne said:

The American people will never rest quietly until they have pushed to its last result and to every logical consequence the astounding step so daringly conceived and so wonderfully carried out.

Well, I hope he will be right about that too, but I am not so sure. Our courageous astronauts had hardly set foot on the moon before some people were saying,

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also goes into the conflict of Land Use Planning; the role of the Farm Bureau, etc. *The Politics of Agriculture*, Free Press, Glencoe, Illinois, 1952, 282 pages. Mr. Hardin here discusses in length the trials and tribulations of USDA, State colleges and Extension and other power groups getting along with each other.

"Food and Fiber in the Nation's Politics," Volume III, Technical papers, *National Advisory Commission on Food and Fiber*, August, 1967.

Kirkendall, Richard, "Social Scientists and Farm Politics in the Age of Roosevelt," *University of Missouri Press*, 1966. A most excellent source. Dr. Kirkendall's book is an expansion of a history doctorate; the bibliography is most excellent, for anyone wishing to gain an intelligent understanding of the agricultural revolution.

McConnell Grant, *Decline of Agrarian Democracy in the United States*, University of California Press, Berkeley, 1953. Originally this book was recommended to me by Solon Kimball of Columbia University. He sent a review of it from a National Council of Churches bulletin. The bibliography I found excellent for further research, particularly the FB, Everett Dirksen, and the Congressional Hearings.

Wells, O. V., J. D. Black, et al. P. H. Appleby, Henry C. Taylor, H. R. Tolley, R. J. Penn, and T. W. Schultz, "The Fragmentation of the BAE"—*Journal of Farm Economics*, Vol. XXXVI, Feb. 1954, no. 1, pp. 1-22. From this paper come all direct quotations of Msgr. Miller on the re-organization of USDA.

ORDER FOR RECOGNITION OF SENATOR COTTON IN EXECUTIVE SESSION ON TUESDAY NEXT

Mr. BYRD of West Virginia. Mr. President, with respect to the order which has been previously granted, under which the able senior Senator from New Hampshire (Mr. COTTON) will be recognized on Tuesday next immediately following the prayer and the disposition of the reading of the Journal, that debate of 2½ hours should be in executive session. Therefore, I ask unanimous consent that it be in executive session.

The PRESIDING OFFICER. Without objection, it is so ordered.

CONCLUSION OF MORNING BUSINESS

The PRESIDING OFFICER. Is there further morning business? If not, morning business is concluded.

MESSAGE FROM THE HOUSE

A message from the House of Representatives by Mr. Hackney, one of its reading clerks, informed the Senate that, pursuant to the provisions of 42 United States Code 2251, the Speaker had appointed Mrs. MAY of Washington as a member of the Joint Committee on Atomic Energy, to fill the existing vacancy thereon.

The message also informed the Senate that, pursuant to the provisions of section 1, Public Law 689, 84th Congress, as amended, the Speaker had appointed Mr. DEVINE, of Ohio, as a member of that U.S. Group of the North Atlantic Assembly, to fill the existing vacancy thereon.

The message announced that the House had passed a bill (H.R. 12964) making appropriations for the Depart-

ments of State, Justice, and Commerce, the Judiciary, and related agencies for the fiscal year ending June 30, 1970, and for other purposes, in which it requested the concurrence of the Senate.

HOUSE BILL REFERRED

The bill (H.R. 12964) making appropriations for the Departments of State, Justice, and Commerce, the Judiciary, and related agencies for the fiscal year ending June 30, 1970, and for other purposes, was read twice by its title and referred to the Committee on Appropriations.

ACM

AUTHORIZATION FOR APPROPRIATIONS FOR FISCAL YEAR 1970 FOR MILITARY PROCUREMENT, RESEARCH AND DEVELOPMENT, AND FOR THE CONSTRUCTION OF MISSILE TEST FACILITIES AT KWAJALEIN MISSILE RANGE, AND RESERVE COMPONENT STRENGTH

Mr. MANSFIELD. Mr. President, I ask unanimous consent that the unfinished business be laid before the Senate.

The PRESIDING OFFICER. Without objection, the Chair lays before the Senate the unfinished business, which will be stated.

The ASSISTANT LEGISLATIVE CLERK. A bill (S. 2546) to authorize appropriations during the fiscal year 1970 for procurement of aircraft, missiles, naval vessels, and tracked combat vehicles, and research, development, test, and evaluation for the Armed Forces, and to authorize the construction of test facilities at Kwajalein Missile Range, and to prescribe the authorized personnel strength of the Selected Reserve of each Reserve component of the Armed Forces, and for other purposes.

Mr. BYRD of West Virginia. Mr. President, I suggest the absence of a quorum.

The PRESIDING OFFICER. The clerk will call the roll.

The assistant legislative clerk proceeded to call the roll.

Mr. STENNIS. Mr. President, I ask unanimous consent that the order for the quorum call be rescinded.

The PRESIDING OFFICER. Without objection, it is so ordered.

Mr. STENNIS. Mr. President, it is very clear that we have had a wholesome debate on the pending bill and on several of its main features, but more particularly on an item that has become known as the ABM.

There have been presentations from the technical and scientific viewpoint, debates from the international and political viewpoint and the situation with reference to the timing, research, and development end of the minor part of the initial beginning of the deployment work.

I think that both sides have been presented in excellent fashion. We had an unusually fine discussion in the closed session, which had to be held because of some very sensitive information.

I think there has been no contest here as to time. Everyone has had as much time as they wished to take, even though I know that properly some of us want to

speaking and maybe some who have already spoken will address themselves to another aspect of the matter.

I frankly think that the subject matter has certainly passed a stage where we ought to consider, if at all possible—and I believe it is possible—having a vote on the pending amendment, which is the Cooper-Hart amendment.

And in a full and wholesome spirit and wanting everyone to have a chance to say everything he wishes, after conference with the Senator from Kentucky and the Senator from Michigan and the Senator from Texas and others, I want to express a very strong hope that we can begin to dispose of the matter. I want them to respond if they will as to how they feel about the matter.

I do not know that we can dispose of the matter without giving prior notice. We should not just try to get an agreement now. And that is not my purpose. However, certainly we can bring the matter up at the next session of the Senate and perhaps then make a proposal and agree upon it.

I think there ought to be at least 48-hours notice in advance of an exact time to vote.

The Cooper-Hart amendment presents the whole issue in one bite.

There has to be notice and there has to be time for debate and we have to allow for the crowded airports and skyways. That is the sentiment of those of us who have a special responsibility here in connection with the pending bill.

I will be glad to yield to the Senator from Kentucky or the Senator from Michigan, or they may have the floor in their own right if they would rather do that.

Mr. COOPER. Mr. President, I thank the Senator. I am sure the Senator from Michigan will also respond.

I have discussed the matter several times with the Senator from Mississippi and, of course, the Senator from Michigan (Mr. HART) and I have talked about it many, many times.

This is the third week of the debate. We considered that during the first week the Senator from Mississippi, as the distinguished chairman of the Armed Services Committee, would present the bill and discuss various sections, including the ABM. And, of course, that was done during the first week.

The Senator from Michigan and I intended to offer our amendment and ask that it be made the pending business last week. However, I think it was clearly understood that last week would not be satisfactory for the serious discussion of the amendment or any part of the bill. While it was a great week for the Nation and the world because of the moon landing, many were away, there was a holiday on Monday and with the closed session there was little time for debate.

On Wednesday, the Senator from Michigan called up the amendment and, on his motion, it was made the pending business.

It is my position—and while the Senator from Michigan will speak for himself, I think that he agrees with me—that we should proceed expeditiously to a vote.

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Meyer Kestnbaum takes over CED in new era of influence, reads page 104 of *Business Week*, page 104, January 24, 1953.

Meyer Kestnbaum, president of Hart Schaffner & Marx, this week took over as the fourth chairman of the Committee for Economic Development has had in its 10-year history. Kestnbaum had served nearly three years as chairman of CED's principal working group, the Research & Policy Committee. Before that, he had been a member of this committee for two years. So he's no newcomer to leadership of CED.

Continuing CED's "New Era of Influence":

This continuity of management of CED—by the businessmen who belong to it, as distinct from its paid staff—is a big reason why CED has risen to high esteem and influence in national policy-making since 1942. . . .

CED's financial support comes from industry as a whole. . . . CED works on the premise that "What's good for the country is good for business". . . .

When a study is finished, the report is analyzed by members of the full committee who alone can submit memoranda, comment or dissent. . . . The theory behind this rule: Businessmen are qualified to pass judgment on the results of basic economic research.

The article writes of the impact of CED influence in the Marshall Plan:

. . . a deadlock in 1948 between Congress and the State Dept. over how the Marshall Plan should be implemented. A CED policy statement, an American Program for European Economic Cooperation suggested middle ground that was accepted happily by both sides. Paul Hoffman, was still chairman of CED, was selected to head the resulting Economic Cooperation Administration.

Mr. Yntema might choose to call CED's activities education. I choose to call it power. Mine is not a mathematical equation. It reads as follows:

CED (Meyer Kestnbaum) + Kestnbaum: Report = ACIR (economics planning, based on economic progress and growth).

NOTE II

While preparing this paper, I received in the mail, an excellently-written paper by a British economist, Dr. E. F. Schumacher, economic advisor National Coal Board of England. The address was a Des Voeux Memorial Lecture, *Clean Air and Future Energy*, presented to the National Society for Clean Air's annual conference 1967, Blackpool England. Dr. Schumacher's qualifications: Rhodes scholar at Oxford, repeatedly called upon to act as Economic Adviser to Governments and planning commissions in developing nations such as Burma and India "convinced him that aid and development policies need to be given a new slant as they tend to by-pass those most in need—the people in the rural areas." He describes himself as an economist "concerned with people rather than goods."

I enclose his material because he says so much better than what I tried to convey:

"Going back into history we may recall that when there was talk about founding a professorship for political economy at Oxford some 150 years ago, many people were by no means happy about the prospect. Edward Copleston, the great Provost of Oriol College, did not want to admit into the University's curriculum a science "so prone to usurp the rest"; even Henry Drummond Esq. of Albany Park who endowed the professorship in 1825, felt it necessary to make clear that he expected the University to keep the new study "in its proper place". (Dr. Schumacher lists quote source as Dwight Culler's "The Imperial Intellect." Yale U. Press, p. 250, 1955).

The first professor, Nassau Senior, was certainly not to be kept in an inferior place. Immediately, in his inaugural lecture, he predicted that the new science "will rank in public estimation among the first of moral sciences in interest and in utility" and claimed that "the pursuit of wealth . . . is,

to the mass of mankind, the great source of moral improvement". (source—John Stuart Mill autobiography, 1924 ed, p. 165).

Here I think relevant to add to Dr. Schumacher's comments on Nassau Senior. I quote from Cecil Woodham-Smith's masterful study of the Irish Potato famine, *The Great Hunger*: "I have always felt a certain horror of political economists," said Benjamin Jowett, the celebrated Master of Balliol, "since I heard one of them say that he feared the famine of 1848 in Ireland would not kill more than a million people, and that would scarcely be enough to do much good." The political economist in question was Nassau Senior, one of the Government's advisers on economic affairs."*

Dr. Schumacher continued:

And the great John Maynard Keynes, some 80 years later, admonished us not to "over-estimate the importance of the economic problem, or sacrifice to its supposed necessities other matters of greater and more permanent significance". (source here: Keynes, *Essays in Persuasion*, London 1933, p. 373).

It is hardly an exaggeration to say that, with increasing affluence, economics has moved into the very centre of public concern, and economic performance, economic growth, economic expansion, and so forth have become the abiding interest, if not the obsession, of all modern societies. In the current vocabulary of condemnation there are few words as final and conclusive as the word "uneconomic". If an activity has been branded as uneconomic, its right to existence is not merely questioned but energetically denied. Anything that is found to be an impediment to economic growth is a shameful thing, and if people cling to it, they are thought of as either saboteurs or fools. Call a thing immoral or ugly, soul-destroying or a degradation of man, a peril to the peace of the world or to the well-being of future generations; as long as you have not shown it to be "uneconomic" you have not really questioned its right to exist, grow and prosper.

I am asking what it means, *what sort of meaning the method of economics actually produces*. And the answer to this question cannot be in doubt: something is uneconomic when it fails to earn an adequate profit in terms of money. The method of economics does not, and cannot, produce any other meaning. Numerous attempts have been made to obscure this fact, and they have caused a very great deal of confusion; but the fact remains, Society, or a group or individual within society, may decide to hang on to an activity or asset for *non-economic reasons*—social, aesthetic, moral or political. . . . The judgment of economics, in other words, is an extremely *fragmentary* judgment.

Even within the narrow compass of the economic calculus, these judgments are necessarily and *methodically* narrow. For one thing they give vastly more weight to the short than to the long term . . . and then, secondly, they are based on a definition of cost which excludes all "free goods", that is to say, the entire God-given environment, except for those parts of it that have been privately appropriated. This means that *an activity can be economic although it plays hell with the environment*, and that a competing activity, if at some cost it protects and conserves the environment, will be uneconomic.

Economics, moreover, deals with goods in accordance with their market value and not in accord with what they really are . . . among primary good no distinction is made between renewable and non-renewable goods. . . .

*Cecil Woodham-Smith, *The Great Hunger*, Signet Edition, Harper & Row, 1964, page 373. Here I am grateful for Mr. Rossiter's pointing out the economist's attitude at that time.

We teach our children that science and technology are the instruments for man's battle with nature, but forget to warn them that, being himself a part of nature, man could easily be on the losing side. . . .

Something like an explosion has to occur before warning voices are listened to, the voices of people who had been ridiculed for years and years as nostalgic, reactionary, unpractical and starry-eyed.

The religion of economics . . . promotes an idolatry of rapid change, . . . the burden of proof is placed on those who take the "ecological viewpoint". . . .

You know, Dr. Hardin, the sad thing about Dr. Schumacher's paper is that it came from the Anti-Pollution League of the Connecticut River Valley, Brattleboro, Vermont. Citizens, at their own expense, have to do battle with their own-tax-supported Big Education—to publish the truths society has a right to. And we are further insulted by picked up the price-tag of the CED's power in the prices of their goods and services. CED is tax-exempt too.

James Kuhn wrote: "Advocacy of the market ethic is understandable, and insofar as it contributes to the continuous debate of public interest, it is desirable; but apotheosis of the market is dangerous and idolatrous. In suggesting that the competitive market was an institution of nature, guided by an invisible hand, Adam Smith provided his later disciples with the rationalization that it was the direct creation of God—a holy instrument for fulfilling His purposes. They forgot that men had created the market, and in raising it high, had fashioned a Golden Calf. They alienated themselves from the fulfillment of Smith's hope, which was that the free market would bring an increase in the wealth of the nation; and in turn the market alienated them from each other and their fellow men who bore the market's injustice.

James Kuhn, "What's Wrong With the Old Business Ethic," *Catholic Mind*, March 1965, reprinted from the Columbia University Forum. Mr. Kuhn was associate professor of industrial relations, Graduate School of Business, Columbia.

References for Father Miller's Talks—Background Material.

Coke, Earl J., "Farmers Issue Stock? Ag Ready for New Role, 11th Annual Conference in Research sponsored by Chas. Pfizer & Co., Chicago; talk given to 300 agricultural scientists, business leaders, etc., *Drovers Telegram*, May 29, 1963, p. 5.

Davis, John W., "Next Twenty-Five Years in Agriculture," *Journal of Farm Economics*, Vol. XXXIV, May 1957, pp. 5-57 and Ray A. Goldberg, *A Concept of Agribusiness*.

Downey, Senator Sheridan, *They Would Rule the Valley*, San Francisco, 1947. No publisher is given. Author paid continual tribute to "rugged individualists" such as Kern County Land Company, DiGiorgio Company. This book brings out the real battle at that time—*abolishing the 160 acre limitation on public water*. Mr. Downey spared little in dragging both the BAE and the Bureau of Reclamation over the coals and back again, with particular fury for Mr. Goldschmidt. Innuendos, warnings, with hints of mysterious leadership in the BAE, and CIO's intervention to destroy "free enterprise" in the Valley. A must if you wish to understand the *role of raw power in agricultural policy*.

Goldschmidt, Walter, *As You Sow*, Harcourt, Brace and Company, N.Y., 1947. Mr. Goldschmidt here goes into detail in his studies of the communities of Arvin, Dinuba, and Wasco, California.

Hardin, Charles M., "The Bureau of Agricultural Economics Under Fire: A Study in Valuation Conflicts," *Journal of Farm Economics*, Volume XXIII, August, 1946. No. 3. pp. 635-658. Here Mr. Hardin covers much of the disastrous career of the FSA, but he

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Many Senators are interested in the amendment. They should have the opportunity to be present in the Senate at the time we discuss the time for a vote.

I agree with the suggestion that has been made, which, as a result of the discussion here today, will appear in the printed Record. It is to announce that on next Monday there will be a discussion on the floor as to a definite date to vote. Everyone will be notified and advised to be present and make their position clear.

I can say for myself I wish we would proceed as expeditiously as is possible to a vote.

Mr. STENNIS. Mr. President, I certainly thank the Senator. I know that has been his sentiment.

Mr. President, I am glad to yield to the distinguished Senator from Michigan.

The PRESIDING OFFICER. The Senator from Michigan is recognized.

Mr. HART. Mr. President, the able Senator from Kentucky has expressed, I think, fully the attitude which is mine with respect to assuring first that everyone who has an interest in this amendment, on either side of it, be given the opportunity to voice it; that the vote be established at a time sufficiently in advance to insure that anyone with travel problems or scheduled commitments will be able to be present.

I concur in the suggestion made by the Senator from Kentucky, that with this exchange in the Record today, we plan on Monday next to develop further the discussion, and at that time any Senator on either side of the amendment, who has a problem, a concern, or a suggestion be here to voice it. I think that all of us then will feel clear in our consciences that everyone has had an opportunity, and the Senate will have the benefit fully of the opinions of any of its Members on this subject before we proceed to fix a date.

Mr. STENNIS. I thank the Senator from Michigan.

As has been true with respect to the Senator from Kentucky all along, the Senator from Michigan has taken the high road, has given the utmost cooperation, and has given the utmost consideration to every Senator, regardless of which side he is on, to have full time for discussion.

Mr. TOWER. Mr. President, will the Senator yield?

Mr. STENNIS. I yield to the Senator from Texas.

Mr. TOWER. I thank the distinguished Senator.

I believe we are probably all in concurrence. There seems to be no disposition on the part of anybody to engage in any dilatory moves or debate.

The Senator from Kentucky just suggested that perhaps we sort of informally agree on something like 3 o'clock Monday afternoon to discuss this matter, which will give anyone out of town a chance to return, and we can work it out to everyone's satisfaction.

Perhaps we can get a line on how many Senators have additional remarks to make. Considering that, we perhaps can arrive at a time certain for the vote.

Speaking for those whose views I express, we are ready to discuss it Monday afternoon. I think that is eminently fair, and I think the Senate is adequately on notice that that is what we are going to do on Monday.

Mr. STENNIS. I thank the Senator from Texas.

I think this reflects an attitude that we should not let a staleness develop about this matter. No Senator wants to do that. I believe that if we go on much longer, it will become stale. It will be stale with the Senators; it will be stale with the public. The matter is fully understood.

With the allowance of this time, everyone will have notice that there will be a request; and then with the allowance of more time for discussion, the outlook for proceeding is very good.

I think we should state that this has been mentioned to the majority leader and the minority leader, and they like the idea of proceeding as expeditiously as possible to a vote.

Mr. COOPER. Mr. President, will the Senator yield?

Mr. STENNIS. I yield to the Senator from Kentucky.

Mr. COOPER. The Senator from Texas has just said that we should fix the time certain as 3 o'clock on Monday afternoon and ask unanimous consent at that time that time be given for discussion.

Mr. STENNIS. I think that is a good suggestion. I want to agree to it, subject to this possible adjustment: The Senator from Mississippi has mentioned 48 hours as a minimum time of notice—that is, the lapse of time between the time of the actual agreement and the time of voting. If we set it for 3 p.m. and we have a good deal of discussion, that would run into late afternoon. Would it be just as well to say we will begin that discussion at 1 o'clock on Monday, with the idea that if we could conclude the discussion about a date within an hour or two, perhaps then a vote could be agreed upon for Wednesday? If we do not, it will take it into Thursday, and the week will be nearly gone.

What is the response to that? Is there any particular reason why the Senator wants 3 o'clock?

Mr. TOWER. It seems to me that we could go ahead and proceed at 1 o'clock, if everybody's interest is protected, and we could postpone the discussion to later on. I would be willing to set a time later in the afternoon. One o'clock sounds all right to me. I think we can all agree to protect everyone's interests, if someone cannot get here for the discussion at that time.

Mr. COOPER. Mr. President, will the Senator yield?

Mr. STENNIS. I yield to the Senator from Kentucky. He may have a special reason.

Mr. COOPER. I think a time certain should be set. The Senator from Texas (Mr. Tower) suggested 3 o'clock, so that anyone who might be away could get back in time.

I have stated my position. I believe we should move forward as quickly as we can and come to a vote. But I cannot

speak for others who are interested in this amendment, either for it or against it.

I do know—I must be very frank—of a situation which I would think would postpone the vote until after Wednesday; because I understand that the Senator from Tennessee (Mr. GORE) is to hold a hearing on this subject on Wednesday morning. He has not spoken to me, but I have this information, and if that is correct, I would assume that he would object to any vote until after that time. I have stated the position as well as I can, and my own position.

Mr. STENNIS. The Senator from Kentucky has been very earnest and concerned about this matter all the way through, as has the Senator from Michigan and others.

I am pleased that we can set Monday for a genuine discussion of this matter, and give notice, so that everyone who wishes to can be present.

Mr. FULBRIGHT. Mr. President, will the Senator yield?

Mr. STENNIS. I yield.

Mr. FULBRIGHT. I just entered the Chamber. I did not hear the discussion.

Mr. STENNIS. We just started an around-the-floor discussion of the prospects for getting an agreement on a vote on the Cooper-Hart amendment. We were not asking for any agreement now. We were going to give notice that on Monday this matter would be brought up and a request made for some agreement as to voting. Certainly, we would not even request it with less than 48 hours elapsing before the agreement was reached, in order to provide travel time and speaking time. Among ourselves, it seems agreeable to have this discussion on Monday and to proceed as I have said.

Mr. COOPER. May I add to that?

Mr. STENNIS. Yes.

Mr. COOPER. The Senator from Mississippi, the Senator from Texas, and I were discussing providing means for all Senators interested to be present at a time which is known, and we have agreed upon Monday—I am not sure whether we have agreed upon the hour as yet—when we will discuss the issue of trying to agree upon a time to vote.

I have stated, and so has the Senator from Michigan (Mr. HART) that our position is that we should proceed as expeditiously as we can toward a vote. I have made it clear that I do not speak for others who are interested in this matter, and I have just said that I have been informed that the Senator from Tennessee plans to secure further information at a hearing; and I would assume from that that he would not consent to vote before that hearing is held.

Mr. TOWER. All we are doing now is talking about agreeing on a time to talk about a time to vote.

Mr. FULBRIGHT. I see.

Mr. President, will the Senator yield?

Mr. STENNIS. I yield.

Mr. FULBRIGHT. I am very glad to have that information. I, too, am thinking of a hearing and trying to set up a hearing for Monday.

Just yesterday, a man who I think is well informed about the matters of com-

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munication told me that he believes with respect to the national communications systems—and he is well informed—that the effect of radiation upon radars, upon electrical communications, is very significant in this debate and it is a matter we overlooked. I do not believe the subcommittee heard much of anything on that subject. But to give an illustration of the immense importance of it, in order to overcome or destroy the effectiveness of an ABM, all you have to do, Mr. President, is to send over one precursor weapon, as he calls it, explode it well above the radars and it would nullify and throw out of communication for 30 minutes to 2 hours the effectiveness of the radars, and during that time they could do anything they like.

I understand it is a slight effort, and it could be overcome. The Russians have discovered this and have withheld going along and building their ABM. The CIA has reported in secret session—I do not think it is secret, because this has been publicly stated—that the Soviets have held up proceeding with the deployment of their ABM. Anyway, it is an interesting further item about the effectiveness of it.

No one is alleging, as has been said here, that the ABM will not work. No one is saying an ABM could not be created that would work under normal conditions. The day before yesterday the Senator from Arizona asked, "How can anyone question our ability to build an ABM after what we have seen on the moon?" It seems to me that is totally irrelevant. As a matter of fact, if the Russians or anyone else cared to interrupt the moon shot with very slight interference electrically, they could have done it, because it is not possible to interdict electrical interference. We heard a good deal about that in the hearings on the Vietnam war.

There are items I would like to go into. What I would like to suggest to the Senator from Mississippi, for that reason and other reasons, is that we arrange to call up other amendments on this same bill. I have some amendments and I know other Senators have amendments; and we could defer the vote on this one—which has been discussed quite well, although new facts are coming up—until after the President returns.

I say that for the following reasons. I think it might be unwise and inappropriate, with the President out of the country, and more particularly behind the Iron Curtain, as has been said here—I understand he will be there next week—to take action on a matter in which he has involved himself, as in this matter. He has taken no position on a number of other matters. I do not think he has taken a position on some of the matters I have in mind, such as research projects, which have been discussed superficially on the floor. There are amendments which I think the Senator from Wisconsin is going to submit in which the President is not involved. He certainly is not directly involved in them and has not taken a position.

I think it would be bad policy to bring up a measure he is interested in and vote on it while he is abroad. He is due back on the 3d of August, as I understand.

I recommend to the Senator from Mississippi that, if there is the urge to go on with this measure, we discuss and vote on other amendments, reserving the vote on this amendment, which is the most important of all the amendments, until after the President returns.

Mr. TOWER. Mr. President, will the Senator yield?

Mr. STENNIS. I yield.

Mr. TOWER. Mr. President, I can say with certainty that the administration would not mind if we voted while the President is absent from the country. I do not think the administration has objection to our voting perhaps in the middle of next week. All we are saying is that now we would like to set a time to discuss this matter and put Members of the Senate on notice. We are not making a decision on voting. At that time the Senator from Arkansas can come up with whatever suggestion he wishes.

Mr. FULBRIGHT. I was not making my suggestion simply to please the President. He has expressed himself on the ABM positively. It is a matter in which he is interested.

I can hear them now. Some of the proponents would say, "What a dreadful thing; pulling the rug out from under the President while he is in Rumania fighting communism," and so forth. This is the situation I do not wish to face. I was not trying to put it off on the President. It is my judgment it is bad policy to vote on this kind of an amendment while he is in Rumania. I would not agree to vote on it while he is there. On the other hand I am willing to discuss and vote on a number of other amendments I am interested in before that time, if the Senator from Mississippi is willing.

Mr. STENNIS. Mr. President, this concern about the President is all news to me. It is totally new. The President knew the bill was pending. The President did not ask that it be deferred. I never heard of anyone—the Senator from Arkansas or anyone else—advising the President not to go or to hurry back, nor was anything said about deferring it until he got back, until after he was gone.

I just do not see the logic or reason or anything connected with it except that it seems to jar the opposition a little here just to suggest that the President is interested in this matter; and it does affect his position in this conference. That is a part of the picture here. There is nothing to be said with him here or gone that can change that. It is simply a part of the facts of life.

Mr. President, I wish to point out further that I do not have any particular personal choice in this matter. However, this is the 25th day of July and this bill has been under consideration by the committee and the Senate itself since a very few days after the inauguration in January. It contains all of the hardware for the military system for the fiscal year that started 3 weeks ago on July 1, 1969. We are already in the new fiscal year. This is merely an authorization bill, ordinarily contemplated to be passed by March or April. It is for the ships, submarines, airplanes, research and development, the missiles, and everything in the way of hardware.

I know from experience it is highly important that this matter be completed as soon as reasonably possible. No one is more in sympathy than I am with the procedure that everyone should have his say and get the facts. But the hearings on this subject have been going on in the Committee on Foreign Relations for about as long as we had the matter in the Committee on Armed Services. So if there are any real new facts to be developed, they could be developed in a few days as well as in a few months. I do not think there are many new facts to be developed unless it is something really new.

Mr. FULBRIGHT. Mr. President, will the Senator yield?

Mr. STENNIS. I shall yield in just a moment.

I think the bill should move along. We have lost a lot of time. I blame myself for not getting the bill here earlier, but there were requests for delay back then and they were legitimate requests. Everything is held up now, the whole program. I hope the bill will move along.

Mr. FULBRIGHT. Mr. President, I wish to make two comments. First, the President did not ask me about the advisability of making the trip. If he had I would have given it, but it would have been presumptuous for me to have given advice otherwise. That trip is his own idea. I did not have any opportunity to do so.

I wish to ask the Senator whether his committee at any time took testimony with regard to the effect upon the communications between the radars and the computers, and between the computers and the missiles. What is the effect of nuclear radiation upon such communications?

Mr. STENNIS. That is a form of jamming—what is ordinarily called jamming of one kind or another. I am sure that the matter has been fully gone into by scientists for both sides and by others who have to pass on the practical side of these matters. I know that they testified there were no problems that could not be overcome. This has to be worked out as they have to work out matters regarding Polaris and others. Yes, I think that matter is fully taken care of.

Mr. FULBRIGHT. I have seen no testimony. I was told no later than yesterday that there has been no testimony of the effect of radiation upon the system because, of course, this is a difficult thing to do. Under the test ban treaty, it is not easy to conduct a nuclear explosion in the air to test its effect upon communications. That is what was pointed out to me yesterday.

Frankly, I never thought of that. As the Senator knows, this was an aspect of it that had not occurred to me but, obviously, it is rather difficult to test the effect upon a missile or upon a system such as the ABM of a nuclear test in the atmosphere where that explosion will take place.

I was only asking: Has the Committee on Armed Services ever had any testimony on this question?

Mr. STENNIS. I am sure I definitely remember testimony about the possibilities, all the possibilities of jamming, and the working of the computers and the radars and all the rest of it. I cannot

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put my finger momentarily on testimony directed to that point.

Mr. FULBRIGHT. I want to ask the Senator whether he would be good enough to ask his staff to locate such testimony and submit it to me by next Monday or Tuesday, whenever it is convenient. I will be very much interested in seeing it, to check whether the advice I was given is true.

But that is only one aspect of it. The main point that I wish to make, and I again ask the Senator to consider it, at least between now and Monday, if he is interested. In promoting or pushing the bill through to enactment—and I certainly do not wish to delay it—why we cannot take up other amendments and make that much headway and get them disposed of? They should not take nearly so much argument because many are simple amendments in their purpose, as the Senator knows. He and I discussed these same things last year. We already had some communication with the Senator from New Hampshire (Mr. McINTYRE) earlier this session.

My own amendments will take me only 10, 15, or perhaps 30 minutes, so that we could dispose of some of them and get rid of a number of other amendments before the major one. I think the Senator will agree that the No. 1 amendment in significance is initiation of deployment of the ABM.

Mr. STENNIS. I do not know about that suggestion, so far as the authors of the amendment are concerned, that it be taken down, but even if it were, we have debated this question now into its third week and my opinion is based upon experience that if we take away or take off and leave the main issue alone, and abandon this part of the debate, we will have to go all through the debate again.

It will be almost like a new subject when it comes up again. I think that it would make the Senate look rather silly to spend 3 weeks and then abandon that part of the debate without some very substantial reason and then go over and go to talking about some experiments without any specifics somewhere on behavioral sciences or a subject of that kind which has little or nothing to do in a substantial way, that is, with our military program. I think the Senator is capable of making a decision now and we should proceed on this.

Mr. FULBRIGHT. I beg to differ with the Senator. I have been in the Senate 25 years now and this is the first time in those 25 years that there has been a serious debate upon an important item in the defense budget. I believe the Senator from Mississippi agreed with me the other day that this is the first time the Senate has understaken to examine and in a way to exert influence on a decision of this kind. I am not sure whether it has been 2 or 3 weeks, but I do not believe that is very long. I can remember that the Senator and I have taken much longer than that on other issues of a domestic nature which we thought were important, for the sole reason of informing the public.

The Senator and I have joined in an effort to enlighten the public on certain subjects in which we were interested. Very often we performed a public serv-

ice in that connection. That is what the Senate is for. I think this issue of whether the Senate is to have any real influence in decisions on a department of this Government, a bureaucracy which absorbs nearly one-half of the total budget, is equally important. It is so important that it would certainly justify 2 or 3 weeks or whatever length of time the Senator just said that we have spent on it. In other words, the ABM is an important matter. The other items are of much less importance.

I do not believe that we would revert back to the beginning at all. We can lay it aside pending the final hearings, but most important, I think it would be bad policy to vote on the ABM issue at this time.

For example, suppose the vote should go against the President—which I hope it will and I will do everything I can to make it go against the President—it would be embarrassing for the President to be in Rumania and have the headlines read that one of the major proposals of the President of the United States had been rejected by the Senate. I would not like that to happen while he was abroad.

When I am abroad, I am very careful in what I say about our internal politics. I try never to say anything that is even critical of our own policy when I am abroad.

It is a different situation, and I am sure it would embarrass the President if the Senate should vote to assert its prerogatives of giving advice and of approving or disapproving a matter of this importance while the President is in Rumania.

I do not believe we should do that. I still think that the Senate has enough respect for its own functions. I think there are enough Senators who think that the Senate is sufficiently important that it should play a role in the balance of our Government, that we should not be completely under the control of the military bureaucracy of our Government.

Really, that is what the ABM is a symbol of; namely, whether the Senate has got enough independence from the influence of the great manufacturers of this country, the great industrial enterprises, and the military bureaucracy. Whether we have it, I do not know. I think we have. I think that Senators do have such pride and such feeling of responsibility in being Senators that they will assert their right to play a role in the Government of the United States.

I have been extremely impressed by the outspoken position of the new Senators in this body, men who have just been elected, who are closer, I would say, then I am to the pulse of the electorate as to what is going on, because they were elected for the first time. It is remarkable how interested they are in being Senators and not stooges of the military.

Mr. STENNIS. Mr. President, will the Senator yield? Will he yield right there?

Mr. FULBRIGHT. I yield right there. I withdraw the word "stooge." I overspoke myself. I did not mean that in the way the Senator may think.

Mr. STENNIS. I do not think the Senator can withdraw an insult unless he apologizes for it.

Mr. FULBRIGHT. I apologize for us-

ing the word "stooge." I overspoke myself.

Mr. STENNIS. I am proud of the Senator. I believed he would, as a gentleman.

Mr. FULBRIGHT. I was overspeaking myself, but I will try, in a moment, to be more precise as to what I intended to say, if the Senator will allow me.

Mr. STENNIS. Yes. I accept the apology of the Senator.

Mr. FULBRIGHT. I apologize for using the word, although I did not use it as applying to the Senator from Mississippi. I used it in the negative. I said they did not wish to become.

What I have been trying to say is that for 25 years the Senate has never challenged what the Military Establishment has asked for, to my knowledge, of any consequence. Perhaps it has on something little. The usual challenge was, "Look, you ought to have more planes. You have asked for 1,000. You ought to have 2,000."

This is not just because of the military. We all know the country we have. Each industrial State has great enterprises that employ thousands of people whose jobs are dependent upon those programs. There is no secret about it.

In the State of Washington, what is the biggest employer? Boeing Aircraft. In the State of Missouri, what is the biggest single employer, with 50,000 workmen? That means 50,000 votes. It is McDonnell Aircraft.

I do not need to call the roll. From General Electric, from Bell Telephone, it is all over the country. It is the kind of country we have. We are proud of it. It is effective. It is a very productive economy. I am not criticizing it. I am calling attention to it.

We are elected, are we not? All of us got here by getting more votes than our opponents. That is what I mean. The word "stooge" is not the right word. I was just shortcutting. What I was trying to say was that what President Eisenhower referred to as the military-industrial complex has a tremendous influence in this country. The Senator from Mississippi really does not challenge that.

Mr. STENNIS. Yes; I will challenge it at the right time.

Mr. FULBRIGHT. That it has a great influence?

Mr. STENNIS. I will challenge the Senator's whole remarks when the Senator has concluded.

Mr. FULBRIGHT. Look at the advertisements in the newspapers. Look at the books being published—two books within a week, one by the great Hudson Institute. What is the Hudson Institute? Well, it is an institute created by the Pentagon, supported by millions of dollars of the taxpayers' money that goes into the Hudson Institute that subsidizes Mr. Herman Kahn and his associates. They write books which invariably support the major issues in which the Pentagon is interested.

That is a fact of life.

We have the Institute of Defense Analyses. We have a hundred other "think tanks." We have the Rand Corp. These are supported primarily either by the Pentagon or by big industrial enterprises or through contracts made by such companies. I am not referring to a

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particular company with a particular "think tank," but, in general, the big companies of this country build the machinery and the gadgets that are paid for by part of the \$80 billion which is supplied by the Government for that purpose. They are the people who support these companies.

I am not saying that in a critical way. I am not saying they should not. There is no other way, under our system, to build a defense establishment. I have no alternative, and I am not saying it in a critical way. It is a fact of life, however, that these people have gradually been able to build up the greatest military machine the world has ever seen, with the biggest budget the world has ever seen.

What the Senate ought to do, and what I am trying to do, and what I think other Senators are trying to do, is to bring back into our Government the system of the checks and balances provided for in our Constitution, so that in the future the Senate of the United States will be in a position, whenever it is proper and appropriate, to raise a question about any part of the defense budget.

As I have said, it is, in a sense, the first time in 25 years that the Senate has made a serious effort to curtail a particular weapons system.

Articles have appeared recently that nobody has challenged, particularly by Bernard Nossiter, in the Washington Post. He outlined a number of weapons systems, amounting to, I think, \$30 billion, or something like that, that had been started, experimented with, and abandoned because they had been misconceived.

I do not say that because I think they should not have been tried. I know a certain amount has to be done. But in the past we have simply accepted them without any question. We hear around here an analogy with automobiles. It is suggested that the ABM is an Edsel. I saw one this morning. It is a sort of folklore that grows up. Everybody knows what the Edsel was. The Edsel was a mistake. Everybody agrees to that. That does not mean Ford does not make a good car. It does. It is making good cars now. Somebody just made a mistake. If someone had had the foresight at the time, it would have saved Ford \$3 or \$4 million.

I am not saying that we cannot make an ABM or make a missile. We know we can make one if we want to spend enough money and if it is the proper design. What I am saying, and what I think some of those who share my view are saying, is that this is not a proper design. Somebody has taken a concept called the Sentinel and overnight changed it and now calls it the Safeguard. I think even the Sentinel was very questionable. But they have changed it to Safeguard. The evidence is that the designs for the Sentinel are not proper for Safeguard, and therefore it ought not to be pursued at this time to the point of deployment.

All that Senators who are leading the opposition in this issue are saying is, "Look, it is premature to make a commitment to this weapons system. This weapons system could easily involve anywhere from \$10 billion to \$50 billion."

I know all these estimates and this numbers game can be challenged. This same principle was involved in the C-5-A, on helicopters, on tanks, and so forth. I do not want to get into that. But all I am saying is, "Just do not deploy this system. Do further research and if, after further research, you still think it is good, bring it back and we will look at it again."

All we are really doing is asking for a year's delay in deployment. That is all I believe the amendment of the Senator from Kentucky means—just wait for 1 year before deployment.

Mr. COOPER. That is right.

Mr. FULBRIGHT. That is all we are asking, bearing in mind the history of the requests from the Pentagon, the enormous cost of Government, and, above all, the very serious domestic budget situation we have, when every day we see the market going down.

Yesterday I spent nearly all day talking about the tax bill. The administration wants the surtax imposed right away, and they do not want any delay about it. The other day, when the President invited some of us to the White House, he had four Secretaries of State, present and past, impressing on us the dire situation in this country and the dire need of the surtax. Not once did he or anyone else say they might cut the budget.

Mr. STENNIS. Mr. President, may I say to the Senator, before he gets off the surtax, I have been glad to yield to him all this time. I do not care to keep the floor indefinitely.

Mr. FULBRIGHT. That is all right.

Mr. STENNIS. I do have some responses to make as far as the Senator's remarks are concerned.

Mr. FULBRIGHT. I will stop now, if he wishes.

Mr. STENNIS. So if he could conclude his remarks within a reasonable time, I would appreciate it.

Mr. FULBRIGHT. I will be glad to.

Mr. STENNIS. I am not asking him to stop now.

Mr. FULBRIGHT. I will either stop now and resume later or make a few more remarks. I do not wish to inconvenience the Senator.

Mr. STENNIS. Just a reasonable time.

Mr. FULBRIGHT. All right. There are different views of what "reasonable" is, but I will try to make my remarks reasonably short.

Mr. STENNIS. Yes.

Mr. FULBRIGHT. The point comes back to this, and I submit to the Senator it is a very serious one. In view of all our circumstances, in view of the domestic situation that I have mentioned, in view of the President's own pleading that we enact a tax, and so on, for the control of inflation, which is becoming very acute and tends to destroy the confidence of the people in their own Government, in view of the protests we have had in this country, in view of the history of the last 3 or 4 years, beginning with the riot in Watts, and going to other riots, then finally leading to the protests in our universities, all these are signs of something wrong in our great country.

I know we are interested in trying to make our country as great as it is capable of being. Everyone has that purpose. The only difference among us is as to what it is that is great. Where is the priority? Is the building of an ABM now, as a symbol of our capacity, or a controlled defense budget more important? Are we so threatened by external enemies, in contrast to internal difficulties, that we must put that above everything else?

The delay for 1 year of the deployment of the ABM—that is what this argument is all about. That is important monetarily, but I still think the most important consideration of all is to reestablish the Senate of the United States as a coequal body, as a body that is capable of raising questions of this kind, and capable of making a decision in the face of the kind of influence and power that is represented by the great industrial enterprises of this country, and the Pentagon with all of its tremendous bureaucracy and its influence, all of which I do not criticize as such, but it does relate to whether or not the Senate still is an important body.

Lastly, I say to the Senator from Mississippi that when, as they often do, historians engage in looking at other great countries that have declined, right on back to the classic case of Rome, they find, for example, that the decline and destruction of Rome began with the decline and destruction of the Roman Senate. I only remind the Senator of that because there have been many other instances, also.

Mr. STENNIS. I thank the Senator.

Mr. President, in response, and with all deference to the Senator from Arkansas, the question we had here was really not an issue, just a discussion of whether next Monday we would discuss further the possibility of a vote on this bill. I think I gave my reasons for wanting to continue on this part of the bill, since the Senate set its course and made this amendment the pending measure.

But, Mr. President, I have fully made up my mind that no one could come here and impute bad motives, sinister influences, or anything that infers those things toward the membership of this body with reference to the military program, and go unchallenged. I challenged the Senator from Arkansas when he called us stooges, and I am very glad he apologized for that. But, in words that are a little more respectable, but have the same meaning, he said it over again when he asked, Is the Senate going to submit to military bureaucracy and the hyphenated industrial complex?

I think the Senator ought to prove those charges by something more than his bare, bald statement that he has made here before, and given to the press over a period of months. He ought to prove them with something substantial, other than just his assertion, or withdraw them.

Mr. FULBRIGHT. Mr. President, will the Senator yield?

Mr. STENNIS. Well, I want to make my point now.

Mr. FULBRIGHT. On that point—

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Mr. STENNIS. To show just how one Senator, at least, feels toward such assertions.

Mr. FULBRIGHT. I would like to offer just one proof of the kind the Senator has requested, and I refer to the Starbird memorandum, which was itself generated in the Pentagon by General Starbird, submitted to Secretary Resor, and published. If that is not proof of their capacity to organize strength, I do not know what is.

Mr. STENNIS. The Senator has, in effect, called names here, and made charges. He has been making them for many months. I say if we submit to things like that without proof, it will get to where a man will be afraid to go on the Appropriations Committee, the Armed Services Committee, or any of the others that has a responsibility to this Nation, of coming in here with what its members think is a sound military program, lest he have to face charges from the Senator from Arkansas—I do not know of any others, but there may be others who make the same charges—that he is base in his approach, that his motives are bad, and that he is serving some ulterior purpose instead of the welfare of this Nation. I am not going to let the membership of our committee, and I exclude myself, be so charged by any Senator, without his being severely challenged. I call on the Senator now to prove some instance of some particular Senator who has had a bad motive in mind when he took a position on these bills.

Mr. FULBRIGHT. Will the Senator yield?

Mr. STENNIS. Yes, I yield.

Mr. FULBRIGHT. In the first place, the Senator has completely misrepresented the position I took. I said this is the nature of our country. It is not a bad motive to serve one's constituents.

Mr. STENNIS. I yielded to the Senator, now, for the purpose of giving an illustration, not to make that speech again about the bad motives of the membership.

Mr. FULBRIGHT. But the Senator completely misrepresents what I said.

Mr. STENNIS. I did not misrepresent anything.

Mr. FULBRIGHT. I made no charge of bad motives. I said it is the kind of country we live in. To illustrate, in my own case, I have always supported the poultry raisers of Arkansas, because they are an important industry, and I have gone out of my way to do it. I do not consider that a bad motive. We do not happen to have an electronics industry in Arkansas of any consequence. It may well be if we had, I would have been representing them. This is nothing bad; it is the nature of our democratic system.

Mr. STENNIS. All right; I yielded to the Senator to give an illustration.

Mr. FULBRIGHT. The Senator challenged me.

Mr. STENNIS. I ask him to be courteous enough—

Mr. FULBRIGHT. Let me ask the Senator this: What did General Eisenhower mean when, in his last statement, he warned us about the military-industrial complex? Was he charging the Senator with bad motives?

Mr. STENNIS. Mr. President—

The PRESIDING OFFICER (Mr. Cook in the chair). Does the Senator yield further?

Mr. STENNIS. I yielded for an illustration only, Mr. President, and I do not yield further just at this moment.

My purpose here is not to engage in debate. I have said what I wanted to say on that point. My purpose is not to engage in a personal controversy. I will respond in the same pattern to anyone else who makes any such assertion.

Our purpose here now is to begin these discussions, that will perhaps lead to a disposition of this matter. I think we have given notice and we will have a good discussion.

I mention one other thing, though, about the President's absence. As far as a personal basis is concerned, I think the sooner the President gets back the better it would suit me. I would like to see him back in the country soon, and I am sure he will be.

But I think, as a very practical matter, no one knows how many votes there are here on each side; but if I were wanting to vote, if it were to my advantage, if I had the votes, I would say, "Vote now." The Senator from Arkansas referred to our previous debates here. When we think we have the votes, we are usually ready to vote; but I do not think this time anyone knows. However, I am willing to vote anyway, after reasonable discussion by everyone who wishes to be heard.

So I think that about covers the point I wanted to make.

Mr. COOPER. Mr. President, will the Senator yield briefly?

Mr. STENNIS. I yield to the Senator from Kentucky.

Mr. COOPER. The Senator from Arkansas was not present in the Chamber when the Senator from Michigan (Mr. HART) and I began our colloquy with the Senator from Mississippi (Mr. STENNIS); and the Senator from Texas (Mr. TOWER); so I shall repeat something of what was said before.

Senator HART and I offered this amendment for ourselves and many other Senators. Since April 18, 1968, we have worked together on these amendments. So we have believed we had some responsibility to lead the way toward a disposition of this issue. We have had discussion over the past 2 weeks and with other sponsors of the amendment.

I must say that we did not think we had any responsibility at all to make the amendment the pending business until this week. The first week was one for the Senator from Mississippi to explain the bill and to support the different sections of the bill. Last week, as we know, it was impossible to have any rational discussion of the amendment. Senator HART made the amendment the pending business at the earliest date possible—Wednesday of this week.

We have had discussions with the Senator from Mississippi and the majority leader, Senator MANSFIELD. We propose, on Monday, to give notice that the subject of a day certain for voting will be raised in the Senate so that everyone who is interested in the amendment, proponents and opponents alike, may be here to give their views.

I have said that as far as I am con-

cerned, I approve moving toward the vote as quickly as is possible.

I cannot speak for anyone else. I have told the Senate that I understand that the Senator from Tennessee (Mr. Gore) intended to have a hearing on Wednesday morning which would bear upon the ABM and that I was sure he would not want to vote until after the hearing.

I want to be open. One of the difficulties that those of us who support the amendment have had in agreeing to vote comes from several factors—and I think I might as well state them—is that some feel, and I must say that I am one of them—that it has been very difficult to secure information from the Defense Department.

I have been able to secure information because I have written time after time to the Secretary of Defense to Dr. Foster and the CIA. I must say that I have received information. However, as it is not made public many Senators have not had the opportunity to have the same information.

Mr. President, another development that disturbs many who support the amendment is the statements made before the closed hearing. Statements were made that last minute intelligence had been received just before the closed hearing began. That intelligence was not available to all, and there was no way to answer because one would not challenge the honesty of the Senators. However, we did not have the opportunity at the time to examine and question that at its original source. Since the closed hearings, I have written the Department of Defense for answers on some of the information that was presented. I must say that from those answers one could exercise a judgment one way or the other for they were not definitive beyond judgment.

I have been informed that the Senator from Missouri (Mr. SYMINGTON) is interested in reported studies in the Defense Department that would throw great light on this issue.

All of these factors made it apparent to me that we cannot agree on a certain date until these questions have been answered satisfactorily.

The Senator from Michigan and I want to bring these issues in the open on Monday.

I do believe that the meeting will be helpful and profitable in the discussion of these matters.

In fairness, Senator HART and I want to be open about these matters.

Mr. STENNIS. Mr. President, I thank the Senator for his remarks. It is always a pleasure to deal with the Senator. I know how earnest he has been in the matter.

Mr. HART. Mr. President, will the Senator yield?

Mr. STENNIS. I yield.

Mr. HART. Mr. President, I thank the Senator for his remarks. I think they clarify our motive in suggesting that we have the discussion and indicate to the Senator from Mississippi some of the concern we have had.

Mr. STENNIS. I appreciate the remarks of the Senator very much.

Mr. President, I yield the floor.

Mr. FULBRIGHT. Mr. President, I wish to comment further upon the idea

of the Senator from Mississippi that I am attributing bad motives to him. I assure the Senator that it does not mean that people who disagree with him challenge his motives.

I can understand that the Senator has different responsibilities because of his committee chairmanship and his long experience and association with the Pentagon and all of that. That is perfectly natural. It affects all of us.

I would not for a moment exclude myself from any of the things I have said, and I did not intend to reflect on the motives of anyone.

I do think it is a fact of life in the kind of country in which we live. We are representatives. We represent in a very real sense the interests of our different communities. In those communities there are diverse and different interests. So, naturally we have different views. And in our minds we are the products of our own experiences. And those experiences include our associations with different people.

We are all the products of every experience we have had in life.

It was the furthest thing from my mind to try to attribute a bad motive to the Senator from Mississippi or to anyone else. However, it is a fact of life.

The other day we had a man named Casey before our committee who, I am sure, is a very reputable lawyer in New York. He has been nominated to be a member of the Advisory Committee on Disarmament. He had formed a committee, of which he is chairman, supporting the ABM. It is perfectly legitimate for him to do so.

He had obtained the names of a great many people—many of whom were very prominent people—among whom were the directors of 11 of the most prominent corporations, all of which have large contracts on the ABM.

There is nothing bad about this. There is not a bad motive intended. Is it not perfectly natural that if one is a director of a corporation which is playing an important part in the production of a great weapons system, he would be interested in it?

I think it is the most natural and human thing in the world that that would happen.

If there is some implication of bad motive in it, I certainly do not see it. If so, I apologize. The word "stooge" was the wrong kind of word to use. It leaves an implication that I did not intend. What I was trying to say was that in a country as rich and big and powerful as ours, we have very great interests growing up. The biggest of all is what we call the bureaucracy of the Pentagon, because there is not any corporation, not even General Motors or General Electric, that has quite the equal in resources of \$80 billion. I do not quite remember the resources of General Motors. However, it is not large.

This is a tremendous conglomerate of power. I make no point that there is anything bad about it. Every man, so far as I know, in the Pentagon today is doing his duty. I would not for a moment say that General Starbird, when he developed his so-called memorandum which

was published, was not doing his duty. He was clearly doing his duty as he saw it. He had the responsibility of promoting and selling to Congress and to the country the ABM system. And he put it down in writing, and Mr. Resor, I believe, approved it—one or the other of them approved it. They were both involved in it. It was called the Starbird memorandum.

It outlined and sought to muster together an organization of all of the various influences which are available to the Pentagon and tried to make the sale and get a favorable decision. That is his duty. He was given the responsibility of doing that.

The last thing I want to do is to imply a bad motive to General Starbird. As far as I can see, he is doing exactly what he was told to do by his organization. There is nothing bad about that at all. However, it is a fact of life.

The Senator from Kentucky has no such organization. He cannot write a letter and say to all the great corporations of the country, "Will you please get your people together and will you solicit speeches? Will you have them written, and will you write books and will you do this and do that?" All of it is set out in the memorandum. I do not wish to misspeak what is said in the memorandum. But, as a result of that, we do see books being published. Two books were announced last week, both in support of the ABM. I do not know that the Senator from Kentucky can produce a book against the ABM. He has to use whatever he has in his own mind and what he picks up from hearings, and so forth.

It is true that a large number of independent scientists, none of whom is on the payroll of the Senator from Kentucky, on the payroll of the U.S. Senate, my payroll, or on the payroll of anyone else I know of who is involved in this argument, came and gave their testimony. Many of them are heads of universities that have nothing to do with this. Some of them may have something to do with it, an indirect interest; but whatever they do, it was not on the side of the Senator from Kentucky. It was on the side of the Pentagon. And I admired them.

In any case, I make no point of the motives. This is a matter of judgment, and I think it is perfectly legitimate to point out that in some cases I am not sure that their judgment is not influenced by these things. That is no crime. It is not a sin that you are influenced by our constituents or by your employer or by your own experiences. If you have spent your life in creating electronic devices, I am certain there grows up in your mind a desire always to respond to any challenge. If you are an electronics engineer and someone says to you, "Here is a challenge to you. Do you think you can shoot down a missile that is traveling at 20,000 miles an hour and shoot it down with another missile?" Immediately you say, "Yes, I bet I can do that, if you give me enough money and enough time."

It is like the story of the man who said, "Why does a man climb Mount

Everest?" And the other fellow replied, "because Mount Everest is there." It is a challenge to him. There is no good reason to do it. I do not think there is any good reason to the ABM, other than that it is a challenge to Dr. Foster and some of his colleagues. They just want to do it. The trouble with that is a practical matter. I have no doubt he can do it in a normal peacetime operation, without interference from external elements such as radiation. I am not at all sure it can be done in an attitude of hostility, where someone is shooting at you with nuclear weapons.

It is like going to the moon. We are very proud of going to the moon. I doubt seriously that it would have been so easy to go, or possibly at all, if some other country was trying to thwart you, was interfering with your communications. I would doubt that it could be done.

I think the Senator from Mississippi misconceives the nature of the argument. I think it is perfectly legitimate to call attention to the fact that some of the arguments made in support of this could be less than objective or free from an interest in the ABM as a weapons system, aside from whether or not it is in the interest of the country or whether or not it is as important as some other priority. Even though it might be good under some circumstances and could be justified, in view of the financial situation of this country, in view of the inflationary pressures, and in view of the requirement for added taxes, is it justified?

This is where I come back to the Senate. I do not think General Starbird or General Wheeler or General X, Y, or Z feels that it is his responsibility—and I do not think it is his responsibility—to weigh such things as inflationary pressures, the budgetary situation, the need for the tax bill, and all the other elements that the Senate should take into consideration.

It seems to me that the Senator from Kentucky and his colleagues in this body have a different function to play from that of the Joint Chiefs of Staff.

I think that the Joint Chiefs of Staff, under our system of Government, are given a special, restricted responsibility. I make no criticism now, or at any other time, of the Joint Chiefs of Staff discharging their responsibility in the way they see it. I do criticize myself and the Senate for having accepted, for at least the 25 years I have been in the Senate, as an infallible sort of dictate from above, the judgment on all these weapons systems of people like Dr. Foster or the Joint Chiefs of Staff.

In this case, Dr. Foster is the principal advocate of these various systems, as I understand it—and, of course, his predecessors. He happens to be the current one. His predecessors had the same role, and their role was to propose weapons systems of any kind they could imagine that might be useful. It is our role to take a look at them, to try to make some judgment as to whether or not they are essential under the present conditions, and to do the best we can.

Speaking for myself—I will leave out everybody else—I have not done my part, I know, in the last 25 years, because I

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sure that if I made a motion to cut any always believed it was hopeless. I was of these programs, I would not get any votes, because nobody ever had, and so there was no use in trying.

Furthermore, the circumstances did not exist. During much of that time we had what is called the dollar gap. We were too prosperous compared with the rest of the world. We were looking for ways to spend money abroad as well as at home, and nobody raised the question about budgetary matters of any consequence. Now that is all changed, and that is the reason why a number of others and I are raising these questions. I think I have been too negligent too long in coming to a feeling that it is my responsibility at least to have hearings about it in order to give experts in this area an opportunity to express themselves.

I think that is the function that the Senate, peculiarly, has. We have to weigh all these things.

I do not make these criticisms of the Senator from Mississippi, any member of his committee, or the Joint Chiefs of Staff. What I am trying to say is that they have their responsibilities and they play their part, and others play theirs. I do not criticize the big corporations. In the common language of the street, they are doing their thing; they are doing what they are set up to do, whatever they may make. That is all they are doing. But it is our job—and we are sent to the Senate as representatives—to make judgments of the whole, broad spectrum of our policy and to make judgments as to priorities.

With regard to an immediate vote, one other thing that I believe the Senator from Kentucky did not mention is the fact that practically a week has gone by with the moon shot, and everyone's attention has been diverted in watching this great exploit. Whether or not it is very significant, as has been represented, I do not know. History will have to prove that. In any event, our attention has been engaged. The Senator from Mississippi will not deny that our attention has been diverted from the affairs on the floor of the Senate to the moon shot, which has taken out practically a week of the debate that has been in progress.

Mr. President, in order to fortify this question, since it has been raised, it is my understanding that the Starbird memorandum was first proposed with regard to the Sentinel system. It is also my understanding that after it was revealed and discussed in the Washington Post, and comments made here, it was canceled or withdrawn, or whatever is done to a memorandum. Whether another one has been prepared, I am not sure. But I believe that as a result of that it has been declassified and that it would be proper to put it into the RECORD as a part of my comments, because I think it is appropriate to the comments that the Senator from Mississippi made a moment ago in which he asked me for proof of what I had alleged to be a capacity for organization of influence behind a program such as the ABM.

So I shall ask unanimous consent to have printed at this point in the RECORD a copy of the so-called Starbird memorandum. While it goes to the Sentinel

system, I believe the Safeguard is the legitimate heir, by direct descent, of the Sentinel.

Mr. President, I ask unanimous consent to have the memorandum printed in the RECORD.

There being no objection, the memorandum was ordered to be printed in the RECORD, as follows:

PUBLIC AFFAIRS PLAN FOR THE SENTINEL SYSTEM

1. References:

a. Part No. 1.01, subject: Sentinel System Charter, SSMP, 3 Nov. 1967.

b. DOD Memorandum OASD(PA) 22/1, subject: Sentinel System Public Affairs Plan, 15 March 1968.

c. AR 360-11, subject: Army Information Guidance for Sentinel Program, 23 August 1968.

d. AR 1-20, subject: Administration Legislative Liaison, 26 Jan. 1967.

2. Purpose and scope:

a. This plan establishes guidelines, implements policy and assigns responsibilities for an active public affairs program on a country-wide basis regarding the Sentinel System and the Sentinel deployment program; it sets forth specific DA information objectives and milestones, suggests certain techniques and delineates responsibilities for the planning, execution and evaluation thereof.

b. The provisions of this plan apply to all U.S. Army elements and to all individual industrial firms and civilian contractors participating in the production and deployment of the Sentinel System.

3. Background:

a. On September 18, 1967, the Secretary of Defense announced the decision to produce and deploy a Communist Chinese-oriented ballistic missile defense system. This system will be deployed at 15 to 20 locations in the continental United States, Alaska, and Hawaii. On November 3, 1967, the Secretary of Defense named this ballistic missile defense system the Sentinel System and announced the appointment of LTG Alfred D. Starbird as the Sentinel System Manager (SENSM). Also on November 3, 1967, the Secretary of the Army approved and issued the Sentinel System Charter which, in part, states: "The Sentinel System Manager will develop and, when so directed, assure the timely, effective deployment of the Sentinel System, and will provide a single point of contact within the Department of the Army for the coordination and direction of all activities pertaining to the Sentinel Systems. . . . The Sentinel System Manager, within instructions issued by the Chief of Staff of the Army, will exercise staff supervision over all Army Staff elements and participating organizations of the Department of the Army for planning, direction, and control of the Sentinel program. . . . The Sentinel System Manager will utilize to the maximum extent, compatible with System requirements and within guidance issued by the Chief of Staff, the functional and process oriented capabilities of the Army Staff. . . ."

b. Opposition to the Sentinel deployment decision has arisen and been publicly expressed in three sectors of public opinion: in certain segments of the U.S. Congress, in scientific circles and in citizen/public official interest groups in local communities. Congressional and scientific opposition centers around questions as the Sentinel technical and operational feasibility, cost, disarmament, the international arms race and national priorities and is national in scope. The local interest groups raise these same national questions but also base their opposition to the Sentinel deployment decision on various factors stemming directly from such actions and proposed actions as

(2) real estate acquisition, (3) effects of construction on the local environment, and (4) eventual impact of the Sentinel installation and its personnel on the community. Initial adverse reaction from private citizens and local public officials has been the direct results of site validation and acquisition actions which are a necessary prelude to the initiation of construction operations, and are vital to the Sentinel program.

c. The SENSM, in coordination with OCLL and OCINFO, will conduct a public affairs program, on a country-wide basis, to accomplish the objectives established herein.

4. Objectives: The objectives of the program are:

a. To gain public understanding of the reasons for a United States ballistic missile defense (BMD) system oriented on the developing Communist Chinese offensive ICBM nuclear capability.

b. To insure that all sectors of public opinion are fully informed of Sentinel System developments, progress, effectiveness and objectives (within the bounds of national security).

c. To inform the public regarding the reasons for the Sentinel deployment decision, the rationale behind it and why it is necessary and important to obtain real estate for use as Sentinel operational sites in particular geographic areas in implementing the Sentinel deployment decision.

d. To gain the understanding of the people of affected communities by keeping them informed of Sentinel oriented activities in their area. Such information will explain the general methods of site selection and validation, the local and national importance of the site, and the impact of Sentinel-connected activities in the community.

e. To provide timely, factual, and authoritative information by:

(1) Timely release of information on activities which will affect local communities.

(2) Responding to queries for information.

(3) Providing briefings and information fact sheets to members of Congress (OCLL coordination required), local governmental leaders and officials, military audiences, scientific, fraternal, and civic groups and organizations, and representatives of news media.

(4) Preparing informational or educational articles for general news and mass communication media, military, scientific and professional journals that are service-oriented.

(5) Preparing exhibits for showing before appropriate groups.

5. Concept: This program will use a gradual approach to the attainment of the objectives stated above. The thrust of the program will be directed primarily toward explaining the military requirement and strategic concepts inherent in the Sentinel deployment decision. As subordinate but related goals, the program will emphasize that the Sentinel System is specifically designed to meet a strategic defensive military requirement; that it is being deployed in an efficient and economical manner; that it is designed to provide a defense against a possible Communist Chinese nuclear ICBM attack through the late 1970's; (with the capability to continue to deny or at least substantially reduce damage from threats in later years); that it concurrently provides a limited added defensive capability over our Minuteman ICBM sites with the option of improving that defense if needed; that it provides added protection of our population against a possible accidental ICBM launch by any one of the world's nuclear powers; that it will complicate any attack on the United States by the Soviet Union; that its effectiveness in fulfilling its national missions requires the acquisition of Sentinel operational sites in certain selected areas for the emplacement of its missiles and radars.

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6. Responsibilities:

- a. SENSM will monitor the overall program for CoFSA and will be consulted on all substantive implementing decisions or actions.
- b. CINFO will:
- (1) Serve as the initial DA staff level point of contact and coordinating agent on all public affairs matters pertaining to the program.
 - (2) Assume for the SENSM overall responsibility for coordination of all Sentinel, public affairs matters with the Army staff, other services when appropriate, applicable Unified and Specified Commands, and OASD(PA).
 - (3) Provide support and assistance to SENSM, as feasible and appropriate, in implementing the SENTINEL public affairs program.
 - (4) Arrange speaking engagements, as appropriate, for the CoFSA, VCoFSA, and senior members of the Army staff to provide opportunities for public explanation of the SENTINEL System.
 - (5) Establish within OCINFO a Sentinel Public Affairs Coordinating Committee (SENPAAC) to provide for periodic review, advice and on-going coordination, development and evaluation of the Sentinel public affairs program. The membership of this committee will include, but not be limited to, representatives from the following commands and agencies: OCINFO, OCLL, Chief of Engineers, ODCSOPS, OCEd, and the Sentinel System Organization (SENSCOM 1.0). The SENPAAC will meet periodically on the call of CINFO and submit appropriate analyses and recommendations to SENSM through CINFO.
- c. OCLL, DA will:
- (1) Provide support and assistance to SENSM as appropriate in implementing the SENTINEL Public Affairs Program.
 - (2) Provide a representative to SENPAAC.
 - (3) Coordinate with OATSD(PA) as appropriate.
- d. ODCSOPS, DA will:
- (1) Provide support in those SENTINEL public affairs related to the military requirement and strategic concept of the SENTINEL System.
 - (2) Provide a representative to SENPAAC.
- e. OCRD, DA will:
- (1) Provide support in those SENTINEL public affairs areas relating to scientific and technical matters or to the Nike-X Advanced Development Program.
 - (2) Provide a representative to SENPAAC.
- f. OCE, DA will:
- (1) Provide support in those Sentinel public affairs areas relating to Sentinel Systems real estate acquisition and facilities design and construction.
 - (2) Provide a representative to SENPAAC.
- g. All elements of the Sentinel System Organization, CONARC, AMC, ARADCOM, and STRATCOM will provide support in those Sentinel public affairs areas germane to their mission and functional areas and as specifically assigned elsewhere in this plan.
- h. The basic public affairs responsibilities of CINFO, SENSM, and participating organizations are included in AR 360-11. The SENSM has established as his staff agent for administration of the Sentinel Public Affairs Program the Information Officer assigned as Chief of the Information Office of the SENSCOM. The SENSCOM Information Officer will coordinate all Sentinel public affairs matters for the SENSM and will be the principal point of contact within the Sentinel System Organization on such matters.
- i. Within instructions issued by the SENSM the SENSCOM Information Officer may clear and release the information described in paragraph 5.a(3), AR 360-11.
- j. Time phases for the execution of the Sentinel Public Affairs Program are established in paragraph 4.a, AR 360-11. Basic responsibilities are with CG, ARADCOM during Phase I (initial briefings of public of-

ficials), the SENSCOM Information Officer acting for the SENSM during Phase II (prior to IOC) and (with CINCONAD, CINCPAC) during Phase III (subsequent to the IOC of individual sites).

k. The SENSCOM Information Officer will coordinate activities pertaining to visits to Sentinel installations, facilities or sites by representatives of news media or the public during Phase II, and will advise OCINFO directly on appropriate matters, with an information copy of all notifications furnished to the SENSM. CINCONAD and CINCPAC exercise this responsibility during Phase III.

l. Sentinel information release requests will be processed through the SENSCOM Information Officer, who will transmit his recommendations to OCINFO for staffing within the DA, and, as necessary, with appropriate Unified and Specified Commands, and OASD(PA). It will be the responsibility of OCINFO to coordinate all proposed releases with the SENSM. The following schedule will apply:

- (1) News releases and photos will arrive at the SENSCOM Information Office not less than 15 working days before the intended release date.
- (2) Speeches and films will arrive at the SENSCOM Information Office not less than 25 working days before the intended publication date.
- (3) Briefing texts and technical papers will arrive at the SENSCOM Information Office not less than 25 working days before the intended publication date.

m. The following expands upon the statements of responsibilities contained in AR 360-11 only to the extent required to assure accomplishment of all aspects of the total public affairs program.

- (1) CG, ARADCOM:
 - (a) Plan, supervise and execute the SENTINEL public information and public affairs responsibilities assigned in AR 360-11, and assure appropriate coordination with other participating organizations.
 - (b) During Phase II, submit proposed SENTINEL related public information releases, not previously cleared, to SENSCOM Information Officer for review and appropriate action.
 - (c) Support and assist the SENTINEL information and public affairs activities of SENSCOM, USAEDH, SENLOG, STRATCOM and SENSEA.

(2) CG, SENSCOM:

PHASES I AND II

- (a) Monitor and coordinate for the SENSM overall Sentinel public affairs and public information activities.
- (b) Furnish necessary data on Sentinel public information and public affairs matters as appropriate to SENSM and OCINFO, DA.
- (c) Review proposed information material to include displays and obtain clearance for its use from the SENSM, OCINFO, DA; and DODOASD(PA) as appropriate.
- (d) Coordinate with OCINFO, DA and SENSO proposed information actions involving other military services, i.e., Sentinel System tests requiring Navy or Air Force launched target vehicles or interface with Navy or Air Force operational systems of those under development.
- (e) Review and coordinate with OCINFO, DA and SENSO, information plans prepared by major DA commands and agencies.
- (f) Coordinate with OCINFO, DA and SENSO appropriate Congressional notifications through OCLL, DA concerning Sentinel information to be released.
- (g) Advise SENSM and OCINFO, DA of impending developments in the Sentinel information program.
- (h) Provide individuals to brief Members of Congress, public officials, news media representatives and the public as stipulated by SENSM.

PHASE I

- (a) Provide CG, ARADCOM with qualified members of the Phase I initial briefing teams as authorized by SENSM.
- (b) Assist other DA commands and staff agencies as appropriate.

PHASE II

- (a) Conduct Sentinel Community Relations briefings as appropriate.
- (b) During Phase II(a) and Phase II(b) monitor, coordinate and assist the community relations activities (AR 360-61) of the Division Engineer, USAEDH, at potential or approved Sentinel sites, as appropriate.
- (c) During Phase II(c) plan, supervise and conduct community relations activities (AR 360-61) at approved Sentinel sites.
- (d) Review for technical accuracy, security and consonance with SENSM policy proposed information materials submitted by all participating organizations and contractors; submit to OCINFO, DA for clearance as required by references b and c; advise originating agency and OCINFO of changes in the text of the proposed material made during the SENSCOM review.
- (e) Conduct other public information and public affairs activities in consonance with the responsibilities of the SENSM as specified herein and in AR 360-11.

PHASE III

Provide such public affairs assistance as may be required to facilitate turn-over of Sentinel sites to CONAD/PACOM and to insure continuity and consistency of Sentinel site community relations activities with on-going Phase II community relations activities at other sites.

(3) Division Engineer, USAEDH:

PHASES I AND II

- (a) Coordinate and supervise the Sentinel information, public relations and community relations activities of Engineer Districts and Divisions.
- (b) Submit public information releases concerning Sentinel related engineer activities which contain material or information not previously cleared for publication through the SENSCOM Information Officer for review and appropriate action.
- (c) In coordination with SENSCOM conduct, as appropriate, other Sentinel public information and public affairs activities.
- (d) Provide individuals to brief Members of Congress, public officials, news media representatives, and the public as stipulated by SENSM.
- (e) Provide CG, ARADCOM and CG, SENSCOM with qualified members of the ARADCOM initial briefing team and subsequent SENSCOM briefing teams as required.
- (f) Support and assist the Sentinel related public information and public affairs activities of CG, ARADCOM as appropriate.
- (g) During Phase II(a) and Phase II(b), in coordination with CG, SENSCOM, plan, supervise and execute Sentinel public information, public affairs and community relations (AR 360-61) activities, as appropriate, in Engineer Divisions and Districts.
- (h) During Phase II(c), support and assist the Sentinel public information, public affairs and community relations activities of CG, SENSCOM, as appropriate.
- (4) CG, SENLOG: Support and assist the Sentinel information and public affairs activities of ARADCOM, SENSCOM, USAEDH, STRATCOM and SENSEA, as well as other participating organizations, as appropriate.
- (5) CO, SENSEA: Support and assist the Sentinel information and public affairs activities of ARADCOM, SENSCOM, USAEDH, SENLOG and STRATCOM, as well as other participating organizations, as appropriate.
- (6) Other Participating Organizations:
 - (a) Plan, supervise and execute appropriate public information and public affairs activities in consonance with DA policy as stated in AR 360-11 and this document.

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(b) Support and assist the Sentinel information and public affairs activities of SENSM, ARADCOM, USAEDH and other commands and agencies as appropriate.

(c) Coordinate all SENSM identified activities through the SENSOCOM Information Officer.

7. EXECUTION: The SENTINEL System public affairs program will be a responsive implementation of the policy guidance contained in references (a), (b), (c), and (d) as expanded and restated herein.

a. Information Kit. A kit will be assembled and distributed to all commands (to include applicable Unified and Specified Commands) and agencies participating in the Sentinel System Program for use in response to requests for information and to serve as background information.

(1) The SENSM will have the overall responsibility for assembling the kit and for procuring appropriate inputs to it from all commands and agencies participating in the Sentinel System Program and for processing its contents.

(2) The kit will include, but shall not be limited to, the following:

(a) Kit folder.

(b) A fact sheet on the Sentinel System which tells within the bounds of security regulations: What the Sentinel System mission is; what the functions of major Sentinel subsystems and components are; how the Sentinel System will operate; when deployed in CONUS, that Sentinel will be an operational element of CONAD; and when deployed in Hawaii, that Sentinel will be an operational element of PACOM; its defensive coverage area (schematic national footprint chart) and how operational sites are selected, validated and acquired for Sentinel radars and missiles.

(c) A chart showing all commands, agencies, contractors and subcontractors participating in the Sentinel Program together with a capsulized statement of mission or contract requirements.

(d) A listing of Sentinel information milestones as specified herein. (See Inclosure 1 hereto)

(e) Biographies and photos of key service personalities associated with the Sentinel System Program.

(f) Photos or artist-concept sketches of Sentinel missiles, radars, site lay-outs and test or training installations.

(g) Copies of all news releases of national import which have been made on the Sentinel Program.

(h) Copies of major speeches or articles pertaining to the Sentinel System considered appropriate for general distribution.

(i) Copies of major statements or testimony on the Sentinel System made by key DOD and DA personalities.

b. Press Releases.

(1) Press releases will be made when justified by newsworthy Sentinel activities executed in the public environment or by the accomplishment of a Sentinel Information Milestone (see AR 360-11 and Inclosure 1, hereto, for Sentinel Information Milestones). Such releases will normally originate with the Army element or Sentinel contractor or subcontractor having immediate responsibility for or cognizance of the event being reported. Releases will be cleared as required by AR 360-11.

(2) Requests for information about the Sentinel program received from members of the press, radio or television will be met with an affirmative response within security regulations.

c. Magazine Articles: All magazine articles and responses to queries will be processed in accordance with references b and c.

(1) Magazine articles will be prepared by Army staff members or major DA subordinate commanders having operational cognizance of the Sentinel Program for submission to military, scientific and professional journals

and publications that are service sponsored or oriented.

(2) OCRD will encourage and assist in the preparation for magazine articles on the Sentinel System by civilian scientific or technical writers of national stature.

(3) There will be an affirmative response to specific requests made by representatives of civilian, military and technical magazines for information about the Sentinel System Program.

d. Interviews.

(1) Requests by representatives of national news media to interview senior DA operating officials regarding the Sentinel System will be met affirmatively.

(2) Officials granting interviews will ascertain to the extent feasible the questions that will be asked concerning the Sentinel System by the news media representatives; where questions regarding the Sentinel System are asked which are outside the context of previously cleared Sentinel material, or where an answer to a question would reveal classified information, the official being interviewed will decline to answer. Every effort will be made to anticipate the questions that will be asked by the interviewing reporter; where unclassified Sentinel information has not been previously cleared which is responsive to the anticipated questions, the anticipated question and the proposed answer will be submitted to OCINFO for review and clearance by SENSM and OASD(PA).

(3) Requests by representatives of local or regional news media to interview Army officials concerned with Sentinel activities in their circulation/broadcast area will be met affirmatively. Officials granting such interviews will be guided by paragraph 6.d(2) above, and the provisions of AR 360-5.

e. Speakers Program. An active speakers program will be established. Senior Army personnel associated with the Sentinel Program will participate in this program to the maximum extent feasible in order to explain to the American people the reasons for the Sentinel deployment decision, the strategic rationale supporting the deployment decision and why it is necessary and important to obtain real estate in particular areas for Sentinel operational sites for the System's missile, radars and supporting facilities.

(1) Speech engagements in support of this program for senior Army staff members will be coordinated by CINFO.

(2) Speech engagements in support of this program for senior Sentinel commanders and members of their staffs will be coordinated by major Command Information Officers.

(3) Every effort will be made to interest high-ranking military and civilian personnel within DOD in making public statements in support of the Sentinel System Program and the Sentinel deployment decision.

(4) OCINFO, DA and major Command Information Officers will maintain a library of quotations and public statements about the Sentinel System and the Sentinel deployment decision for insertion in speeches made by participating personnel.

(5) A standard briefing text with appropriate slides will be prepared by the SENSM, with appropriate inputs from participating commands and agencies and cleared in advance with OASD(PA). The SENPACC will review this briefing text periodically and suggest update inputs as appropriate. Copies of this briefing text will be distributed to major DA commands/agencies participating in the Sentinel Program.

f. Exhibit Program. If available, mobile exhibits cleared by OASD(PA) may be used in conjunction with speeches, panels, conventions and symposiums in which the Sentinel System is discussed.

(1) CG, SENSOCOM and the Division Engineer, U.S. Army Corps of Engineers Division, Huntsville (USAEDH), will coordi-

nate and collaborate on the construction of several mobile Sentinel exhibits suitable for display at Community Relations briefings conducted in local communities in connection with Sentinel site validation, acquisition and construction activities.

(2) Requests for utilization of all exhibits in civilian sponsored fairs, expositions, conventions, etc., will be coordinated by OCINFO with the SENSM and OASD(PA) on a case-by-case basis. (Note: This does not apply to exhibits at Sentinel Site Community Relations Briefings conducted by SENSOCOM or USAEDH personnel).

g. Sentinel Site Community Relations Briefings.

(1) SENSOCOM and USAEDH will collaborate and prepare a Sentinel Site Community Relations Briefing Text, with supporting slides, which (after appropriate clearance by OASD(PA)) will be used by Corps of Engineers, SENSOCOM and ARADCOM personnel in briefing, as appropriate, local governmental officials and citizens groups regarding Sentinel site activities underway or anticipated in local communities.

(2) These briefings will be designed to inform recipient audience groups regarding the reasons for the Sentinel deployment decision, the strategic rationale supporting the deployment and why it is necessary and important in implementing the Sentinel deployment decisions to obtain real estate in particular areas for use as operational sites for Sentinel radars, missiles and supporting facilities, and the operational roles of CINCONAD and CINCPAC after IOC. Whenever briefings are given in Unified Command areas, or in communities adjacent to military installations, the commanders concerned will be notified beforehand.

(3) The briefing text shall also include factual information identifying potential Sentinel sites in or near the local area where the briefing is given, and appropriate comments regarding site acreage requirements, site physical lay-out and functions, anticipated site population data, estimated site pay-roll data, how potential sites are validated and acquired (described entire decision-making process to include Title 10 action required by law), expected or anticipated effects of potential Sentinel sites on local property values, tax structure and payments, schools, sewers, water supply, fire protection, police protection, TV and radio reception, roads, highways, and safety to include its radiation and nuclear accident aspects.

h. Operation Understandings.

(1) CG, ARADCOM will periodically update ARADCOM's Operation Understanding Program to highlight appropriate aspects of the Sentinel decision and its supporting deployment program.

(2) Corps of Engineers Districts and Divisions participating in the Sentinel Program, and SENSOCOM, will nominate appropriate citizen leaders and officials from local communities adjacent to potential Sentinel sites to ARADCOM for participation in ARADCOM's Operation Understanding.

(3) CG, ARADCOM will issue invitations to nominated citizens to participate in Operation Understanding as feasible and appropriate.

i. SENTINEL Training.

(1) CG, CONARC will develop a Sentinel Training Public Affairs Plan for implementation at the earliest feasible date.

(2) This plan will be submitted to OASD(PA) for review prior to implementation. (See AR 360-11).

j. Press Visit to National Missile Ranges.

(1) CG SENSOCOM will develop, in coordination with OCINFO and OCRD, a Public Affairs Plan supporting a visit or tour by news media representatives to Kwajalein Island or to White Sands Missile Range to witness appropriate portions of Sentinel System tests.

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(2) These plans will be submitted to OASD (PA) for review prior to implementation (see AR 360-11).

k. Radio/Television.

(1) A program to acquaint service personnel with salient portions of the Sentinel System and the Sentinel deployment decision through Armed Forces Radio and Television will be conducted. CG, USCONARC, in coordination with CG, ARADCOM, will develop a plan to implement this program as part of the overall DA Command Information Program.

(2) There will be an affirmative response by all commands and agencies participating in the Sentinel Program to requests by commercial radio and television for cleared Sentinel newsworthy items to include film clips of missile flights, photos and taped interviews.

1. State officials and Civilian Aides to the Secretary of the Army, state Governors, state Adjutant Generals of the National Guard, Civilian Aides to the Secretary of the Army and other state officials as appropriate will be kept informed by direct mail or by personal visits by senior officers regarding Sentinel plans or activities which will or may have an effect in the respective states or areas of these officials. Specific notifications or briefings of these officials will be as directed and authorized by the SENSOM.

m. Local Officials. CG SENSOCOM and the Division Engineer, U.S. Army Engineer Division, Huntsville, will coordinate activities to keep local government officials informed as to activities which affect their areas. Co-operating Corps of Engineers division and district engineers will maintain liaison with public officials in affected communities to keep them informed of Sentinel-related real estate and construction activities which will impact on those officials' areas of interest.

Mr. FULBRIGHT. Mr. President, I wish to say to the distinguished Senator from Mississippi that I apologize for that word "stooge" or any implication or any other word I used that would reflect on his good faith and good judgment. I think he is discharging his duty and he always has. I have told him on many other occasions in matters which have nothing to do with this matter that the Senator from Mississippi has made one of the greatest contributions of anyone I know of around here. He has been given some very difficult assignments by the Senate, and he has always discharged them with great integrity and judgment.

I hope he knows that there is room for legitimate differences of opinion on this particular system at this particular time and under these particular conditions of our financial situation that afflict the country at this particular time. I do not think the Senator should take offense because we differ on this particular weapons system.

Mr. President, there have been many more occasions on which we agreed than differed in the last 25 years, if my memory serves me correctly. I hope the Senator will understand that there is room for difference of opinion on the ABM.

Mr. STENNIS. Mr. President, will the Senator yield for a brief statement?

Mr. FULBRIGHT. I yield.

Mr. STENNIS. I appreciate the Senator's remarks. I want the RECORD to clearly show that the remark I was taking exception to was saying that the Senator should not submit to the military bureaucracy or the industrial complex.

I really feel kind enough toward the Senator from Arkansas personally. I do not feel I was speaking for myself at all. I had made up my mind I was going to speak for the other 98 Senators if these charges were made again. That is the way I feel about it. There are no ill feelings toward the Senator from Arkansas at all.

As much as I can, and with my years of experience, I leave myself out of what he has said. I speak for the other 98 Senators.

Mr. FULBRIGHT. With respect to the other 98 Senators, I do not think the Pentagon comes up and says, "Senator X, you do so and so." That is never the way it works.

I say this is characteristic of our country. A Senator is serving an important interest or a friend in an important matter. I confess I am influenced by it. I am very much influenced by rice growers, cotton growers, and poultrymen. I do not lie down and do exactly what they say, but I am influenced by them. They are important elements in my State. We have that kind of representative democracy. The only kind of government which does not have that kind of influence is a dictatorship where there is one man who is not responsible to anyone. We do not have that kind of government. I was seeking to make that plain, and what I think General Eisenhower was calling attention to: The probability of the growth of this kind of influence which he warned us against; that we must be on our guard against the growth of it because it could become so influential.

I was not impugning the motives of anyone. This is the type thing that can occur when there is the growth of such an enormous organization which dispenses so much money in our society. That is all I meant.

I had forgotten to mention another matter, but the Senator has reminded me of it. This has no bearing on that aspect. However, it has been remarkable to me that Senators who were elected last year have the attitude that they do on this question. I think it is significant. I do not know of any of these Senators and I am not being personal, but I think it reflects a feeling that is very widespread in this country. It is made up of very different things: First, the war in Vietnam, probably more than anything else. The great and overwhelming emphasis that has been given the war in Vietnam since 1965. I do not wish to review all of the record about that. I had my part in the beginning of it, of which I am not very proud, as the Senator knows. I was mistaken in my judgment. I think I was misled partly because I had been—what shall I say—complimented by the President and my judgment was a little warped and I did not exercise the judgment I should have been capable of exercising at the time in 1964.

But that is water over the dam. I think these new Senators come here free from past commitments. They come here fresh from the electorate and they look at these things with a fresh look. They are not burdened with some of the old alli-

ances and influences that I and others have. I thought it extremely interesting and extremely reassuring. The most encouraging thing politically about this year is the quality and the intelligence of the men who were elected and who were sworn in last January. I think it is interesting that so many of them look on the ABM in what I think is a very enlightened manner.

Mr. HOLLAND. Mr. President, I cannot pretend to speak for any Senator except one and that is the senior Senator from Florida. I found out a long time ago that the 100 Senators are very, very different in their points of view. They are different in their experience and in their background. That background helps to make the attitudes of each of us.

The distinguished Senator from Arkansas, whom I am happy to call my friend, whom I was happy to support in his resolution of a few days ago after it had been changed in several important particulars to which I called his attention, has a background different from any of us. Certainly, I would expect that background to reflect somewhat in his point of view. My own background reflects mine.

I speak for no one but myself at this time. I came into this debate knowing very little about the subject. I am not privileged to be a member of either the Committee on Armed Services or the Committee on Foreign Relations. I came with somewhat of an inclination to support my President, although he is not of my party, because I knew that he was hoping—and the Nation was hoping—that he would soon begin a difficult confrontation with the Soviets, a summit conference on the question of whether we should have a limitation of armaments.

But I declined to make any commitment, and I stated to the press from time to time that I would make no commitment, until after the Senate had had a closed session and I could have access to classified information to which I had not been entitled up to that time, by reason of the fact that I was not a member of either the Committee on Armed Services or the Committee on Foreign Relations.

I attended very carefully the closed session, which had been requested, by the way, by Senators who oppose the ABM item in this important bill. I must say that I came out of that session not with a feeling that it had raised difficult questions for me and might bring me to feel that opposition to the deployment of the modified ABM was appropriate at this time but, instead, with a feeling that it had done exactly the opposite. I came out of the closed session feeling that the case of the President in asking for the modified ABM system and the position of those who were supporting him was made much stronger because of what we saw and heard in the closed session than it was by what is general knowledge.

With that background, let me say now that it is my very strong feeling that we should vote for the inclusion of the ABM in its modified form. I call attention to the fact that we are asked to vote for

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it—and it is what the President has asked us to do—as an authorization just prior to his entering a conference with the Soviets at the summit on the important question of limitation of armaments. I have voted for many authorizations which did not find fruition later in appropriations. I have voted for some appropriations based on authorizations made before that time which did not come into full fruition because the money was not actually expended.

What we are talking about now is only the first step in a change of direction from what we voted for last year and the year before last—a system which was primarily designed to protect cities, for what I think is a sounder, smaller program to protect our retaliatory power by protecting a part of our missile strength from destruction in the event we are attacked by forces from outside with nuclear weapons. It is my strong feeling that we would make a very great mistake—a very great mistake, indeed, at this particular time, to withhold this authorization.

I invite attention to the fact that this is only an authorization. Going to the summit conference for the important purpose which will carry him there, the President, under the circumstances now existing, will go either with an authorization, indicating that Congress, speaking for the people are back of him or without an authorization, indicating that there is great difference in our country to the extent that a majority of Congress is against him in that particular.

I think that any of us who have been through many conferences—I do not pretend to have been through any of as great importance as this one, and I do not suppose any other Senator has—but to go there without the assurance given by the facts, given by what has taken place, that his country is back of him is, in my judgment, to send the President there in a very weakened position and one which I do not wish to impose upon him.

Now, Mr. President, insofar as the backgrounds of the various Senators are concerned—and I question the motives of no Senator, and never have—I invite attention to the fact, again, that we are all of a different background.

If I may contrast the very distinguished background of the Senator from Arkansas with the much more modest background of the senior Senator from Florida, the Senator from Arkansas is a Rhodes scholar, he was the president of a university, and he saw at first hand the workings of the parliamentary system in Great Britain. The Senator from Arkansas has admired that system to the extent that he has expressed on this floor what amounts to questions as to whether it is wise—as we do—to separate the executive from the legislative, or whether the British parliamentary system may be a sounder and better system.

The Senator from Arkansas is in all ways a man of peace, a man of learning, a man of science, a man of great understanding—and, if I may say so, a man of very wonderful personality.

From that background he comes to one conclusion. I wish that I could say I have come to that conclusion, but from a

very different background. In war quite a while as a young man, in law practice, and in public affairs in my own State of Florida as a young man, and also as an older man both in the legislature for a long while, and then as Governor, and now here in the Senate, with entirely different committee assignments and with entirely different interests in many fields of study, certainly not the same interests and scholarship which my good friend has, I come to the conclusion that the practical, commonsense thing is for us to stand back of the President in this authorization.

Mr. FULBRIGHT. Mr. President, will the Senator from Florida yield?

Mr. HOLLAND. I yield.

Mr. FULBRIGHT. First, I, of course, cannot resist thanking the Senator for the implications in his remarks which are most complimentary to me about some of my past activities, although I do not think they are particularly relevant to this point. Let me say one other thing about this present situation. The Senator from Florida left out his own accomplishments. He has had a very long and distinguished career as Governor of his State, as a Senator, and as a public servant in many other ways.

Mr. HOLLAND. I thank my good friend.

Mr. FULBRIGHT. We know that. No man in the Senate is more respected for attention to his duties and the contributions he makes to the Senate in many different ways, in his integrity, and so forth, than the Senator from Florida.

On many occasions, we have been on the same side of controversial issues. The Senator from Florida has always taken the lead in those and has done a very fine job.

But on this particular question, I have had some pretty bitter experience myself in adopting the attitude, "He is our President; therefore, we should follow him." Perhaps that is one of the things which has made me most skeptical about that particular approach. That is the point the Senator from Florida, apparently, really is making.

Mr. President, I felt that way in 1964. In 1964, I went out of my way as much as any man in the Senate to support the then Democratic candidate for President of the United States. I made speeches here and elsewhere, particularly in my own State. I was one of the few office holders in my State who made public speeches and took the responsibility of organizing a campaign in the summer of 1964.

I was chairman of the committee which reported to this body a resolution sometimes called the Gulf of Tonkin resolution. I later found out that that resolution, in my view—and I am more convinced now than I ever was—was based upon false information. It was not directly given by the President. It was given to my committee by his appointees. Of course, I think he has to take the responsibility for it. That was the beginning, in my view, of the greatest tragedy this country has suffered since the Civil War.

Maybe that is part of our background that makes me most skeptical just to say,

"Well, the President wants it, so let us give it to him."

That is where I think I differ with the Senator. Perhaps it is because of my experience. The Senator from Florida did not go through that experience. He did not have the same responsibility for it. I doubt, being only one Member of this body, that I could have influenced the outcome in that situation, because it was a highly emotional one. The House of Representatives had voted unanimously for it, and in this body there were only two skeptics. Perhaps that is one of the deciding elements why I do not feel that, because the President wants it, we should give it to him.

I have great respect for the President. He used to be a Member of this body. He used to be a Member of the other body. He has moved from this end of the avenue to the other end. I have great respect for him as a public servant, but I do not think he is infallible.

I differ with the Senator from Florida as to the effect on his representation at a conference, assuming he goes to a conference. I could make as good an argument for the view that we should go there without trying to impress the Russians that we can overcome them, that we are the "big fellow," and we do not want to do anything unless they do this or that. I think it would be more effective if we approached them a little from the standpoint of equality.

I think the Russians suffer from the feeling that we are trying to outdo them; that we are the richest nation—everybody knows that—that we have great missiles—as everybody knows—that we spend at least 25, if not 30, percent more on our defense than they do. This is a psychological thing. The Senator thinks it strengthens the President's hand. I am not sure that it does not make it more difficult to arrive at an understanding, even on that basis.

Mr. HOLLAND. I thank the Senator. I say again, I do not question his motives or objectives. I did not in connection with his sponsorship of the Gulf of Tonkin resolution. I supported him. We had a long colloquy on it on the floor—

Mr. FULBRIGHT. I was wrong.

Mr. HOLLAND. I believed everything he told me. I reexamined it the other day. I think all the things he told me were true. They had to do, generally, with the relations of the nations in the Southeast Asia area, if the Senator will look at the colloquy, and not with the question of the soundness of the facts as related to him, and by him to us, as to what had taken place in the Gulf of Tonkin. They had to do more with the relationship of the various nations in in that area.

I believe in the Senator from Arkansas, and I have tried to say so, but I do not always agree with him, and neither do I always agree with my President. But when I send my President, as I hope I may be a party to sending him, with every good wish, to confront the Soviets, I want him to have every assurance of support and backing from his own people that we can give him. When I know it is not a final expression we are asked to make, but simply an authorization, and when I know they know that just

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as well as we do, whether or not we pass this authorization, I want him to go there feeling that he is backed by his own people and his own Congress, and I think they should have the knowledge that he is so backed.

May I say, with reference to this whole question, that I have not blindly supported the President of the United States. The Senator from Arkansas spoke of a President whom we jointly helped elect in 1964. I think the Senator knows, without recounting them, how many times, in my conscience, I opposed that particular President, and I did so, and sometimes strongly. One of them was last year, just before he left office, when he tried to name as Chief Justice of the Supreme Court a man who I felt was not of the proper philosophy, as was shown by his own actions upon the high Court. The Senator may not know some of the things visited upon the Senator from Florida because of his position then, but the Senator from Florida did not waver.

So far as his support of the Defense Department is concerned, the Senator from Florida has frequently differed with it. I remember last year and the year before they wanted expensive, big ships to be stationed in various parts of the earth, full of all kinds of implements of war and peace, so that when anything broke out at remote areas of the earth, we could act very quickly. The records of the Congress show I opposed that.

Mr. FULBRIGHT. It was taken out in committee, was it not?

Mr. HOLLAND. When they were trying to build a very impressive and large bomber—I do not remember the name of it, but it was an alphabetical name—the Senator from Florida opposed it. Another time, when they were trying to build an additional nuclear carrier, the Senator from Florida opposed it.

The Senator from Florida has, on frequent occasions, opposed the Defense Department, and he stands ready to do so again. But the feeling of the Senator from Florida at this time is that, if he were going into an argument, confronting our only great potential hostile force in the world, he would want to have the assurance of the backing of his own people, as shown by the vote of the Congress, which represents the people of this country; and the Senator from Florida would not want to send him there naked, and not clothed with that expression of support.

Mr. FULBRIGHT. Mr. President, will the Senator yield?

Mr. HOLLAND. I will yield, but may I finish with just one additional comment?

I remember when the question came up on the issue of selective service a few years ago. The Defense Department was begging for an extension. I remember that the Armed Services Committee was begging for an extension. I remember that, finally, after long debate, the Congress extended selective service by one single vote. That was the margin in one House of the Congress. And within a few weeks, Pearl Harbor fell upon us, and we realized how terrible a handicap we would have been under without an extension of selective service.

I think this is one of the issues we may be divided on, just as the Congress was then divided; but I think I am entitled to have a very strong conviction, which I do have in this instance. I promise nothing further, because I may vote against the President next time it comes before us. This is not because he asks for it. It is because he is going to represent the people of this Nation. I think he should go with the assurance of our support and that in giving him that support he will carry greater weight and greater strength with respect to those with whom he will be in difficult contest—and that is what amounts to when he gets into such an experience as that conference will be.

Mr. FULBRIGHT. Mr. President, if the Senator will yield—

Mr. HOLLAND. I yield.

Mr. FULBRIGHT. I think the Senator misconstrues the issue. The issue of the ABM goes beyond that conference. We have already had a vote which clearly supports the President on the conference. If the Senator will look at the debate on the Nonproliferation Treaty, he will see that article VI of the treaty commits us to discussions with the Soviets for the purpose of stopping the spiraling of the arms race. That was put in there at the urgent request of the smaller countries who were parties to the treaty. It was put in as article VI of the treaty itself. We discussed it in the committee. I discussed it on the floor. The vote for it was overwhelming. I think 80 Members of this body voted to advise and consent to the Nonproliferation Treaty.

That is the vote which is relevant to the President's going to a conference with Russia.

This issue is on just one item in a military bill, which, it seems to me, is utterly irrelevant to the President's discussions on armaments.

If the Senator wants to take an item which is more relevant, it would be the question of the MIRV. Much was said about it in the hearings before our committee. It was revealed that that is a far more dangerous weapon and much more likely to disrupt a conference. I refer to our proceeding with MIRV.

I could make a far better argument, I think, if we want to strengthen the President and place him in a position they could not challenge, for laying on the table the fact that we have MIRV, that we have MIRV-ed our weapons, and that we are absolutely invulnerable because of our strength.

I do not think that is really the way to approach a conference, if we are serious about seeking an agreement with the Russians. I would say that the ABM is of little consequence. The Russians have tried an ABM. They started to deploy one. They got it half way in, and they discovered it was a bad deal and quit deploying it. This is the information we had, and the Senator knows we had it.

Mr. HOLLAND. I listened to the information in the closed hearing. It was not entirely to that effect.

Mr. FULBRIGHT. I beg to differ with the Senator. That is as far as you could go in reading anyone's mind. This was the conclusion of the intelligence community, that they had stopped and were

not proceeding, and what they are doing is what we are saying we ought to do now, which is only to conduct research on it. They are not proceeding to deploy.

One thing that is very difficult to deal with is when the proponents of deployment get up and say, "The Russians have an ABM. Shouldn't we have?"

What the Russians have is absolutely nothing like what is proposed here. It is around only one city. If anything, it is like Sentinel, which we have abandoned, which was designed for the protection of a city. But they got it halfway up and decided it was a bad deal, and they have stopped deploying it. That is the uncontroverted testimony of the Chairman of the United States Intelligence Board. We had this information before we even got into this controversy over a year ago, when this matter came up with regard to the Galosh system.

They are not proceeding to build it because they know it needs further development, and maybe they cannot make it work at all; they do not know. That is the only rational conclusion one can draw from what they have done.

I do not see how the Senator thinks this would be a vote of confidence in the President. If any vote could be that, it was the vote on the nonproliferation treaty, which has a specific article on this subject. This is simply one item. I suppose, one could pick out any item in this bill and say a vote for it is a vote of confidence.

Why is it? I cannot understand the Senator's point that if we should vote not to deploy, but simply to go ahead as the Senator from Kentucky suggests, it would be interpreted abroad as a disavowal of the President. I think that is an absolute non sequitur. I do not think anyone would interpret it that way, and certainly not the Russians, because they know what an ABM is, even if we do not. They know how faulty it is. If they did not, why did they not proceed to put it in, not only around Moscow, but around Leningrad, Kiev, Irkutsk, and so on? Obviously because they have not been able to make it work up to this time, and there is grave doubt whether they can.

I have no purpose of disavowing the President, if and when he goes to meet with the Russians.

Mr. HOLLAND. I am sure the Senator does not, but there are Senators who think that to agree to the amendment would weaken the President, and the Senator from Florida, for one, is very strongly of that feeling.

I ask the Senator to go back with me a little bit. I think, in the first place, we here in this country are not as cautious as we should be in our dealings with the Russians. I hope that they are frank this time. I hope that the fact that Mr. Gromyko has indicated that they would like to have this conference for arms control may be taken at face value. But my memory goes back to some things that make me a little more cautious than I would be otherwise, and I am a little bit inclined to be suspicious and cautious, and I make no apology for so being.

I remember that we thought we had an assurance from the Russians that they would not explode a nuclear weapon in

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outer space, and we woke up suddenly to find that they had done so, and that they had secured information which we wished we had, and which we cannot get because we are, of course, conforming to the later treaty on that subject.

Mr. FULBRIGHT. May I say that was not a treaty.

Mr. HOLLAND. May I finish my point on this matter?

Mr. FULBRIGHT. Just as a point of—

Mr. HOLLAND. May I please finish my point?

Mr. FULBRIGHT. It was not a treaty. That is the only point I wish to make. There is no such treaty.

Mr. HOLLAND. I supported the Senator in his nonproliferation treaty, and was glad to do so. I thought it was the patriotic thing to do so, just as I think now that in order to give our President the greatest strength and the greatest showing of unity at home, we should support him in this request, which comes from the Armed Services Committee on a perfectly nonpartisan and bipartisan basis.

I remind the Senator that not only did the Russians completely breach their agreement with us with reference to the explosion of a nuclear body out in space, but that this same man, Gromyko, when the Russians had transported some of their great weapons, some of their long-distance missiles, into Cuba, and they were installed there, and the President had on his desk the picture taken by some of our people in the Air Force showing that the missiles were there, and right where they were, this same man, Gromyko, came into the office of President Kennedy and told him that this was all a pipedream, that Russia had not sent any of its missiles to Cuba.

The Senator well remembers that, because I think he was close to that situation as the distinguished chairman of our highly distinguished Committee on Foreign Relations, I am sure that he knew all about that, and he knows of the rather atrocious misstatement made by Mr. Gromyko to our late, beloved President John F. Kennedy.

Then I remember that, though they were committed by treaty to give us access to Berlin, that they forgot all about that commitment, and we had to go through the very expensive but very effective airlift program, to show that even though they did violate it, we did not propose, because of a few million dollars, to abandon the people of Berlin on our commitment to them and to our allies in Europe.

Knowing these things, it seems to me that we would appear rather naive, that we would appear over optimistic, that we would appear over credulous to the Russians and to the world if, at this time, we took at face value—though I hope that later we can take it at face value—the assurance of Mr. Gromyko that they want to limit arms. We all know how badly we need to curtail the arms race, and I think Russia needs just as badly to curtail it; perhaps they need it more than we do. I think we would look very naive indeed, however, if we took the fact that he has approached us on this subject as a sort of assurance that the

difficult objective was going to be worked out, and that therefore we were going to abandon what we had already entered into as a program to protect our retaliatory strength—not to make an offensive gesture of any kind, but in order to defend, if we needed to make use of them, the continuing availability of our weapons up in the areas of our Midwest where they are in place.

Mr. President, I feel so strongly about this issue that I felt that I should place this statement in the Record at this time. I am not prepared to discuss now, though I have read a great deal on the matter, the scientific questions that are involved. But those questions have been adequately discussed. I simply wish to bear down on this one point: that I think we would make a great mistake to leave the Nation with the feeling that we did not propose to support our President on this first step—and that is what this is—that as far as the modified ABM is concerned, and that we did not propose to support him just prior to the time that he goes away to this all-important conference. I feel that we should do so, and I do not think I need to remind my distinguished friend that I have very frequently opposed the Presidents, not just this President—though I have not had much chance to oppose him yet, because he has not asked for much that has come to the floor as yet—but I have frequently opposed my own Presidents, if one can so speak of those who belong to the party to which he and I both belong—and I opposed the previous President of the other party, under whom I had the privilege to serve together with the Senator from Arkansas.

I do not feel an obligation to support everything they ask for, and never expect to do so. But I feel that in this instance, whether he had asked for it or not, we should arm him with the additional assurance that his Nation is behind him; that we are taking this first step, an authorization step only, on a program designed to protect our retaliatory power.

There is no crime in protecting our retaliatory power. There is no offensive action of any kind in doing that. I think we should begin on that path at this time.

I thank my friend the distinguished Senator from Arkansas for his patience. He knows how I feel toward him. I have shown that frequently by what I have said and how I have voted on the floor of the Senate.

I think the Senator is wrong in his conclusion at this time, although from the best of motives. I think he is entitled to know what my decision is, why I have made it, and why I feel the President will be a much stronger advocate of what we want him to stand for when he goes to have a summit conference with the Russians if he goes with the knowledge not only of himself and the Russians, but also of the world, that his Nation stands behind him in the beginning of an effort to protect our retaliatory power so that always we need not fear destruction at the hands of one who tries to destroy us by nuclear weapons.

I thank the Senator.

Mr. FULBRIGHT. Mr. President, I have a few words to say in response.

There are a number of points that the Senator raises. I would be more than willing to cosponsor, sponsor, or vote for a resolution which in no uncertain terms states that we are behind the President in his efforts to reach some agreement on the limitation of armaments and so forth.

As I say, I consider the vote on the nonproliferation treaty, which contained article VI, to be just such a vote. I feel that this is just a weapons system on which there certainly is great doubt.

The Senator will agree that when we take the testimony of the scientists—and especially if we take into consideration those scientists who were the advisers of the previous Presidents, Eisenhower, Kennedy, and Johnson, who are not now in the employ of either the Pentagon, the Government, or a contractor—and put it against the others, it is very impressive. I think that there is doubt about the state of the art at the present time.

As to the retaliatory strength that the Senator has mentioned, we have the weapons. There is no question about the number of weapons we have in place at four different locations: the Minuteman in silos, the Polaris in the submarines, the Poseidons in the Polaris, and the weapons at airports and even abroad.

The deterrence grows from the belief on the part of the Russians that we will use them. The way they were designed and the way they will operate as deterrents is that when our radars and satellites indicate the Russians are attacking, they will be released and destroy them. This is the whole theory of deterrents. It works now. It will work in the future.

In my opinion, I do not believe the ABM is relevant to the proposed conference with the Russians in any substantial way.

The question is whether we will use them. I think we will. They understand that; we understand that.

What we are going for now is—and it is the purpose of the conference—that we cease to escalate and cease to spend all of our money, or so much of it, on both sides for this nonproductive instrumentality known as nuclear weapons.

All we are doing in creating MIRV and ABM is stepping up an arms race and doing exactly the opposite of the purpose of the conference.

With reference to the conference—and I do not believe I am naive about it—I think it is very dubious that we will get any results, because I think there is great question about our credibility in really meaning to go forward with a restriction on the number of armaments because we are now making the decision to put in ABM. We have already begun the MIRV. Contracts were let and publicly announced a week or two ago for the deployment of MIRV.

Many of our best authorities have said that this is a more significant thing than the ABM because once we get the MIRV in operation, it is very difficult to find out what is going on by means of satellite or any other means.

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There is no reason to be very optimistic about it. That is another reason, it seems to me, that we can agree this is not likely to promote an agreement. I am not so optimistic when it comes to getting an agreement. I would like to get an agreement. However, in the meantime, I do not want to spend all of our money on this.

Actually, with respect to the Senator's point of view about supporting the President, the day before yesterday the President had a large number of Senators and Representatives at the White House at 8 o'clock in the morning. And the present Secretary of the Treasury and his three predecessors were there.

What was he talking about? The ABM? No. He was talking about the surtax and its importance.

I would say that a vote against the surtax would be perhaps a more significant disavowal of the President than a vote against the ABM. At least the President gave the surtax far greater prominence in his efforts at prevailing upon the Senators. There were more Senators and Representatives present to listen to his very fervent pleas for the surtax than he has ever had present concerning the ABM.

Am I going to be in a position to say, "I can't vote against the surtax because it would be a disavowal of the President and he would go abroad without the full support of his Congress." Surely, to me the surtax is just as relevant to the purpose of the conference as is the ABM.

I do not think the ABM is so significant to the Russians one way or the other.

They know it is a rather insignificant thing. What I am really interested in is not going down the endless road of pouring our money into weapons systems which serve no useful purpose. We have serious matters to consider, and I agree with the President about inflation and the surtax.

The only criticism I made about his presentation at the White House with his people was that he spoke only about taxes, nothing about cutting the budget. I think that budgetary matters are as important as taxes. But that is another subject. I raise it at this point merely to say that the President himself has given, within the last 2 weeks, greater attention to persuading us of the necessity for a surtax than he has for the ABM. I think the ABM, even from his point of view, is merely another item in the overall program which his new Secretary of Defense, because, I am sure, of his feeling and his duty, is urging upon the President.

But I do not believe the President thinks at all that the ABM is as significant as the Senator from Florida thinks it is to support him. If it is support, and that is all it is, I would be more than willing to submit a resolution of support, backing the President 100 percent in his efforts in Moscow, if that is all it would take to satisfy the Senator from Florida on that point. If he has some other point, that is another matter. But I would have no hesitancy in backing the President in that way.

I do not believe there is a relevant connection between the ABM and backing the President in his conference on the limitation of armaments. Some persons have already said that the ABM is a defensive weapon. Why should the Russians particularly care about it? I do not think the Russians particularly care. In the first place, they know it will not work. Second, it would be expensive. It would weaken us to divert money to the ABM, which is useless, instead of procuring more MIRV's or Poseidons, which are more dangerous. I think the Russians would be glad to have us proceed down this futile path.

It has been suggested that we ought to go all out in the arms race because the Russians will go bankrupt before we will. That argument has been suggested by some columnists and others who think that we cannot make an arrangement with the Russians anyway. They make the argument the Senator has made, that the Russians cannot be trusted.

They call attention to the fact that the Russians exploded a nuclear weapon before we did. Actually, that was not under a treaty. They had made no formal agreement; it was a tacit understanding which they broke. I do not think the Senator was correct in saying that there was a treaty—in other words, a formal agreement. It was what might be called a gentlemen's agreement, although that might not, perhaps, be appropriate in this connection.

I dislike to be in a position of trying to defend the Russians. They have done many things of which I do not approve. I think they have made many mistakes. I do not approve of their having gone into Czechoslovakia. I think it was a great mistake on their part. But I must say, also, that I did not approve of our intervention in the Dominican Republic in violation of treaties. We had made treaties with Latin American countries at Rio de Janeiro and other places, in which it was said in no uncertain terms that we would not intervene in those countries—the Senator knows that—but we did intervene directly against those treaties. So I do not like to use that type of thing.

I think that big countries, when they feel that their interests are threatened, rightly or wrongly, and mostly wrongly, intervene.

I certainly do not approve of the misrepresentation about Cuba, but neither do I approve of the misrepresentation about the Gulf of Tonkin to my committee.

Surely, the Senator does not take the position that we are the only good people and that we have never gone against any of our treaties—going back to the Indians or anybody else. The Senator will not approve of the way we treated the Indians. The Senator will not approve of the way we treated the Filipinos after the Spanish-American War. I do not approve of it; I do not think history approves of it. I think we were absolutely without justification. It was a cruel and barbarous thing to do, after we had cooperated with Aguinaldo and then turned upon him and destroyed him.

But those are things that big countries have done, and I do not think any of us are without fault.

I am not trying to defend the Russians and say they are good people and we can trust everyone. The only purpose in having a conference with them is that their interest in this instance coincides with ours. We did make a treaty with them in the Antarctic. There was a great deal of opposition. I believe 30 Senators voted against it. To my knowledge—and we inquire from time to time—the Russians have abided by it to the letter, to this day, because their own interest coincided with ours. It was a good treaty. So far as I know, they have abided by the Nuclear Test Ban Treaty, as well as we have. Both of us, I think—I know we did—inadvertently allowed a little to escape in our underground testing. I do not think it was intentional, and they have made no point of it, nor have we in their case. I think we all are subject to making mistakes or doing things we should not do.

Now, that has nothing really to do with this. What it comes back to on the ABM, the point I am trying to make, is that in all good faith I think the Senator, to some extent, misconceives the relevance of the ABM to the support of the President. I do not want to weaken the President; I do not think it does weaken him; and I am willing to do whatever the Senator thinks appropriate, other than this type of thing, to support him, if the Senator thinks it is necessary. I do not think it is necessary. I believe that the vote of 80 Senators on the Nonproliferation Treaty, with article 6 in it, is all the backing the President needs from this body to go to Moscow with the full assurance that they know he is speaking for us when he makes a proposal to limit armaments.

On the contrary—and I will end with this—I think that in proceeding with ABM and with MIRV, we are guilty to a degree of talking out of both sides of our mouth. On the one hand, we are saying we want to limit armaments. On the other hand, we are proceeding with both the MIRV and the ABM.

This is a characteristic which has been much in the public eye. The Senator knows about what was called the credibility gap and how it afflicted the last administration to the point that people felt there was a degree of talking one way and acting another. I do not like it. I think it destroys the faith of our people in their own Government. I believe this is bad.

If we are really serious about this negotiation, if we really mean to try to get an agreement, to be consistent with that I think we should, as the Senator from Massachusetts has so well put it, have a moratorium on the MIRV, and we should suspend the ABM at least until after the conference. I think that logically we could be accused of saying: "You voted 80 to 16, or whatever it was, to say we will proceed to a conference, and you turn around and begin to deploy ABM's and MIRV's. So you are speaking one way and acting another."

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As our Indian friends, who had so much experience with us, said, "The white man speaks with a forked tongue"

And I think we could be guilty of it. Mr. HOLLAND. I thank the Senator.

I just want to make it clear that, so far as the Senator from Florida is concerned, he thinks that the authorization to proceed with the ABM is a necessary ingredient of our effort to remain strong. The Senator speaks of how strong we are. It is a defensive effort to make sure that we have the retaliatory force not only to defend ourselves but also to wipe out an opposing enemy, if we have to, if we are first attacked. No real criticism can be made of a nation that tries to protect its power to defend itself.

The Senator knows full well that so far as the Senator from Florida is concerned, he has not been summoned to the White House, he has not talked with the President, and he has not talked with the Secretary of Defense. He has been forced, so far as his information about classified material is concerned, to rely upon the closed session, at which he heard a great deal, and it made him feel that there was a good case made for the authorization of the ABM.

I want to make it very clear, also, that the Senator from Florida has not been approached by anybody of the industrial-military complex to which the Senator has referred; but he has been approached by his own people, who did not know how he was going to stand. I had a count made of my thoughtful letters—from my own people the other day, and they were practically 3-to-1 in favor of the ABM, some 1,500 to 500. Many of them take the position that since it is a purely defensive effort, they feel that by all means it is necessary to help us preserve our strength. And that is what it is for.

I hope the Senator will not mind if I tell him a little story about something that happened to me many years ago. The Senator will recall that shortly after World War I, we used to have Armistice Day celebrations every November 11. The Senator from Florida, as one who had taken part in that war, was called upon at times to make speeches on Armistice Day. He recalls one that he made at the fine little city of Arcadia, Fla.

The host there was the preacher of the Methodist church, the largest place of meeting in the city, who later became a very distinguished bishop of the Methodist church. His name was John Branscomb, and I am certain that the Senator will recall him.

After the Senator from Florida had completed his speech, the customary type of speech made in those days about Armistice Day, about the efforts to make the world safe for democracy, about our having successfully fought a war to end all wars, and then with something about preparedness thrown in for good measure, we were all talking in front of the church. The preacher, who was a dear friend of mine, the Reverend Branscomb, said:

Well, Judge Holland—I happened to be a judge at that time—I want to tell you that I thought you made a fine speech, except the

part about preparedness. I don't believe we ought to stay militarily prepared. I don't believe we ought to arm. I believe we ought to be peaceful.^a

I questioned that very mildly and finally we both turned to an old friend who was standing by. His name was Dr. Aurin. He was the dean of all doctors in south Florida at that time. As a young man he had fought in the Spanish-American War as a cavalryman. Brother Branscomb said:

What do you think about it? What is your judgment?

Dr. Aurin said:

I have been here a long time. I was here in the days when there was much disorder here every Saturday night. The cowboys would come to town and the Indians would come to town and there would nearly always be a fight, there would nearly always be a shooting, and there would nearly always be all kinds of scraps. One of the things I noticed was that when a man came to town with a six shooter strapped to his hip where everyone could see it, nobody ever picked a fight with him.

That ended the discussion. For years I was good friends with Brother Branscomb. We both became trustees of Florida Southern College. He would frequently recall that incident.

I think that to have the ABM is to have a pistol on our hip where it is available and where all the world knows it is available; and we have the striking strength, if the need comes to strike back, so we can demolish anyone that has the effrontery to attack us. It is not an offensive effort; it is a defensive effort.

I want the Senator to realize that those who would confront us may honor us the more if we try to move from a position of strength rather than from a position of relative weakness.

Mr. FULBRIGHT. Mr. President, will the Senator yield?

Mr. HOLLAND. I yield.

Mr. FULBRIGHT. In his last phrase, the Senator made reference to "relative weakness." That, I think, might be the key to the entire matter. The relative weakness is utterly inappropriate to our situation. I realize the Senator is not on our committee, and he could not possibly have heard the testimony from official witnesses about our relative strength and have any idea that we are relatively weak. We are relatively very powerful. There are many ways this can be judged.

In the first place, there is no question, according to people in authority, that we are spending at least 4 to 3 in purchasing dollars. This is translated by the best authorities as the purchasing power, not the number. We went into the matter in great detail.

I asked, "How do you estimate what the two countries are spending?" Of course, we have twice as much productivity as they have and they may be spending a little more of their GNP percentagewise, but we are spending far more in purchasing power.

Mr. HOLLAND. Our wages and living costs are vastly more than theirs.

Mr. FULBRIGHT. I am sure the Senator is being misled if he believes

that. This is the very thing we asked the Director of the CIA to translate for our committee. Taking into account the cost of living, the cost of materials and everything else, he comes up with a ratio of 4 to 3, which is considerably more. We have these weapons, sufficient to destroy all of Russia several times over.

I beg to suggest that the analogy of the six shooter on the hip with hydrogen bombs is not appropriate. The days of six shooters, and rocks, and slingshots is gone. There was a different concept then. We are talking about nuclear weapons.

Nuclear weapons translate into hydrogen bombs which can utterly demolish a country. At the same time, they are piled up far beyond the capacity to destroy them completely, far beyond anything in the Soviet Union.

I also call attention to the fact that the ABM is not intended or designed to do anything about protecting the *Polaris* submarine or the weapons in airplanes. It is only designed, even if it were effective, for the Minuteman. So you have all these Poseidons, and more than enough to destroy the whole Soviet Union.

The Senator is talking about only one aspect. If there is only that insignificance, why does the Senator oppose it? I am absolutely convinced we have more weapons than they have. We could destroy them. The deterrence is there. The best people in the military will confirm that, except when they are trying to make a sale on the ABM.

The Senator said that his constituents favored the ABM 3 to 1.

Mr. HOLLAND. 1,500 to 500.

Mr. FULBRIGHT. This is the result of the kind of misleading advertising and polls that I referred to. There have been polls in full-page ads. The question is: "The Russians have an ABM to protect them; wouldn't you like to have one?"

If that is not a loaded question, I do not know what is. Anyone who knows nothing about the ABM would say, "Sure, the Russians have it; we should have it also." This is the type thing which creates an impression.

Mr. HOLLAND. Has the Senator seen the page-long ads of the opponents of the ABM? I have.

Mr. FULBRIGHT. I have seen some of them, but they are very few compared to the others.

We had a Mr. Case before our committee the other day. He is the chairman of a committee which took a poll. The question was: "The Russians have the ABM to protect themselves. Don't you think we should have one?" How could anyone who has not heard anything about this help but say "Yes"? It says nothing about the facts. There is not a word in it that is factual at all. This feeling has been created by this very sort of thing which I mentioned a while ago. It is a good illustration of the military-industrial complex, because among the sponsors of that advertisement were representatives of 11 of the biggest contractors in the country, companies like General Electric, IBM, and

so on. The directors of those companies pay for such ads.

As I have mentioned, they are putting out books. Mr. Herman Kahn of the Hudson Institute is publishing a book that I am sure will be spread all over the United States. I do not know who will pay for it, but undoubtedly it will be plenty of people. The \$80 billion in the Defense budget is such an enormous amount of money that no one can conceive of it.

The Senator says we have to be strong. Nobody has ever been as strong as we are.

Mr. HOLLAND. The Senator was present in the Chamber during the closed session the other day, was he not?

Mr. FULBRIGHT. Yes.

Mr. HOLLAND. The Senator knows that neither he nor I can reveal the information disclosed there, but with respect to nuclear submarines does the Senator remember that information?

Mr. FULBRIGHT. Yes, I remember the reference of our having 41. It is not secret. It has been in the newspapers.

Mr. HOLLAND. Does the Senator remember the information about the ones they are constructing?

Mr. FULBRIGHT. Yes, they are building submarines, but we are doing it, too, and we can build them faster and we will if we need them. It was only a few days ago that some of our people thought we have so many more than we need that they are thinking of retiring 10. We can destroy Russia 10 times over and some of the more thoughtful people said, "Why should we keep this up at a cost of hundreds of millions of dollars?"

This brings me to one further point. I do not wish to belabor my argument with the Senator. If we have to build everything that comes up, there is no limit—we are already outspending them—unless one assumes we are more stupid than the Russians. We are doing lots more than they in the way of defense. I do not think we are stupid. I think our industrialists are more competent and efficient. There is no way to accept that result. We are already strong enough.

When the Senator refers to a position of strength in which we should go to this conference, we are in a position of strength.

I think we run a risk, by continuing to build the MIRV and ABM, of destroying credibility and creating a situation in which the Russians and everybody else will say, "The Americans are not serious about this. They talk one way and act another way."

But we want to negotiate by proceeding with MIRV which is the most dangerous development since the hydrogen bomb itself.

Mr. HOLLAND. Are not the Russians proceeding with a similar three-headed monster of their own?

Mr. FULBRIGHT. But we were proposing that we stop. Everyone agrees, I think, that we are ahead of them insofar as the rate of development and the place of development are concerned. The Committee on Foreign Relations held a hearing with three or four of the best scientists we have. They said that MIRV is the most dangerous new development in the sense of preventing an agreement, because it cannot be supervised or—that is not the right word—

Mr. COOPER. Observed.

Mr. FULBRIGHT. Observed. In other words, we cannot tell what the other parties are doing. That is why we wanted to have a hearing. We had one. It was a good one.

When we go to the extent of proceeding with MIRV, under these circumstances, we are setting the stage for a failure in any conference. I do not think by threatening people, by saying we are coming in with twice as many weapons, that we are likely to create an attitude or an atmosphere in which we would get any agreement. If we want to sabotage that matter, that is one way to do it.

Mr. HOLLAND. I do not agree with that last statement at all. I think, to the contrary, if we do not proceed with an authorization, which is the first step only of this project, that the very reasonable conclusion for the Russians to reach is that again we are showing we are a bunch of saps, that we believe everything they say, that we are naive, because Mr. Gromyko comes this time to say that, "We sincerely want to limit armaments, so let us have a summit conference," and we regard that as already completed.

I think that we should go to the conference and do everything in our power to bring it out to a successful conclusion, but I do not believe that we will do it by the overoptimistic approach under which we would abandon what we were beginning to do, simply on the strength of his having said that we want to do thus and so. We have seen enough of him heretofore to know that he talks out of both sides of his mouth.

Mr. FULBRIGHT. That is not new. That was a conciliatory speech. This proposal for negotiating on arms limitations was made nearly a year ago. The preceding administration was seriously getting ready for a conference at the time of Czechoslovakia. We suspended it then and the preceding President—I happen to know from my own knowledge, because the last time I saw him was on his very question—asked me if I thought it was wise to proceed with negotiations with the Russians on arms limitations. That was in the early part of December. I said, so far as I could see, it was. It is my understanding, but this is second-hand, that subsequent to that the incoming administration vetoed the idea. But the Senator should not imagine all of this to be some devious idea of Gromyko's in his speech the other day. This matter has been underway for over a year.

Mr. HOLLAND. I understand that, but I know that the recent hope and the recent effort stem from the statement made by Mr. Gromyko. The Senator knows that that is true. It is not the first thing on this negotiation—

Mr. FULBRIGHT. No.

Mr. HOLLAND. The Senator spoke of the preceding President. Does the Senator take the same position that he does with reference to the ABM?

Mr. FULBRIGHT. I do not know about the ABM. I have not talked to him about that. I am talking about negotiations. The Senator brought in the question of negotiations.

Mr. HOLLAND. The press states that the preceding President has exactly the

same conviction that the present President has.

Mr. FULBRIGHT. With all deference, that is not persuasive with me.

Mr. HOLLAND. I thought the Senator was relying upon the preceding President.

Mr. FULBRIGHT. Oh, no. The Senator was talking about the Gromyko speech. In all fairness, I do not think that because he made a conciliatory statement, that we should make the argument that he is double dealing in order to proceed. On that theory, then they could condemn us.

But I do not attach that kind of condition to the speech he made. One of his main points was that he would like to have better relations with us and maybe we should exchange some Senators and Representatives to come over there. I do not know what he has in mind, in the long run. But we should try to eliminate expenditures and I said I do not think it was a wise policy to spend each other into bankruptcy. The real reasons the Russians want a conference is the reason I want one; namely, to quit breaking ourselves by spending our money on non-productive enterprises. I think the demands by my constituents for sewer projects, water projects, roads, jobs, and so forth, are so great that this is a foolish and very irrational way to proceed—that is, to continue to spend our money in this way.

I am confident that the Russians feel the same way. They need money as badly as or worse than my constituents. This is ultimately the most persuasive reason not to continue an unlimited arms race.

Mr. HOLLAND. Again I appreciate the candor and always the motives of my distinguished friend, but it seems to me that we would be extremely naive to change our plans. The reason we require this new authorization at this time is that we are changing our plans for a cheaper program and for a clearly defensive program. I think just to change those plans on the eve of sending our President over there is not strong but weak.

It is for that reason, among others, that I want this project to be approved.

Now, Mr. President, one more thing. One of my friends from Virginia has sent me a fine editorial from the Daily Progress, published in Charlottesville, Va., an editorial on Tuesday, July 22, 1969, entitled, "Senator Byrd's Warning."

I have read the editorial, as it quotes from the CONGRESSIONAL RECORD, with a great deal of appreciation. I have read the comments made by the editorialist on that warning of our distinguished colleague from Virginia with a great deal of appreciation also; and I ask unanimous consent to have the editorial printed in the RECORD.

There being no objection, the editorial was ordered to be printed in the RECORD, as follows:

SENATOR BYRD'S WARNING

Sen. Harry F. Byrd Jr. of Virginia had a great deal of common sense packed into a speech he made to the Senate last week in support of a \$20 billion Defense Department authorization for military weapons and research and development.

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First off, Sen. Byrd declared his support for a reduction in the \$23 billion authorization sought for the Defense Department by President Johnson before he left office. The Nixon Administration reduced this by \$1 billion and the Senate Committee on Armed Services, of which Sen. Byrd is a member, cut out another \$2 billion.

Sen. Byrd supports the \$20 billion authorization now proposed and in doing so he warned those who would curtail the nation's strategic offensive capability.

"All of us would like an end to the arms race," said the Virginia senator.

"All of us would like to devote to more constructive purposes the money being sought for weaponry.

"But the day that those objectives can be accomplished is not yet here—nor does it appear imminent.

"For the foreseeable future a strong military posture remains essential to our national survival.

"We cannot take a chance on just what might be the intentions of other nations.

"Hours of discussion have been consumed on the floor of the Senate as to the intentions of the Soviet Union, as to whether it intends to seek a first-strike capability against the United States.

"Frankly, I do not know just what the intentions of the Soviet Union are, nor, I submit, does any other member of the Senate. Nor does the President, nor the Secretary of Defense, nor the Central Intelligence Agency.

"In recent years, the Soviet Union has greatly increased its offensive capability. The Soviet Union is continuing to increase its offensive capability. The Soviet SS-9 missile has the capability of knocking out a U.S. missile site. It is our strong offensive missiles upon which we rely to deter any nuclear aggressor.

"The entire strategic concept upon which the United States has been relying to avert a nuclear war is that the United States be so strong that any foreign power deploying missiles against us would know that we could retaliate by destroying him who struck the first blow.

"Today, we are in such a position. But we must constantly be on the alert. These major weapons systems have a long lead time. We must legislate today for four and five and six years hence. We cannot let down our guard—not until the day, not yet discernible, when effective arms control agreements can be reached."

These are not pleasant words to hear or read but they are comforting to the extent that they face up to hard facts and the price the United States must pay in today's world. Once the nation learns to accept a burden that it must shoulder despite its natural reluctance, the stronger our national security will be. In today's world we cannot afford to drag our feet, to take chances or to make educated or uneducated guesses as to what our potential enemies intend to do.

Mr. HOLLAND. Mr. President, I yield the floor.

ORDER OF BUSINESS

Mr. BYRD of West Virginia. Mr. President, I suggest the absence of a quorum. The PRESIDING OFFICER. The clerk will call the roll.

The bill clerk proceeded to call the roll.

Mr. BYRD of West Virginia. Mr. President, I ask unanimous consent that the order for the quorum call be rescinded.

The PRESIDING OFFICER. Without objection, it is so ordered.

ORDER FOR RECOGNITION OF SENATOR MCINTYRE ON MONDAY

Mr. BYRD of West Virginia. Mr. President, I ask unanimous consent that at the conclusion of the remarks of the Senator from Hawaii (Mr. FONG) on Monday next, under the order already agreed to, that the able Senator from New Hampshire (Mr. MCINTYRE) be recognized until, and not to extend beyond, 12 o'clock noon.

The PRESIDING OFFICER. Without objection, it is so ordered.

COMMUNICATIONS RELATING TO EXPRESSIONS FROM BRITISH OFFICIALS ON LANDING OF AMERICANS ON MOON

Mr. BYRD of West Virginia. Mr. President, I have been asked by the Vice President to call attention to a communication from the British Embassy addressed to the Vice President, in which communication there is conveyed to the Vice President a letter from the Right Honorable Lord Shackleton, of the British House of Lords, together with an official extract from the House of Lords' official report of July 22, 1969.

The letter to the distinguished Vice President from Lord Shackleton reads as follows:

HOUSE OF LORDS.

DEAR MR. VICE PRESIDENT: Today in the House of Lords I was asked by Lord St. Oswald a Private Notice Question: "Whether in view of the unique and inspiring achievement of the Moon Landing by the American Astronauts, and its importance to human history, it would be desirable for this House to convey their admiration to the Senate of the United States of America."

This suggestion was warmly supported in the Lords by Lord Jellicoe, Deputy Leader of the Conservative Party, Lord Byers, Leader of the Liberal Party, and Lord Snow, a former Minister speaking from the Labour Benches. It was clear that the proposal had enthusiastic and unanimous support in all quarters of the House and I hasten therefore to transmit this message of admiration and congratulation to you, Mr. Vice-President, in the hope that you will do us the honour of conveying this message to the United States Senate.

May I add my own personal warmest regards and admiration.

I remain,

Yours sincerely,

SHACKLETON.

The British Embassy asks that Lord Shackleton's message be read into the CONGRESSIONAL RECORD and also that the extract be included in the CONGRESSIONAL RECORD; and, at the request of the distinguished Vice President of the United States, the Presiding Officer of the Senate, I ask unanimous consent that the letter from the British Embassy addressed to the Vice President, the letter addressed to the Vice President by Lord Shackleton, and the extract from the House of Lords' Official Report dated July 22, 1969, be included in the RECORD.

There being no objection, the material was ordered to be printed in the RECORD, as follows:

BRITISH EMBASSY,

Washington, D.C., July 24, 1969.

The VICE PRESIDENT OF THE UNITED STATES.

MY DEAR MR. VICE PRESIDENT: In the Ambassador's absence from Washington I should like to convey to you the attached letter from Lord Shackleton, the Leader of the House of Lords, together with an official extract from the House of Lords Official Report of 22 July, 1969.

Lord Shackleton would be most grateful if it were possible for his message and the extract to be read into the Senate Record.

Yours sincerely,

F. E. TOMPKINS.

HOUSE OF LORDS.

DEAR MR. VICE PRESIDENT: Today in the House of Lords I was asked by Lord St. Oswald a Private Notice Question: "Whether in view of the unique and inspiring achievement of the Moon Landing by the American Astronauts, and its importance to human history, it would be desirable for this House to convey their admiration to the Senate of the United States of America."

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May I add my own personal warmest regards and admiration.

I remain,

Yours sincerely,

SHACKLETON.

EXTRACT FROM HOUSE OF LORDS OFFICIAL REPORT, JULY 22, 1969

LORD ST. OSWALD. My Lords, I beg leave to ask the Question of which I have given Private Notice; namely, to ask the Leader of the House whether, in view of the unique and inspiring achievement of the moon landing by the American astronauts and its importance to human history, it would be desirable for this House to convey their admiration to the Senate of the United States of America?

LORD SHACKLETON. My Lords, I hope the House will agree that I was justified in allowing this Question on grounds of urgency and certainly in relation to timeliness. Speaking personally, I very much welcome the noble Lord's suggestion. He and I have both had a great interest in this subject for many years, so he is perhaps not surprised that I should be so much in agreement with him. Strictly speaking, this would probably be best done by a Motion on the Order Paper. On the other hand, if the House is in general agreement and there is not any dissenting voice, I would certainly be willing to make the feeling of the House known by conveying a message to the Vice President, who is the President of the Senate, to indicate our great admiration for this achievement; and I personally hope, whatever anyone may think about the best way of spending money, that this will be a real and vital unifying force for the whole of humanity.

LORD BYERS. My Lords, I am quite sure that my colleagues on these Benches would wish to be associated with the action that the noble Lord has proposed.

EARL JELlicoe. My Lords, I am certain that what the noble Lord has suggested would equally meet the feelings of all our colleagues on this side of the House in admiration for

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an extraordinary technical and extraordinary human performance.

Lord SNOW. My Lords, I should like to support this suggestion, if I may, speaking as one whose belief in the future of space exploration is not unqualified. Nevertheless, I suggest that this is probably the most remarkable single technological achievement yet made by man, and also an example, which is more important, of really astonishing and enduring human courage, which helps to make us feel proud for once of belonging to the same species; and I hope that this particular pride might give us the courage to attack more mundane problems, such as too little food and too many people.

Lord ST. OSWALD. My Lords, in thanking the noble Lord for his response, which does not take me entirely by surprise, I wonder whether I could add two observations which I did not think appropriate to include in the substantive Question, which I hope will be allowed by the Rules of Order: first, I should like to say how particularly and personally pleasant it is for me to have been able to address this Question to the Leader of the House in the person of the noble Lord, Lord Shackleton, knowing and sharing with him, as I do, his philosophical and cordial enthusiasm for this kind of endeavour, especially when it is crowned with triumphant success as in this case. Second, the universal nature of the achievement was most beautifully expressed some years ago in certain words, themselves a reflection of Zen Buddhism, which I beg leave to repeat: "One moon and one only is reflected in all waters, All moons in the water are one with the one moon."

Lord SHACKLETON. My Lords, I am much obliged to the noble Lord. We have gone so far out of order on this occasion, when clearly the House is tolerant in this matter, that I think I should be safe in saying that there will be no dissentient voices. I therefore greatly welcome the noble Lord's initiative. It would not be for me to discuss what the future space policy of this country should be, but I noticed yesterday in another place that at the time the astronauts blasted off from the moon there was a certain Member of Parliament quite properly called Mr. Moonman on his feet. I will certainly convey in the warmest way possible the feelings of your Lordships' House.

Mr. BYRD of West Virginia. Mr. President, I suggest the absence of a quorum.

The PRESIDING OFFICER. The clerk will call the roll.

The bill clerk proceeded to call the roll.

Mr. SPONG. Mr. President, I ask unanimous consent that the order for the quorum call be rescinded.

The PRESIDING OFFICER. Without objection, it is so ordered.

ABM

AUTHORIZATION OF APPROPRIATIONS FOR FISCAL YEAR 1970 FOR MILITARY PROCUREMENT, RESEARCH AND DEVELOPMENT, AND FOR THE CONSTRUCTION OF MISSILE TEST FACILITIES AT KWAJALEIN MISSILE RANGE, AND RESERVE COMPONENT STRENGTH

The Senate resumed the consideration of the bill (S. 2546) to authorize appropriations during the fiscal year 1970 for procurement of aircraft, missiles, naval vessels, and tracked combat vehicles, and research, development, test, and evaluation for the Armed Forces, and to authorize the construction of test facilities at Kwajalein Missile Range, and to prescribe the authorized personnel strength

of the Selective Reserve of each reserve component of the Armed Forces, and for other purposes.

Mr. SPONG. Mr. President, for many weeks I have been engaged in an intensive review of President Nixon's recommendation to deploy the first phase of the Safeguard anti-ballistic-missile system. It has been difficult to arrive at a decision on this issue because of basic disagreement among eminent scientists on the efficacy of the system itself, and because of the wide diversity of expert opinion on how deployment will affect prospects for arms limitations and a lessening of international tensions. Moreover, my study has been complicated by that fact that I do not serve on the committees which have examined these issues, and therefore have not had the benefit of hearing first-hand the testimony submitted at the hearings.

My evaluation of the testimony on the technical aspects of the ABM, and an appraisal of this Nation's history of scientific and technical accomplishments, is persuasive that a missile defense of our Minuteman sites can fulfill the objectives of its design. As the Armed Services Committee said in its report on this issue:

The testing and design work on both the missile and radar components, and the computers, so far has not indicated that there are insuperable technological problems confronting the Safeguard system. It is prudent that any doubt on this question be resolved in favor of confidence in the system.

It our scientists can resolve technical problems involved in epochal achievement of landing a man on the moon, they should be able to integrate successfully the components of the ABM. Questions relating to the feasibility of other projects—most notably the hydrogen bomb and the Polaris missile—have been resolved by the scientific community. Accordingly, there is justification for the belief that our scientists and technicians can overcome any problems that may arise during deployment.

Deployment of the first phase of the system at two Minuteman sites is a logical extension of the research and development program which dates back to 1956, when the Nike-Zeus system was started. I would be constrained to oppose proposals limiting the administration to continued research and development in view of testimony that the first phase of the system is a prototype installation needed to enable the Defense Department to conduct shakedown tests and expose any problems not encountered in research and development. It is only through first-phase deployment that the system can be tested as a coordinated unit. Research and development cannot give answers to technical issues that only operational experience can provide.

In view of the intensity of opinion on this subject, I am confident that the Congress will assess the ABM situation on a continuing basis. Hopefully, with the reporting system recently announced by the Armed Services Committee, cost overruns and wastes which have occurred in the development of other defense projects can be avoided. The quarterly reports to be filed with the committee

under its reporting system should provide up-to-date cost information on all weapons, and prevent recurrences of the miscalculations of the past.

One cannot deal with the question of ABM deployment solely on the basis of its technical feasibility. My consideration of whether deployment should proceed inevitably has involved the larger question of the effect of Safeguard upon arms control. Initially, it seemed necessary to decide whether first-phase deployment would have an adverse effect upon the convening of discussions on arms limitations. A review of the history of the ABM has persuaded me that a favorable vote should not impede efforts to begin these talks. Soviet Premier Aleksei N. Kosygin said at a news conference in February 1967, that defensive systems, which prevent attack, are not the cause of the arms race, but constitute a factor preventing the death of people. As has been affirmed time and again during the debate on the ABM, Safeguard in no way can be considered an offensive weapon. It is intended to intercept incoming ballistic missiles fired by an aggressor, thereby protecting our deterrent. Within a week after Congress appropriated funds last year for deployment of Sentinel, Soviet Foreign Minister Andrei Gromyko expressed a willingness on behalf of Russia to discuss disarmament. Similar overtures were made earlier this month.

In view of Russia's reaction following the last ABM vote, and the more recent expression of interest by Mr. Gromyko, I have concluded that the Soviets, on the basis of their own utterances, cannot consider as provocative a favorable vote on the first phase of Safeguard.

In my judgment, a far more serious threat to arms limitations arises from MIRV, the offensive multiple warhead missiles being developed by both the United States and Russia. MIRV, a weapon which presents difficult on-site inspection problems, should be a top-priority matter for discussion at the forthcoming negotiations. I recognize that it is uncertain whether Russia's multiple warheads are independently targetable, but it must be assumed that it will be only a matter of time before the Soviets in fact have developed this weapon. In any event, the leadtime involved in MIRV deployment is shorter than that for Safeguard. Should the Soviet Union perfect and deploy multiple independently targetable re-entry vehicles, a hard-point defense system would become absolutely necessary in this country.

A moratorium on MIRV would serve to preserve the existing second-strike capability of the United States and Russia, whereby either side could absorb an attack by the other and effectively retaliate. This situation promotes stability, because a first strike would constitute an invitation to destruction. A MIRV agreement could prevent mutual first-strike capability, whereby each side could destroy the other by firing its missiles first. Such capability would have a destabilizing effect, because the side which attacked first would win.

Because of the destabilizing effect of MIRV deployment, and because of the

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present absence of an agreement on testing and deployment of this system, it would seem desirable to me to support first-phase deployment of the ABM until we know the extent to which arms negotiations will be successful. If the talks lead to an acceptable agreement, it may not be necessary to proceed with further ABM deployment. On the other hand, if there is a breakdown in negotiations, or it appears they otherwise will not be productive, the United States at least will have initiated first-phase deployment of a defensive system which will provide a measure of protection against incoming ballistic missiles.

Because of the escalatory effect of MIRV, I shall support Senate resolution 211, sponsored by the Senator from Massachusetts (Mr. BROOKE), which expresses the sense of the Senate that the President propose to Soviet Russia an immediate bilateral suspension of tests of multiple independently targetable offensive weapons, subject to national verification or such other measures of observation and inspection as may be appropriate. The resolution also provides that the United States should declare its intention to refrain from additional flight tests of multiple re-entry vehicles so long as the Soviet Union does so.

Mr. President, as is obvious from my preceding remarks, I have decided to support the committee majority and vote for first-phase deployment. However, I reserve judgment on future authorizations and appropriations for the system. I shall be guided in subsequent voting by progress in arms control talks, estimates of the extent of offensive weapons deployment by Russia and China, and by evaluations of progress pertaining to both offensive and defensive weapons technology.

Proceeding with first-phase deployment may well serve the desirable purpose of providing an incentive for productive talks on arms limitations. It is a better response at the present time to the Soviet buildup than an increase in our offensive forces. First-phase deployment would serve notice only that we desire to provide a measure of protection for our deterrent force while arms talks are in progress, and give the President an additional measure of flexibility in the range of options available as a response to an attack.

It is my hope that the negotiations will be successful and it will not be necessary to proceed with subsequent phases of deployment. Because a defense of Washington is contemplated in a later phase, I have expressed to the Department of Defense my concern over planning and property acquisition for prospective ABM sites in metropolitan Washington.

Both the United States and Russia have much to gain from productive talks on arms control for both offensive and defensive weapons. The President, our Commander in Chief, is of the opinion that congressional approval of Safeguard would strengthen his hand in negotiations on arms limitations. If the United States acts unilaterally to stop deployment of defensive weapons, with the

knowledge of Russia, it could encourage the Soviets to prolong talks on arms control while they continue their weapons development. Moreover, the system could guard against accidental or irrational attack upon our strategic forces, and provide a measure of protection in the event of a nuclear ultimatum.

I recognize there is a great division of opinion in the Senate on this issue, and respect the deep conviction which has motivated those on either side of the debate. It would seem desirable to me for the Senate to express its intent to proceed with a measured deployment of ABM, with a willingness to create further offensive and defensive nuclear weapons development if the Soviet Union will do likewise.

Mr. DOMINICK. Mr. President, will the Senator yield?

Mr. SPONG. I am pleased to yield to the Senator from Colorado.

Mr. DOMINICK. Mr. President, I have had the pleasure of serving in this body with the distinguished Senator from Virginia, and serving on committees with him, and wish to congratulate him on his talk. I think he has made a very careful analysis of the problems we face, of the situation vis-a-vis the Soviet Union, of our prospective problems in the seventies, and of the question of arms limitation talks with the Soviets.

I think his conclusions, particularly with respect to the deployment of the ABM, are certainly shared by many. The question of what we should do with respect to the MIRV has, of course, still not been fully debated in this body. It would involve the question of the Poseldon, and would involve title III and a few other things of that kind, on which research and development have already gone forward. But I suspect we will be into that at some length after we finish the debate on the pending measure. Meanwhile, I simply wish to express my thanks to the Senator for his careful consideration of the situation, and I welcome his support on behalf of the ABM.

Mr. SPONG. I thank the Senator from Colorado. Mr. President, I yield the floor.

Mr. BYRD of West Virginia. Mr. President, I suggest the absence of a quorum.

The PRESIDING OFFICER. The clerk will call the roll.

The bill clerk proceeded to call the roll.

Mr. BYRD of West Virginia. Mr. President, I ask unanimous consent that the order for the quorum call be rescinded.

The PRESIDING OFFICER. Without objection, it is so ordered.

ADJOURNMENT UNTIL 11 A.M. MONDAY

Mr. BYRD of West Virginia. Mr. President, if there be no further business to come before the Senate, I move, in accordance with the previous order, that the Senate stand in adjournment until 11 o'clock on Monday morning next.

The motion was agreed to; and (at 4 o'clock and 47 minutes p.m.) the Senate adjourned until Monday, July 28, 1969, at 11 o'clock a.m.

CONFIRMATIONS

Executive nominations confirmed by the Senate, July 25, 1969:

U.S. AIR FORCE

Gen. John P. McConnell, FR611 (major general, Regular Air Force), U.S. Air Force, to be placed on the retired list in the grade of general, under the provisions of section 8962, title 10, of the United States Code.

Gen. John D. Ryan, FR1418 (major general, Regular Air Force), U.S. Air Force, to be appointed as Chief of Staff, U.S. Air Force, for a period of 4 years beginning August 1, 1969, under the provisions of section 8034, title 10, of the United States Code.

Lt. Gen. Seth J. McKee, FR4279 (major general, Regular Air Force), U.S. Air Force, to be assigned to positions of importance and responsibility designated by the President in the grade of general, under the provisions of section 8066, title 10, of the United States Code.

The following-named officers to be assigned to positions of importance and responsibility designated by the President, in the grade indicated, under the provisions of section 8066, title 10, of the United States Code:

In the grade of general

Lt. Gen. John C. Meyer, FR4496 (major general, Regular Air Force), U.S. Air Force.

Lt. Gen. Jack J. Catton, FR4719 (major general, Regular Air Force) U.S. Air Force.

In the grade of lieutenant general

Maj. Gen. Harry E. Goldsworthy, FR1631, Regular Air Force.

Maj. Gen. John W. Vogt, Jr., FR8709, Regular Air Force.

Maj. Gen. Timothy F. O'Keefe, FR4603, Regular Air Force.

Maj. Gen. George S. Boylan, Jr., FR4836, Regular Air Force.

Maj. Gen. George B. Simler, FR9236, Regular Air Force.

Maj. Gen. David C. Jones, FR9887, Regular Air Force.

Maj. Gen. Paul K. Carlton, FR8693, Regular Air Force.

The following officers for appointment as Reserve commissioned officers in the U.S. Air Force, to the grade indicated, under the provisions of sections 8218, 8351, 8363, and 8392, title 10, of the United States Code:

To be brigadier general

Col. Clarence E. Atkinson, FG751239, Delaware Air National Guard.

Col. William J. Crisler, FG822388, Mississippi Air National Guard.

Col. Jack Motes, FG1180275, California Air National Guard.

Col. Earl G. Pate, Jr. FG781393, Tennessee Air National Guard.

U.S. ARMY

The following-named officer, under the provision of title 10, United States Code, section 3066, to be assigned to a position of importance and responsibility designated by the President under subsection (a) of section 3066, in grade as follows:

To be lieutenant general

Maj. Gen. William Joseph McCaffrey, O22065, U.S. Army.

Lt. Gen. Richard Giles Stilwell, O21065, Army of the United States (major general, U.S. Army), for appointment as senior U.S. Army member of the Military Staff Committee of the United Nations under the provisions of title 10, United States Code, section 711.

The following-named officer to be placed on the retired list, in grade indicated, under the provisions of title 10, United States Code, section 3982:

To be lieutenant general

Lt. Gen. Harry William Osborn Kinnard, O21990, Army of the United States (major general, U.S. Army).

S 8618

CONGRESSIONAL RECORD — SENATE

July 25, 1969

The following-named officer, under the provisions of title 10, United States Code, section 3066, to be assigned to a position of importance and responsibility designated by the President, under subsection (a) of section 3066, in grade as follows:

To be lieutenant general

Maj. Gen. George Irvin Forsythe, O24510, Army of the United States (brigadier general, U.S. Army).

IN THE NAVY

Adm. Thomas H. Moorer, U.S. Navy, for appointment as Chief of Naval Operations in the Department of the Navy for a term of 2 years.

Vice Adm. Kleber S. Masterson, U.S. Navy, and Rear Adm. Robert J. Stroh, U.S. Navy, for appointment to the grade of vice admiral when retired, pursuant to title 10, United States Code, section 5233.

Rear Adm. C. Edwin Bell, Jr., U.S. Navy, having been designated for commands and other duties determined by the President to be within the contemplation of title 10, United States Code, section 5231, for appoint-

ment to the grade of vice admiral while so serving.

D.C. COURT OF GENERAL SESSIONS

William S. Thompson, of the District of Columbia, to be an associate judge of the District of Columbia court of general sessions for the term of 10 years.

IN THE AIR FORCE

The nominations beginning LaVerne F. Huston, to be lieutenant colonel, and ending Donald C. Zartner, to be 2d lieutenant, which nominations were received by the Senate and appeared in the Congressional Record on July 8, 1969; and

The nominations of Col. William R. Jarrell, Jr., to be Registrar, U.S. Air Force Academy, and Richard H. White, to be 2d lieutenant, which nominations were received by the Senate and appeared in the Congressional Record on July 15, 1969.

IN THE ARMY

The nominations beginning Claude W. Abate, to be captain, and ending James E. Robert, Jr., to be captain, which nominations were received by the Senate and appeared in

the Congressional Record on June 26, 1969; and

The nominations beginning Jimmie B. Kinder, to be major, and ending Dwight Williams, Jr., to be 2d lieutenant, which nominations were received by the Senate and appeared in the Congressional Record on July 10, 1969; and

The nominations beginning Glenn E. Nida, to be colonel, and ending Gerald D. Cox, to be 2d lieutenant, which nominations were received by the Senate and appeared in the Congressional Record on July 18, 1969.

IN THE MARINE CORPS

The nominations beginning Hugh E. Loftin, to be captain, and ending Wayne M. Wynkoop, to be 1st lieutenant, which nominations were received by the Senate and appeared in the Congressional Record on June 26, 1969; and

The nominations beginning Garland S. Bishop, to be 2d lieutenant, and ending Bruce M. Windsor, to be 2d lieutenant, which nominations were received by the Senate and appeared in the Congressional Record on July 2, 1969.

"I insist that the jets have got to go from Washington Nation." This approach would bar small business type jets as well as commercial aircraft, and the legislation is the first to be introduced in the Senate aimed at barring a particular type of aircraft from a particular airfield.

What aroused me was the statement made on the Senate floor, "that this bill will probably be sent to committee and buried." The Senate Commerce Committee does not operate in that manner. However, if a proposal in a bill is lacking in merit then perhaps it should be buried, if one must use that word.

I pointed out on the Senate floor that the discontinuance of jets at National would result in a serious cost of manpower to the nation. The shuttles alone carry approximately 20,000 persons per day, and adding one hour ground travel time for each per day would result in thousands of hours of loss in productivity to the nation's economy.

It is easy to say bar the jets, but all possible effects from such a move must be considered before such action is taken.

I would like to be able to forecast how the move to repeal the investment tax credit will make out in Congress, but the whole tax situation is too confused at the moment. The bill is now out of committee and will soon be before the Senate.

I know how important this credit is to all industry, let alone the business most of you are in.

All of you know the Congress, over the years, has created various boards and commissions to do some of the work for which Congress is responsible. The Civil Aeronautics Board is one of these.

This Board for the past couple of years has been struggling with the Transpacific Route Investigation. It was all pretty much decided in 1968, but this Administration reopened and rejected the case because it said it feared there were some political pay-offs in the awards. New or improved authority was then granted by the Board to four carriers, and a new carrier was selected for a fifth route.

The President then disapproved that selection, and while he did not name another carrier in so doing, he laid down some interesting guidelines.

This raises some questions. Is this a pre-emption of authority that belongs to the CAB?

Is not the President's responsibilities confined to considerations of foreign policy, national defense and security? The Federal Aviation Act may need an amendment.

It was a pleasure to be here and discuss some of the problems that give us mutual concern. Thank you.

ORDER OF BUSINESS

Mr. EAGLETON. Mr. President, I ask unanimous consent that I may address the Senate for 10 minutes.

The PRESIDING OFFICER (Mr. ALLEN in the chair). Is there objection? Without objection, it is so ordered.

THE ABM SYSTEM

Mr. EAGLETON. Mr. President, as the Senate decides whether to authorize the deployment of an anti-ballistic-missile system, there are several facts of which we can be relatively sure in this unpredictable and ever-changing world.

We know deployment will be extremely costly. On March 14, we were told it would cost \$6.6 billion. Since then estimates have risen by \$1.2 billion for nuclear warheads and again, to include approximately \$500 million to extend the system to Hawaii, and \$2.5 billion for

research, development, and testing of the systems components. The cost is now estimated at between \$10.3 and \$10.8 billion.

If history is a guide to the future, we may expect to pay an even higher cost for a system which fails to meet specifications—more money for less performance.

A Brookings Institution study indicated that missiles generally cost 300 to 700 percent more than original estimates.

A recent study indicated that the more complicated electronic systems procured by the Pentagon seldom perform to even 60 percent of specifications, even after extensive testing. And it is impossible to test the Safeguard as a system.

With inflation still rampant, prime interest rates at 8.5 percent and possibly still rising, we do not need and cannot stand the added inflationary pressures caused by further imprudent Government spending.

A second fact of which we can be relatively certain is that the irresistible logic of the arms race will produce renewed efforts to counter the ABM, further escalating the arms race.

A kind of sustained overreaction is common in the field of weapons systems, and the weapons race does not need a further stimulus at a time when we appear to be, at long last, ready to explore arms control agreements with the Soviet Union.

These distasteful facts are the certainties of the ABM debate—but they are not crucial. The way each Senator answers two other questions is crucial.

First. Will the creditability of our nuclear deterrent be threatened in the mid-1970's?

Second. Is the Safeguard ABM system the most efficient way to meet such a threat?

For the last 19 weeks the Pentagon's case for an ABM has been predicated on a new-found fear that almost all of our nuclear force could be simultaneously destroyed in a first strike by the enemy, leaving us without the power to retaliate with a devastating second strike on the Soviet Union.

Previously the Pentagon toyed with a variety of other threats to justify ABM—an accidental enemy launch, a purposeful Soviet attack, a small and suicidal attack by the madmen in China, and so forth.

Thrown in for good measure are the arguments that only through deployment can further research and development be useful, that the ABM, whether it works or not, is an important bargaining point in arms limitation talks, and simply that the President thinks he needs it.

But finally the Pentagon decided Safeguard is needed to protect our land-based strategic forces. Secretary Laird cites continued development by the Soviet Union of the SS-9, a large rocket comparable to our Titan 2, as the new threat. The SS-9 is capable of carrying three 5-ton multiple warheads. By 1975, an estimated 500 could be deployed.

This constitutes, according to Secretary Laird, a threat to our Minuteman

ICBM, the backbone of our land-based retaliatory force.

The threat is calculated on assumptions which are highly questionable; an accuracy of one-fourth mile for a single 5-megaton warhead delivered against a Minuteman silo, a failure rate of only 20 percent, and a capability to retarget, almost instantaneously, missiles for those that fail.

According to many noted scientists, such assured accuracy is extremely difficult to achieve, especially with an SS-9 with either MIRV's or, as is more likely, MRV's.

A 20-percent overall failure rate is highly questionable with a system as complicated as the SS-9 with either MIRV's or MRV's.

The problems of retargeting are almost insurmountable in the 1970's.

As was indicated in the joint report of Drs. Wiesner, Rathgens, and Weinberg:

Clearly this would be extremely difficult even if one were concerned only about retargeting to compensate for launch pad and boost phase failures, but Mr. Laird apparently postulates reprogramming to compensate for other failures as well, including presumably those that occur during separation of the several multiple warheads, which may occur fairly late in the trajectory. The United States rejected the retargeting concept for its own single-warhead missiles some years ago. Yet, Mr. Laird assumes the Soviet Union may adopt and be willing to rely on such a concept with multiple warheads where the problems are much more difficult than for single warheads.

But even if we accept Secretary Laird's questionable assumptions, our second-strike retaliatory capability is not based solely—or even primarily—on our intercontinental ballistic missiles which the ABM is designed to partially protect.

It currently includes our 41 Polaris submarines with their 658 nuclear missiles. Thirty-one of these submarines will have their missiles replaced by the Poseidon missile, each with approximately 10 warheads and greater range—raising our undersea missile total to 5,120.

Also, it includes about 640 Strategic Air Force bombers around the world, 7,000 tactical nuclear weapons in Western Europe, many deliverable to the Soviet Union; and an unspecified number of nuclear weapons at other foreign bases.

I find no one who convincingly argues that this aggregate retaliatory force can be almost instantaneously obliterated—now or in the 1970's.

If development of MIRV's and MRV's continues, the land-based forces of both the Soviet Union and the United States may be vulnerable to a preemptive attack, but not in the mid-1970's as prophesized by Secretary Laird.

At such time, strategic countermeasures to protect our land-based missiles may well be needed; and this raises the second critical question: Is the Safeguard system an effective means—much less the most effective means—of meeting a threat to our deterrent, should such a threat arise?

I doubt it. In the first place, there are technical problems inherent in the ABM itself.

Joseph O'Connell, Chairman of the National Transportation Safety Board assured us of the safety of air travel. He did not give us a date or time, but it seemed clear to me there was a warning in his testimony to not wait too long before updating the equipment and all that goes with it.

We heard from the President of the Air Transportation Association. It seems this Association has teamed up with the Aircraft Owners and Pilots Association to maintain the latter's opposition to users taxes in any form. Their joint plan would help airports by taxing tickets, but there would be no tax on general aviation. General aviation airports would be maintained by yearly \$50 million appropriations.

Their general approach was to the airports, the airways problem being left to the government. The failure of the appropriations approach to airport problems should be well known to everybody in this room, and it is one of the reasons the whole system is so far behind the times.

The proposed legislation from ATA-AOPA would create a fund for airport development by increasing the domestic ticket tax from 5 to 7 percent with a \$2.00 head tax on enplaning international passengers. This tax would bring in about \$123 million and could be used in both the terminal and landing areas.

It would authorize the guarantee of locally issued bonds, and the account would be broken down with half going into a discretionary account and the other 50 per cent into a direct airport account. The Act would set out how and what percentage of the discretionary fund could go where, such as 62 per cent for large hubs, with the direct account going to airport sponsors based on a ratio of enplaning passengers.

After this phase of the hearings closed, the ATA wrote Chairman Magnuson changing their approach a little. They will go along with the Administration's passenger tax and international head tax, but they want the 5 per cent tax on freight cut to 2 per cent.

This narrows the gap a little, and that is all to the good. Unless we can find common ground in this problem, progress will not be easy.

Suddenly, in the middle of all this we had some union testimony, some of it constructive, a great deal of it pointing up the overall problem we have with our airport/airways program. The Air Traffic Controller is a very important part of our whole system, and as we upgrade it, bring in new and better equipment, his lot will be much better.

We will look over his entire working arrangement, salary, hours, retirement and what have you at the proper time.

However, I must comment on the power of the spoken word. Some words were spoken by certain witnesses in our hearings and two days later several hundred controllers phoned in sick from all over the country.

We reopen our hearings again tomorrow, this time officially on the legislation itself. There is a third phase on planning for the 1980's, but first things first, so while we can put this last phase off a while, we should not delay too much. In the 1980's there will be 2½ million people airborne at a given time.

I have spoken here in a rather light vein but please understand that I, and I am sure I can speak for the Committee, am grateful for the hard work and efforts our witnesses put forth preparing their statements. They have given us more up-to-date information, statistics and ideas than we have had in a long time, and this will be very helpful as we make our final decisions.

I am deeply dismayed, and I now speak in all seriousness, that the day before the Senate Commerce Committee reopens the hearings on airport/airways development

there seems to be a pervasive attitude within the aviation community that Congress again this year will fail to take action on this matter of greatest importance to us all.

There seems to be a spirit of resignation among many in the aviation business that the acrimony, controversy and dispute over financing an expanding and modernized aviation system will again force us in the Congress to do nothing.

This feeling—this pessimism is especially disturbing after sitting in the Committee for several days listening to a parade of witnesses come forward to warn of the perils facing the nation's aviation system unless we take action and take it now. We heard that lack of modern navigation and guidance equipment is creating situations in which accidents occur, accidents which probably would never happen if our system was as modern and well equipped as it can and should be. We have heard that instrument landing systems—that great friend and back-up of pilots in bad weather, exists at only about half of the nation's airports which have air carrier service and that radar—a great aid in keeping airplanes from running into each other—is even scarcer outside of the major metropolitan hub terminals.

We have listened to the airlines' witnesses as they told us that air transportation will at least double in the next ten years requiring airport investment anywhere between 8½ and 14 billion dollars if we are merely to keep pace with this tremendous growth.

The National Business Aircraft Association informed us that business aviation is facing a grave threat to its very existence because the FAA has been forced to greatly restrict the number of hourly operations at the nation's five most congested airports, often making it impossible for the busy executive to make a last minute decision to fly to New York or Chicago or Washington.

We have been told that air traffic controllers—often working six and seven days a week for months on end because of critical shortages in high density areas—are fed up and are about to quit the control service for a career with less strain and demand.

These problems are real, they are critical, they are pervasive and they threaten to wreak chaos on what has been the world's greatest air transportation system. And we know this growth, which we all look forward to, will continue only if we provide a system to move people and airplanes more safely and efficiently. There is not one of you here today who will not agree that the failure to act—the failure of all of us—has created the problems we are facing today, and they are only a prelude to the nightmares we can expect tomorrow if we continue to sit on our hands.

In light of this overwhelming evidence of the fact that our aviation system has reached the point of over-saturation and that future mobility of millions of Americans is in peril, why then is Washington full of doom sayers who either say that Congress will again retreat to an impasse or that we ought to put off a decision for another year or two in order to better assess who is to pay for this expanded system and how.

We will be lost if we do not pull together.

If we are going to argue about who pays what, with each defending his own position thereby hoping to save for a year or two a few cents in fuel tax or a percentage or two on the air passenger ticket tax, then we will be doing a great disservice to all Americans who rely upon air transportation. Today, this negative attitude is going to stifle our air transport system as surely as Pennsylvania Avenue will be clogged with traffic at 5 p.m. tonight. And just as certainly—if this defeatist attitude prevails—those very interests who are fighting so doggedly against contributing revenues to meet some of the costs of a better system will be denied use of that system simply because it will not absorb

the increasing use to which we all wish to put it.

Certainly there are private interests who may have the clout—as we sometimes call it—to kill a program that is drastically needed by the country and they are able to stop action because the economic stakes appear to be high. But I would caution that the economic penalties for inaction, for continuing to use and abuse a system designed for the piston fleet era will be even greater. One hundred million dollars a year in fuel wasted on the taxiways will seem to be small change 5 years from now if we continue to allow selfish interests to deter us from this urgent task.

And so I would ask all in the aviation community—one of the greatest enterprises in the history of our country to think again about the costs of delay and inaction. I would ask them again to realize that none of us will get precisely what we want in a new, modern system, but on the other hand we will all receive some of what we want and that is the spirit in which the system operates so as to serve many diverse and essential elements of aviation. Each of us will pay a price for this tremendous growth to which we all look forward and if the price seems a little high in one area or a little inequitable in another let that not deter us from beginning.

All segments of aviation can and must find common ground on which action can be taken and certainly the Congress, and its committees on which the responsibility rests, are willing and anxious to find solutions which may not be perfect to everyone but which will not allow us to stifle the great system of aviation upon which we have come to rely so heavily. For if we do not act—if we continue to procrastinate and do nothing we will be assured of a system that all of us will find a nightmare.

In other words, get ready to give up something, and get ready fast.

I think the time has passed when Congress could sit back and await indefinitely for an agreement from industry. We have done too much of that already.

I think when these hearings are over the Committee must sit down and hammer out a bill.

I think we must do this no matter what industry does, but we want your help and we need it.

So please help us! Help us with a solution: Don't be a part of the problem.

We need the kind of teamwork that put our astronauts on the moon.

We must, as I said, hammer out a bill. Some are advocating a temporary measure, and we could be forced into such a position. The National Business Aircraft Association backs such an idea. They say an emergency exists so let's have an emergency temporary program.

They suggest legislation that would expire in 18 or 24 months and that would place a 5 cents per gallon tax on all aviation fuel. It would raise \$460 million per year with \$276 million for the airways and \$184 million for the airfields.

During the 18 or 24 month period a cost/benefit, cost/allocation study would be made so that a sound long-range plan could be established. This could certainly be an emergency answer.

Let's consider again what we are up against. Delivery rate on commercial jets is better than one a day. General Aviation is adding about 160 new aircraft each month—many of them jets. Public demand for air transportation is growing about 20 per cent a year while air cargo has tripled over the past five years.

There is another piece of legislation you should be aware of. It is S. 2570, a bill that among other things would phase out pure jet aircraft from the use of Washington National Airport. The sponsor of the bill said,

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Its indispensable components are a complex radar system and its complex computers. Each ABM site depends on one radar, and should it break down or be destroyed, all intercept missiles would be useless.

And yet this extremely expensive radar system, according to most estimates, is 10 times more vulnerable than the offensive missiles it must defend. The Soviet Union could target their SS-11's with far smaller payloads, against the radar—either exhausting the supply of missiles available to protect it or destroying it with the smaller payload carried by the SS-11. In so doing, the Soviets would be able to target their larger SS-9 at the missile silos where the larger 5 megaton warhead is essential.

The computers would be the largest and most complex ever built. Up to 20 data-processing units with a capacity equivalent to 100 large commercial computers, would be involved.

These computers would have to be programmed to perform many tasks at the same time.

According to a recent report:

The computer would have to interpret the radar signals, identify potential targets, track incoming objects, predict trajectories, distinguish between warheads and decoys, eliminate false targets, reject signals from earlier nuclear explosions, correct for blackout effects, allocate and guide interceptor missiles, and arm and fire them if they get within range of a target. All this must be done continuously and with split-second precision during the short period—ten minutes at most—between the time the attacking missiles first appear and the moment of impact.

This complex computer system can never fully be tested. Far simpler computers and computer programs have malfunctioned, even after years of testing.

The "soft" missile site radar and the computer systems are the weak links in a weak system—and without them the system is entirely useless.

Eminent scientists, such as Dr. George Kistiakowsky and Dr. Wolfgang Panofsky, have suggested that more efficient and less costly defenses for our ICBM's may be technically feasible. If there is a better way, let us find it. But let us not waste money on a system that will not do the job.

But even if the ABM, as now constituted, worked perfectly, the Russians can render it obsolete a few months after it is deployed by simply producing more offensive missiles. As Drs. Wiesner, Rathgens, and Weinberg point out:

At the rate of SS-9 growth assumed by Mr. Laird, at most three additional months of production would completely offset Phase I of the Safeguard deployment, and at most one year's production would completely negate the Phase II deployment.

My colleague from Missouri, Senator SYMINGTON, an acknowledged and respected defense expert, has continuously called for the declassification of a Pentagon chart which is purported to show that even if the intricate electronics of Safeguard work perfectly, at the projected rate of Russian missile production, the system could be overwhelmed by the addition of relatively few missiles.

I would like to join Senator SYMINGTON in his request that the classified chart presented by the Department of Defense

to the Senate Armed Services Committee be made public.

I, too, believe this chart makes a devastating and decisive case against deployment of a costly system which will be obsolete shortly after it is finished—billions of dollars for a few months of doubtful protection.

Should we ever legitimately need protection for our land-based retaliatory force, there are several more effective, less costly methods.

More ICBM's could be constructed with far less leadtime at far less cost. Secretary Laird states:

It only takes 18 to 24 months from the start of construction to the operational availability of an ICBM in a silo.

This alternative would allow decisions for the mid-1970's to be made in the mid-1970's based on hard information and facts—not on the speculation and possibilities of 1969.

Another alternative is the addition of more Polaris submarines. The Polaris provides an invulnerable retaliatory capability not likely to be challenged by the mid-1970's. The addition of the Poseidon missile provides 10 times the present number of warheads and increases the range, making ASW even more difficult. The leadtime on submarine construction is approximately 3½ years, which also allows for more realistic planning.

Still another possibility is superhardening. Using Secretary Laird's assumptions, if we tripled the hardness of the silos, the Soviets, in order to maintain the same kill probability, would be forced to use a 20-megaton warhead. The size of such a warhead would preclude the use of multiple warheads on the SS-9 and thus the projected 1975 first-strike capability of the Soviet missile force would be reduced from 1,500 deliverable 5-megaton warheads to 500 20-megaton warheads—no threat to our over 1,000 land-based missiles.

It is true that superhardening could be offset by improvements in Soviet accuracy from one-fourth of a mile—as hypothesized by Secretary Laird—to one-sixth of a mile. But if such advance were made, the yield of Russian warheads could be reduced to 1½ megatons to have the same kill probability against unguarded sites. The SS-9 could carry at least four or five 1½-megaton warheads and therefore only three-fourths to three-fifths as many SS-9's would be required to destroy our Minuteman. The remaining missiles would be more than enough to offset either phase I or the full Safeguard system.

Why does the Pentagon continue to press for an ABM system? In a June 8 editorial, the St. Louis Post Dispatch offers one explanation:

Of course everybody knows what the script calls for. Long before mid-1970's, the Pentagon would undoubtedly go to Congress with the alarming news of a forthcoming Safeguard gap, and the public would be told that national security imperatively demanded an enormous expansion of the antimissile system. This is, quite obviously, the true mission of Safeguard—to serve as the first stage of an unlimited escalation of the nuclear arms race, guaranteeing juicy contracts and military proliferation and cold war psychosis far into the future.

If we buy this system, it will have to be expanded if it is not to be completely useless. The Pentagon must also know that the Russians can expect to keep even or ahead of the ABM simply by building a few more offensive missiles which are less expensive to produce. I think it is time the Pentagon leveled with Congress and the American people.

And I think it is time Congress leveled with itself.

More weapons, defensive or offensive, do not necessarily mean more security. A vote for another weapon is not necessarily the patriotic or even the prudent thing to do.

It is not patriotic or prudent to vote for a costly weapons system which will provide very little security for a very short time.

It is not patriotic or prudent to vote for a costly weapons system of such technical uncertainty to meet an equally uncertain threat.

It is not patriotic or prudent to vote for a costly weapons system which will stimulate the arms race for the next decade—the reaction and counterreaction we are all so familiar with.

We are told on the Senate floor that "Clearly, we cannot discount the danger that these men—leaders of Russia—who are showing themselves unequal to the need for reforms at home, may make serious errors of judgment in their conduct of affairs abroad." Can the Russians think less of this country and this body, which after free and open debate would direct our wealth to build a costly, unneeded, unworkable weapons system.

I believe the Pentagon has failed to make its case that our deterrent is threatened or that the proposed Safeguard system is the best way to meet such a threat should one develop.

Several Senators addressed the Chair. The PRESIDING OFFICER. The Senator's time has expired.

Mr. COOPER. Mr. President, I ask unanimous consent that I may proceed for 2 minutes.

The PRESIDING OFFICER. The Senator from Kentucky is recognized for 2 minutes.

Mr. COOPER. Mr. President, I believe the Senator from Missouri has made one of the clearest speeches on the subject that has been made in the Senate in this debate. It is analytical, well reasoned, and comprehensive. I think it has been made with such simplicity that almost anyone could understand and comprehend the involved issue.

The Senator is a new Member, and I think it is a great thing that those Senators who have come here this year have entered into the debate and contributed a great deal.

Mr. EAGLETON. Mr. President, I thank the distinguished Senator from Kentucky, and I take the word simplicity in the nicest sense of that term.

Mr. PERCY. Mr. President, I associate myself with the comments of the Senator from Kentucky. I think his statement is a concise, clear, and forthright statement that can be understood by every Senator and by the average American citizen who is deeply involved and concerned about the problem.

Would the distinguished Senator from Illinois' great sister State of Missouri tell

me whether there are defense contracts in the State of Missouri that would be affected by the ABM system?

Mr. EAGLETON. One of the largest employers in our State is the McDonnell Douglas Corp. and the Douglas branch thereof, a merged corporation, would be one of the significant contractors for the ABM system.

Mr. PERCY. I know well the McDonnell Douglas Corp., and I know Jim McDonnell, one of the really great men of American industry. He, above many other men I know, has been responsible for the success of our space program.

I think this great company wants to produce what they are told to produce. I have never heard any sort of campaigning by them for any particular military system. They serve the interest of the Government and the American people.

I think it is rather interesting that, though the company headquarters are in Missouri and the company is affected by the ABM system, both Senators from Missouri oppose the deployment of the ABM system.

It is significant also that we have a proponent of the ABM system from the great State of Washington, a State that has no such contract.

So, clearly, self-interest or parochial concern is of no interest to anyone concerned, that I know of, in the debate.

The debate far transcends any interest in the military-industrial complex.

The matter concerns the question of where we put our national priorities, what is important, and whether we have a sufficiency of security and adequacy of protection for our national interest.

I think this debate has been greatly enhanced by the clear and forthright statement of the distinguished Senator from Missouri.

Mr. EAGLETON. Mr. President, I am very pleased to hear those fine remarks from the Senator from Illinois.

I hasten to add a footnote and an observation to make it abundantly clear for the Record that at no time during the many weeks this ABM debate has gone on, both directly and indirectly, has any amount of pressure, even the smallest amount of pressure directly or indirectly, been applied to me by any member of the McDonnell-Douglas Corp.

They are magnificent people. They are fine producers of excellent machinery, and they have let me make my decision for myself without trying to influence it by any parochial question which might apply with respect to that corporation's future profits.

I think the point brought out by the Senator from Illinois is an excellent point to have made clear in the Record.

Mr. President, I yield the floor.

Mr. MURPHY. Mr. President, I have been most interested in the presentation of the distinguished Senator from Missouri.

I have spoken on the matter on the floor several times. There is disagreement, and honest disagreement.

It seems that after all the hearings—and I am a member of the Committee on Armed Services—closed hearings and open hearings and all of the evidence received, we had to conclude that all con-

cerned thought that we should have some defensive system.

I heard no one disagree with that.

I listened while some said this system would work, this system would not work, and this system might work. But all the scientific experts agreed, after questioning, that the only certainty as to whether it would or would not work would come after the components required to make the ABM system were assembled. In other words, it was necessary to construct one; it was necessary to put it together; it was necessary, as the President has asked, to deploy one.

Then some said that the system might not work. Almost all the experts agreed that all the component parts had been tested and that all of them worked. It was merely a matter of opinion, not scientific expertise, when they said they thought it might not work.

I have heard statements on end. One scientist in California told me that it had only a 14-percent chance to work. I asked him how he arrived at that, but he was not certain.

AUTHORIZATION OF APPROPRIATIONS FOR FISCAL YEAR 1970 FOR MILITARY PROCUREMENT, RESEARCH AND DEVELOPMENT, AND FOR THE CONSTRUCTION OF MISSILE TEST FACILITIES AT KWAJALEIN MISSILE RANGE, AND RESERVE COMPONENT STRENGTH

The PRESIDING OFFICER (Mr. ALLEN in the chair). The hour of 2 o'clock having arrived, the Chair must lay before the Senate at this time the unfinished business, which will be stated.

The ASSISTANT LEGISLATIVE CLERK. A bill (S. 2546) to authorize appropriations during the fiscal year 1970 for procurement of aircraft, missiles, naval vessels, and tracked combat vehicles, and research, development, test, and evaluation for the Armed Forces, and to authorize the construction of test facilities at Kwajalein Missile Range, and to prescribe the authorized personnel strength of the Selected Reserve of each Reserve component of the Armed Forces, and for other purposes.

The PRESIDING OFFICER. The question pending before the Senate is the amendment offered by the Senator from Michigan (Mr. HART).

ORDER OF BUSINESS

Under a previous order, the Chair at this time is to recognize the Senator from Illinois (Mr. Percy). Will the Senator from Illinois yield to the Senator from California, so that he may conclude his statement?

Mr. PERCY. I am very happy to yield so that the Senator from California may finish his statement.

Mr. MURPHY. I thank the distinguished Senator.

THE SAFEGUARD ABM SYSTEM

Mr. MURPHY. Mr. President, I have heard opponents of the ABM system suggest that we could build additional intercontinental ballistic missiles, while at

the same time they argued against an ABM system because an ABM system might encourage an arms race. This is the widest inconsistency I could imagine.

The Russians have said that they do not consider ABM as another step in the arms race to be an argument. They consider ABM as a defensive weapon, exactly as we consider their ABM system. I may say that the Russians have deployed ABM systems for a period of 3 years.

The matter of adding to our ICBM's has been considered, and it was a question, in my opinion, whether to do so would accelerate the arms race. It would create exactly the situation that we would want to avoid in the upcoming meetings between the President of the United States and the Russians.

We have heard of the simplicity of removing the radar of this system. I assure Senators that there has been much testimony by experts that would contradict such a proposal. It would not be that simple.

All the scientific experts with whom I have had a chance to speak—and they include the man who was actually placed in charge of the development of the space program, General Schriever—agree that there may be a better system someday in the future; that new ideas may be developed; that all sorts of knowledge may be obtained as a result of the moon shot. But at present, considering the present state of the art and the present capabilities, the ABM Safeguard system is the only one that is now available. They beg, very simply, to put together the component parts and make them work, to have a chance to build one, to take the bugs out; and if it does work, we will have a defensive system already built. This has been done not by the Department of Defense, not by the Pentagon, but by the President of the United States, who makes this request, simply and directly—and I believe practically—for the security and the future of our Nation. He has asked for it as quickly as he can get it, so that it will be on his side when he goes to the arms negotiation, in the hope of finding a way to come, at long last, to a means of limiting all armaments and, hopefully, eventually to get rid of all armaments.

The PRESIDING OFFICER. The time of the Senator has expired.

Mr. MURPHY. So, Mr. President, I should like the Record to show that, after all the evidence and all the arguments, I am more convinced than I was at the outset—and I assure my colleagues that I attended with an open mind—that we need the ABM, that we can afford it, that it is the best possible protection at the present time, and that I believe the President's request for it should be acceded to.

Mr. SAXBE. Mr. President, will the Senator yield.

Mr. PERCY. I yield.

Mr. SAXBE. Mr. President, I suggest the absence of a quorum.

The PRESIDING OFFICER. Will the Senator yield for that purpose, without losing his right to the floor?

Mr. PERCY. I yield for that purpose.

The PRESIDING OFFICER. The clerk will call the roll.

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The bill clerk proceeded to call the roll. Mr. PERCY, Mr. President, I ask unanimous consent that the order for the quorum call be rescinded.

The PRESIDING OFFICER (Mr. CRANSTON in the chair). Without objection, it is so ordered.

MESSAGE FROM THE HOUSE

A message from the House of Representatives by Mr. Hackney, one of its reading clerks, announced that the House had passed a bill (H.R. 9825) to amend subchapter III of chapter 83 of title 5, United States Code, relating to civil service retirement, and for other purposes, in which it requested the concurrence of the Senate.

HOUSE BILL REFERRED

The bill (H.R. 9825) to amend subchapter III of chapter 83 of title 5, United States Code, relating to civil service retirement, and for other purposes, was read twice by its title and referred to the Committee on Post Office and Civil Service.

AUTHORIZATION OF APPROPRIATIONS FOR FISCAL YEAR 1970 FOR MILITARY PROCUREMENT, RESEARCH AND DEVELOPMENT, AND FOR THE CONSTRUCTION OF MISSILE TEST FACILITIES AT KWAJALEIN MISSILE RANGE, AND RESERVE COMPONENT STRENGTH

The Senate resumed the consideration of the bill (S. 2546) to authorize appropriations during the fiscal year 1970 for procurement of aircraft, missiles, navel vessels, and tracked combat vehicles, and research, development, test, and evaluation for the Armed Forces, and to authorize the construction of test facilities at Kwajalein Missile Range, and to prescribe the authorized personnel strength of the Selected Reserve of each reserve component of the Armed Forces, and for other purposes.

THE ABM DEBATE AND NATIONAL SECURITY

Mr. PERCY, Mr. President, for 4 months now, there has been a nationwide debate in our country over three letters: ABM. The public and public officials are engaged in a learning experience that is as complicated as it is vital to the future of our Nation. The Senate is learning in full view of all the people. It is learning to ask questions, make suggestions, and express its concern—not simply over the Defense Department's expenditure of \$80 billion a year but also over the risks of war and peace that envelop that \$80 billion budget.

The executive branch of our Government is also learning. It is learning how to answer questions in public that it never before had to answer. It is learning how to explain complex and classified issues so that the American people can better express their wishes. It is learning not to make its decisions without great care, and it knows as never before that it is going to have to justify them.

The results of this collective learning process are good and necessary. Inevitably,

however, some confusion has developed as to what the debate is really all about. Unless the purposes of the debate are made clear, legitimate questions and answers will be seen as attacks and counterattacks while decisions on the merits of the issues will fall victim to wasteful political compromises. If the debate turns into mutual accusations about personal motives, we shall never get down to the facts. If we do not get down to the facts, if we do not reach agreement on whether it is necessary or prudent for the United States to begin deploying a nuclear ballistic missile defense now, we could find ourselves jeopardizing our national defense while adding nothing to our security—all at enormous cost.

Perhaps it is best to begin by making clear what the debate should not be about.

It should not be an attack on the so-called military-industrial complex. It is patently unfair to charge that our military leaders and the aerospace industry are conspiring to feed on fear in order to sell billion-dollar gadgets for profit.

The problem is with those who are still convinced that our safety lies solely and exclusively in more and newer weapons systems, because "that is the only way to deal with the Russians." If the public has not been well served, it is not because of these men. It is because so many have sat silent for so long without asking the hard questions.

Nor should this debate be a disguised attack on President Nixon. The President's performance in his high office has received, and I believe justly, widespread popular support. The support certainly includes the President's handling of foreign affairs.

Specifically, with respect to national security policy, he deserves the highest praise for his reformulation of U.S. strategic doctrine. The President has stated:

The only way that I have concluded that we can save lives, which is the primary purpose of our defense system, is to prevent war, and that is why the emphasis of this system is on protecting our deterrent.

He has rejected a heavy city defense because it "tends to be more provocative in terms of making credible a first-strike capability against the Soviet Union." In his April 18 press conference, he said that he did not want to put any American President "in the position where the United States could be second rather than first or at least equal to any potential enemy." His Secretary of State has made it quite clear that the administration is flexible to the extent that "if the U.S.S.R. wants to go out of the ABM business, we can, too." The Nixon doctrine should be admirably suited to decisions which can brake the spiraling, dangerous arms race.

The ABM debate encompasses three objectives:

First, to determine and reorder national priorities;

Second, to subject the defense budget to the same kind of scrutiny as other appropriation requests; and

Third, to explore whether a unilateral decision on the part of the United States to deploy ABM's now on the eve of nego-

tiations with the Soviet Union on strategic arms limitations, makes any sense.

We must examine our national priorities. In the light of our tragic Vietnam experience and because of growing civil disaffection, we are trying to seek out a new and proper balance between our domestic and international goals.

We cannot have a meaningful debate on priorities, we cannot set a meaningful national-international balance, without giving careful attention to the \$80 billion defense budget, an expenditure which would constitute fully 60 percent of the Federal budget over which Congress can exercise discretionary action.

The specific focus of the ABM debate is whether we need to deploy it now, later, or not at all.

The administration's position is that we must begin deployment now.

Some critics are determined never to deploy.

My position is that I favor not going forward now, both because I strongly believe that it is in the national interest to use the time to improve the design, and because we can make a better decision regarding deployment later, in the context of arms limitation talks with the Soviet Union.

This debate does not rest on whether the proposed system will provide effective protection for our deterrent strike forces, though scores of scientists believe that it does not.

This debate does not rest on whether the Soviet Union or Communist China has embarked on a strategy which will enable either nation to attack the United States with impunity by the mid-1970's. Such a strategy is unrealistic and would be suicidal. Rather this debate rests on our hopes, and the hopes of all mankind, for a genuine and lasting peace. For if we mean to have peace then we must recognize the futility and the danger of military strategies which have no regard for global politics.

Now is the time to take the initiative for peace.

Now is the time when we possess the ability to launch a devastating attack upon any nation that would dare to strike us first.

Now is the time, before deploying a new generation of strategic weapons, to try to prevent a situation whereby the Soviet Union would be compelled to escalate their own weaponry.

Certainly we can accept President Nixon's dictum that we must not be in an inferior strategic position to any other power. We must have the power to deter aggression against our country. And we do have that power. We must have the will then to use our power should any aggressor attack us. And we do have that will.

Our second-strike capability is so awesome that we can safely decide not to deploy Safeguard at this time. Those who want to deploy now say the two Minuteman wings need to be protected by late 1973, and, the whole system should be operative by the end of 1975.

These timing requirements are based on the prediction that the Soviet Union will develop and deploy all they are capable of, regardless of cost. Secretary

Laird's estimate is that, by 1975, the Soviets could have as many as 2,500 ICBM's compared to our 1,000, while exceeding our total of 41 Polaris submarines, and deploying as many as 2,000 ABM's relative, to say, the 1,000 projected under Safeguard.

It is the opinion of almost all Soviet watchers that the Russians are not seriously contemplating the vast expenditures that this estimate would entail.

Indeed it is hard to believe the Russians would expect that they gained anything after having done so. But, let us nevertheless assume they will do so by 1975 and let us further assume that Safeguard will in fact provide a significant added measure of deterrence and protection against such a threat. Does this mean that a year or so from now it will be too late to make the Safeguard decision? In my judgment, it does not.

Our scientists and engineers have given us an alternative. Simply stated, this alternative involves continuing present research and development, engineering and testing and evaluating an ABM system. If we did only this now and if we were also willing to spend a reasonable additional sum of money to meet a shorter deadline, we could still do all that Safeguard advocates desire and have it in operation by 1975 if that course appeared necessary.

In addition to the fact that we have time before we have to make these decisions, there is a second and more basic point that calls for delay. We can make a better decision later. A postponed decision would be better on two counts:

First, it would give us a chance to take the measure of the Soviet Union's intent in arms talks;

Second, it would allow us the time to make necessary improvements in Safeguard technology and strategy.

Most of the ABM debaters understand quite clearly that the United States and the Soviet Union now each has sufficient forces-in-being as well as the technology, additional resources, and the will to compensate for or to negate new strategic deployments by the other side. Whatever we do, they can match, and whatever they do, we can match. This is the basic point governing the futility of the strategic arms race. What has not been made clear by this debate is the conclusion to be drawn from this mirrored capability. The operative conclusion is that neither Washington nor Moscow can make sensible strategic decisions unilaterally.

I am not saying that arms control talks will solve all our problems. But I am saying that these talks may indeed constitute an important initiative for moving further away from a nuclear holocaust. And, moreover, I am saying that what we will learn from those talks, and what we will fail to learn, will help us make better strategic decisions.

For example, we have announced over the last few years that our Minuteman force will stabilize at 1,000 missiles. Secretary Laird claims that the Soviets have the capability for a fixed land-based force of 2,500 by 1975. We should ask the Soviets how many they intend to build, and we can check their answers accurately over a period of time by counting the ICBM silos they construct. We can

test their intent regarding a ballistic-missile-defense system. Is it in the interests of both nations for both to deploy an ABM system? Or is it better for neither to deploy?

If Moscow is willing to talk numbers and needs in a mutually reciprocal context, if each side talks about what it believes deterrence requires, then a great deal of the speculation and uncertainty that make both want more and newer weapons can be dissipated.

Mr. MURPHY. Mr. President, will the Senator from Illinois yield for a question?

Mr. PERCY. I yield.

Mr. MURPHY. The Senator asked the question, would it not be better for neither side to deploy ABM's? Does not the Senator have the knowledge that the Russians have already deployed an ABM?

Mr. PERCY. Yes, they have deployed it, as I understand it, from the intelligence reports I have, but they have considerably slowed down or even stopped deployment of the system. They may have stopped. But the slowdown may be for one of a number of reasons. They may have decided to abandon the whole project as worthless, as we abandoned the idea of Sentinel. They may have decided to go back into research and perfect a better system. That is exactly what the opponents of deployment are now suggesting we do about the Safeguard system—that we perfect the system for to have the capability, but not to deploy it now.

Mr. MURPHY. The Senator gave the impression that there was a balance between what the Soviets had and what we had, but that neither should go ahead with the ABM. I merely rose to point out that they started their deployment 3 years ago, and they have quite a few already deployed around Moscow. The reason for the slowdown is the uncertainty, so far as my information goes, and to improve it, or they may have found out it is not successful—hopefully—but I do not think there has been an exact answer as to the reason for the slowdown. The point I want to make is that the Russians do have an ABM already deployed and we do not, and that is not exactly what the Senator is saying.

Mr. PERCY. The Senator is not suggesting that we should adopt a policy that whatever the Russians do, we should do. I do not suggest that kind of policy. If they make a bad mistake, I am realistic enough to believe that there is no reason for us to go ahead and make the same one.

Mr. MURPHY. The Senator's premise is not very logical. I did not suggest that whatever they do, we do.

Unfortunately, a false premise leads to a false conclusion and it gets developed; and sometimes the main thrust of the discussion gets lost. My point in rising was to emphasize the point in the Senator's remarks that the Russians have the IBM. As a matter of fact, they have another system which is deployed all over the Soviet Union that we think is built for another purpose. So that actually they have two, and we do not have any. That is the reason I do not believe we should react to everything the Russians

do. Certainly, I do not think that. We worry about how many warheads they have as compared to how many warheads we have.

I think the main thing is to be conscious of the fact that within the past 5 years we have lost a distinct military advantage. I do not think anyone will argue against that. It is my opinion that as long as we have a distinct military advantage, as long as the character of America and the policy of America is known; namely, that we are not going to attack anyone, or start a war, that we insure a great degree of safety for the security of our country.

On the other hand, we know historically from what the Russians have said, to my knowledge, going back 30 years, every time they have had a meeting lately—I should not say the Russians, I should say the Communists—the Moscow Communists, the Peking Communists, and the Castro Communists—that they all seem to wind up with the main theme, "We must destroy America. We must destroy imperialistic America."

We are not imperialistic. However, we have won the door prize. In a closed society like a dictatorship, it is always necessary to have a "heavy," a "bogeyman"; someone to scare everyone with. "You do what I say, or else."

We do not have that in our society. It is not in the character of the American Nation. I believe that those charged with the security of our Nation are making certain that we are able to do whatever is necessary to protect the safety of the Nation. I do not believe we should be negligent. Where there is a question of making a mistake, I think we are bound to make that mistake in favor of the safety of our country and not in favor of, maybe, saving a few dollars, or giving some scientists a few more months to do research work. All the scientists have agreed that in the present state of the art, this is the only system. They all say we can find a better one. I am sure that we can. I would hope that science would find one so much better we would never need to continue with another—hopefully this would be a lot less expensive.

I would hope more than that. I would hope the President of the United States would be more successful in his meeting with the Russians. I would hope they would come to an absolute agreement and say to us, "Don't you build an ABM or don't you build any more ICBM's and we don't build any more."

I think we would all be very pleased if that happened. But as long as they continue to inveigh against us, as long as they use us as the target, as the design, for destruction, I think we have to take them at least partially at their word and be prepared to think perhaps they mean it.

I can remember some years ago I bought a book for a dollar. It was called "Mein Kampf." It was written by a madman in Germany. I read it. I told some people about it. They thought I had lost my mind. When I read it, I believed that man meant what he said. He did. Look at the terrible trouble he caused. If we had listened to him in the beginning, if we had taken proper precautions in the

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beginning, if the people in his country had been careful in the beginning, the chances are he never could have created the great destruction he did.

This is the only reason for the debate. I, as the Senator knows, have the greatest regard for my colleague. He and I together would like to see the solution of these problems. But I must keep to the point in making the final decision. From what is factually clear and correct as I have been able to hear the facts in all the hearings before the Armed Services Committee, both open and closed hearings—and the distinguished Senator from Missouri, referred to the closed session of the Senate which took place—we must be realistic and deal in facts. If we had done that in the past in our dealings with the Soviets, we would not have had all this trouble. When we do not deal in facts, they lose respect. They think we are silly. I dealt with them for many years as an adviser on the cultural exchange. It was exactly the same kind of negotiations. They would ask 5 for 1, and settle for 3 for 1. They told us they would have to get more in return, because they would be in trouble when they got home.

That is the trouble with a dictatorship. Two fellows are watching the first fellow, and four are watching the other two, and it all piles up, so nobody makes a decision because they are fearful of making a mistake. That is the trouble. They lost about 7 years in the development of the country. I have watched them.

Mr. PERCY. Mr. President, I am glad to yield for a question—

Mr. MURPHY. I did not mean to make a speech. I got carried away.

Mr. PERCY. I may have trouble sorting through all the Senator's comments to find a question, but he made one important comment—

Mr. MURPHY. The question was this: I thought my colleague had said that neither the Soviet Union nor the United States should build the ABM system. I merely wanted to point out that the Soviet has already built and deployed its ABM system. The Soviets have quite a few of them around Moscow. They have another system, which is around the country, which we think is aimed perhaps at our Tactical Air Force.

Mr. PERCY. I very much appreciate my colleague's repeating the question. I will try to respond to it, because he made another very important comment, that we should try to deal with facts in this case.

It is true that there is a beginning, and it might be or it could be the end—we do not know—of an ABM system around Moscow. The system is limited to Moscow. All the military authorities I have talked with in our own Department of Defense feel it presents no real problem to them whatsoever. They can saturate it. They can penetrate it very easily. Probably that is recognized by the Soviets.

Mr. MURPHY. I would just like to know how they propose to saturate it. I have not heard that.

Mr. PERCY. By penetration. If they have 67 ABM's, we send over 68 ICBM's. When they have sent up their 67, they have exhausted their supply.

Mr. MURPHY. In other words, our military experts have told the Senator that the Soviets have an ABM system around Moscow containing missiles, and we can send one missile over to destroy it?

Mr. PERCY. We can send one additional missile beyond the number of ABM's they have deployed. It is just simple arithmetic. In fact, I do not have to go so high.

Mr. MURPHY. There is more than arithmetic involved. I assure the Senator that if we have an ABM, they cannot send one missile plus one missile to destroy our ABM. I am not sure that is disclosing any secret, but I assure my colleague that is a fact.

Mr. PERCY. Does my distinguished friend from California doubt the accuracy, the power, or the will to use that power on the part of our Defense Establishment? Does he doubt the second-strike capability that we have in this country?

Mr. MURPHY. I do not doubt the second-strike capability. What we are talking about, and the whole purpose of the debate, is to protect the second-strike capability so that we may have a second-strike capability, so that if somebody attacks us, we may be able to respond. That is what the ABM is all about. That is what it is for. It is not to hit anybody else. It is to destroy incoming missiles that would destroy our second-strike capability.

I must tell my distinguished colleague that I am forced to leave the floor. I dislike to leave. I will hurry back if I can.

Mr. PERCY. I would like to comment on one other aspect, to be as factual as we can, and that is what respect to whether or not the Soviets have an ABM system deployed around the U.S.S.R. beyond Moscow. It is my understanding that whatever they have is an anti-aircraft system. What we thought was an ABM system around Leningrad turned out not to be an ABM system, but an anti-aircraft system. We have an anti-aircraft system deployed, as they have, but theirs is just as obsolete in the kind of warfare we are talking about and trying to avoid as is our own defense, covered by snow and Arctic wastes, which is useless against the type of missile attack which might be made against us.

Mr. MURPHY. If my colleague will permit, when I spoke of the second system, I was not speaking of an anti-aircraft system; I was speaking of the Tallinn system, which is not really an anti-aircraft system. It is an antimissile system. But I have been advised that we think that may be targeted against our strategic aircraft.

The defense of both countries, strangely enough, is laid out in three elements. It takes in the land-based system, the ICBM's; submarines, which they are building at a much faster rate than we are; and the manned bombers. They have some "dandies," there, too. They have medium manned bombers that are excellent, and they have airbreathing missiles that can stay up a long time. So things are not as happy as they were 5 years ago, and that is why I am concerned.

I thank the Senator for his patience.

Mr. PERCY. Mr. President, just to complete my own comments on these pertinent questions, it is my understanding—and I would stand to be corrected if I am wrong—that there is not an ABM system deployed around Russia; that there is an ABM system that has not been completed around Moscow; but Dr. Foster, head of research and engineering in the Department of Defense, in hearings before the Senate Armed Services Committee, said that we have already targeted the Moscow Galosh system out of existence. I think that testimony from such an authority in the Department of Defense is adequate to answer whatever questions have been asked me by my distinguished colleague from California.

Let me continue my comments.

The fear of the unknown, whereby a nation must attempt to plan for all eventualities, would no longer be a telling argument for escalation of the arms race. If, on the other hand, Moscow delays or refuses this kind of dialog and exchange of information, we would conclude the worst about Soviet intentions. We would then be in a position to make decisions accordingly based on knowledge, not fearful speculation.

Quite apart from arms talks with the Soviets, there are some basic engineering questions that indicate the value of delay. There is strong evidence to believe that the Safeguard is not the best system we can devise to accomplish its stated purpose. Here let me simply repeat some uniform concerns of the most qualified U.S. scientists and former high Pentagon officials—concerns which have not to date been adequately dealt with by the Pentagon.

Since the Sprints would be blinded and inoperable if the MSR radars were destroyed, how can we first deal with the problem of MSR vulnerability? Do we need hundreds of Sprints just to defend these radars? Should we seek to find new ways to harden these close-in radar sites? Should we disperse from one radar to a multiplicity of radars?

What can be done generally about Soviet saturation tactics? If the Soviet Union does expand its missile force, add multiple warheads and then MIRV's, thus having several thousand separately deliverable warheads, how can only "several hundred" Sprints now visualized under Safeguard hope to defend our ICBM's successfully.

These are only a few of the dozens of questions that have been raised by the scientific community regarding the improvement of the Safeguard system. These questions need answers before deployment.

This is one way of stating the case for holding off a decision, pro or con, on deploying Safeguard now. Specifically, I am opposed to a decision that begins the process of starting to gear up for full production of a missile defense system in the United States now. Once any part of this system is begun in the United States, the decision is taken out of our hands—the inertia of military weapons systems dictates that the whole system will inevitably be deployed. And will be deployed regardless of the success of the arms talks and regardless of what the Russians do. Any deployment in the

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United States may make a sham of the arms control talks.

I say this despite Pentagon statements about annual reviews and phasing decisions.

I say this because the Pentagon has unequivocally told us that the full system will be deployed "as the Chinese ICBM threat continues to increase."

I say this because that would put us right back in the game of building an ABM system for defense of cities which President Nixon says would be very provocative and destabilizing, and which scientists in and out of the Pentagon believe cannot be effectively provided and would be wasteful.

I am not prejudging the ultimate decision on ABM's. Circumstances might dictate ultimately that we all would support a workable and well-thought-out missile defense system in time. I would be in favor of going ahead with a U.S. missile defense system—hopefully a better system than Safeguard—if the Soviets insisted on deploying a more significant one of their own and we were convinced of its value. We could not afford to let the Soviet Union get that kind of technological jump on us without responding in kind.

It is because of these considerations that the Congress has struggled with the decision on ABM. The ABM debate has not been a foolish one with all the truth on one side. The unfortunate aspect of the debate is that we are trying to settle it all now.

Richard Nixon, as our President and Commander in Chief, has a real responsibility for the Nation's defense, for not taking unnecessary risks with our security. He faces great new uncertainties in the strategic nuclear balance of power. These uncertainties breed fears and demands that are difficult to assess and resist. Both the United States and the Soviet Union are on the verge of being able to deploy a whole new generation of strategic weapons.

We do not know with certainty what effects these new weapons will have on the system of mutual deterrence, that balance which prevents holocaust and keeps the nuclear peace. We never will have this certainty. President Nixon himself made this clear with his own statements on strategic doctrine and with his concept of "sufficiency." What we need is enough, not necessarily more and more. We cannot eliminate risks to ourselves without increasing risks to others. If others are placed in greater jeopardy, they will react from fear, just as we are being entreated to do.

In regard to Safeguard, there is merit to President Nixon's desire to maintain the retaliatory capability of our Minuteman force. This is part of a very sensible doctrine that seeks to maintain separate retaliatory capability in each of our major strategic force components—land, sea, and air. It may well be too risky to place our deterrent capability solely on any one component. This, in turn, means we may have to do something about the potential vulnerability of our Minutemen. But the Pentagon has far from made a convincing case that the sole answer to this problem is to deploy Safeguard now.

Just as the President has responsibilities and problems, so does Congress. We have responsibility, with the President, to determine the Nation's needs and priorities. This should be a cooperative, not a competitive, process. In fulfilling our responsibilities to the American people, many in Congress are simply not convinced that Safeguard, just as we were not convinced that Sentinel, is either right or necessary at this time.

Because our doubts and our questions have not been answered satisfactorily or convincingly, many of us—which may well be a majority—will have to vote our judgment and conscience against Safeguard.

But this is not the way this decision has to be made. There is no need and nothing to be gained from an outright confrontation between Congress and the President. There is a middle ground which does not compromise national security. Indeed it enhances the future security of this Nation.

First, we should not make the decision today that would commit us to deployment of an ABM system in the United States.

Second, we should begin arms limitation talks immediately and make the next round of ABM decisions based on what we learn or can agree to at these talks.

Third, we should continue with research and development, engineering, testing, and evaluation. Speaking for myself and not for my colleagues, I would also approve the preproduction of long leadtime items such as radar components and computer software.

Fourth, we should take steps to deploy a full unit of an improved ABM system at Kwajalein.

This approach would allow us to meet any contingency in the middle and late 1970's. It would keep necessary vital technical personnel together, working as a unit, and it would enable production lines to be readied for a more proven design. It would also allow for fuller testing—which deployment in the northern United States would not. This approach would make the curtailing of the arms race feasible without incurring any new risks.

At the same time, I would like to renew the proposal for a mutual moratorium on MIRV testing, a proposal in which I joined with the Senator from Massachusetts (Mr. Brooke) and 40 other Senators of both parties. I believe firmly that the only way to remove the threat that derives from multiplying numbers of deliverable warheads and increasing their accuracy is for both sides to agree to stop testing them. We did achieve an agreement to prohibit atmospheric testing of nuclear weapons. We did achieve an agreement with the Russians to also prevent the proliferation of nuclear weapons to other countries. This is the next logical step, and should be the first order of business at the arms talks.

Mr. President, I should like to point out one deep concern that I have, in which I am joined by many others in this body.

We can accurately determine whether the Russians, and they whether we, are

testing a MIRV. But once it is tested, designed, produced, and deployed there is no way that we can inspect adequately the integrity of a limitation agreement without on-site inspection.

I think from our past experience in negotiating we know that this presents an exceedingly difficult problem. I would not consider very useful an agreement that would not be in our mutual self-interest, an agreement that could not be clearly understood, or an agreement that could not be clearly enforced.

We know now that neither an offensive nor a defensive weapons system can be deployed without detection, either by the Soviet Union or by ourselves. We would know if they were cheating, and they would know if we were cheating. The technology and scientific capacity we now have for satellite reconnaissance insures the integrity of such an agreement.

Yet we could not ensure the usefulness of our current means of detection once MIRV had been deployed. This is why the urgency for a mutual—and I say mutual, not unilateral—agreement is the highest order of priority in an arms limitation talk.

And this is not the time to commit ourselves to production of an ABM defense system. If the great debate that has taken place throughout the land has proved any one point, it has proved that now is not the time to expand the world's nuclear arms race. It has proved that both the time and opportunity for further steps toward peace may coincide. We should make every effort toward this end, and take steps that will in any way endanger the possibility that we have today of coming to accord and mutual agreement so that we may stop and arrest the arms race in which both nations are now actively and wholly engaged.

Mr. MURPHY. Mr. President, will the Senator yield?

Mr. PERCY. I yield to the Senator from California.

Mr. MURPHY. Mr. President, does the Senator have knowledge of whether the Russians have tested MIRV?

I am trying to establish whether the Russians are ahead of us in the matter of testing, adapting, and employing MIRV.

Mr. PERCY. I presume that we both are at a stage now where we are pushing ahead rapidly. I presume they have certainly done some research, development, engineering, and testing, and so have we.

Mr. MURPHY. Have we tested MIRV, to the knowledge of the Senator?

Mr. PERCY. I assume we have done a great deal of design, engineering, research, and development. And as a matter of fact, from my recent experience on a Polaris submarine, there seemed to be no hesitation in their capability for going ahead with the Poseidon.

Mr. MURPHY. Mr. President, I have no knowledge that we have tested an operational MIRV. I do have knowledge that it is believed that the Russians have tested MIRV.

I therefore suggest that they might be a little ahead of us.

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The Senator spoke about arriving at a treaty controlling nuclear testing in the atmosphere. I wonder if the Senator recalls the circumstances preceding that treaty when, during the time that the treaty talks were going on, the Russians did test in the atmosphere and did take advantage of our trustworthy nature and did gain a tremendous advantage and knowledge and did a great deal to change the balance because of that testing. Is the Senator aware of that?

Traditionally, we find that our country is asked to slow down and not take the initiative. I know that we had MIRV available to us 6 or 7 years ago. For one reason or another, it was pushed aside by the then civilians who made those decisions. I believe that Secretary McNamara was responsible.

I am just as hopeful as is my distinguished colleague that the day will come when we will not have to worry about these armaments.

I must point out, however, that the ABM is not a move in the arms race. It is a defensive weapon. It can never be made into an offensive weapon. The Russians know that. They have said so. As a matter of fact, when it was first indicated that we might go ahead, they immediately said, "Let us sit down and talk disarmament."

This is perhaps the way we should approach the matter. Maybe over the years we have been dealing with them in the wrong way. I know that history is replete with the story of people who have tried to deal with the Soviets from a position of weakness. They have accomplished very little. However, people who from time to time have had a confrontation with strength backing up their design—as we had in Greece, Lebanon, and Cuba—always seem to be able of accomplishing something.

I wonder if perhaps that is not the way they would rather have the meeting take place.

I am sure of one thing—and I know that my distinguished colleague will join me in this—that I do not think he nor I nor any other Senators have thought of anything or any condition or have as much scientific or technical knowledge of the matter as has the President of the United States.

I always come back to that same point. I know of the sleepless nights spent worrying about the matter. We have to be right. A mistake in this matter could be absolutely vital to the future of our Nation.

I am sure that the President finally came to the conclusion that, in his best judgment, he wanted to have a Safeguard missile, he wanted to be able to protect our second-strike capability so that in the event anyone got a crazy idea that they wanted to attack us or in case anyone made a mistake or there was a misfire, we could destroy the incoming missile before it would do any damage.

He decided at long last that this was what he wanted. That is his responsibility. He has that responsibility in the name of a majority of the people of this country.

I think that in the event there is any question, this fact ought to weigh very

heavily in making the final decision. It is his job. Our responsibility is advice and consent.

Actually, our job is also to debate the bill and then act on the bill that we worked over in committee to supply an amount of money, not for policy, but for procurement, to supply the funds for the armed services to buy the things they need, pay the salaries, and keep up the installations.

The debate became part of that. However, in the bill, if that is all we are talking about, there is a matter of less than \$800 million involved.

Some have said that once we start, we can never stop. I can. I have stopped a lot of things. We can stop the day we decide to do so. As a matter of fact, the President in his request provided for exactly that. He said that at the end of the year we will look at the matter, and if we do not need it, we will stop it.

If the negotiations are successful, we can stop it then. We should not even start it, if the negotiations are successful before we start. We should not go beyond that point.

I point out that if we do not start it and start it now, the best advice I can get is that we would lose 2 years before we got to the actual finished product. And those 2 years, in the judgment of those in the top jobs of Government, we cannot afford to waste at this time.

Mr. PERCY. Mr. President, with respect to MIRV testing, it is my understanding that half of the MIRV tests have been completed by us with positive results. The Soviets have tested, to the best of my knowledge, MRV. We are ahead of them in MIRV.

As to whether we would be dealing from strength because of having gone into the production of a weak ABM system, I do not see that that argument is particularly strong. I do not think the Soviets would be greatly impressed if we were to go into production on it.

If we wanted to expend our resources in that way and have a low level in our defense systems, I do not think it would be particularly worrisome to them, any more than we should be particularly worried by the so-called ABM system they have deployed in part around Moscow.

I feel it would be a great mistake for us to just simply say that they have one and therefore we have to have one and had better rush into production, no matter what the vulnerability of certain parts of the system is and no matter what the weakness of that system may be.

We have talked a great deal about MSR. We might well talk about the electrical power that will operate this particular system, and we might get into that at some point in the future.

Mr. GORE. Mr. President, will the Senator yield?

Mr. PERCY. I yield to the Senator from Tennessee.

Mr. GORE. Mr. President, I thank the Senator for his very able address, to which I have listened with close attention.

I have not found a way vocally to distinguish with any distinction—in the pronunciation, at least—between MIRV

and MRV. The best pronunciation I can give to either is "MIRV." Some distinction will be found in the testimony of Secretary Laird, beginning at the bottom of page 45:

MIRV is certainly something that is negotiable as far as any arms limitation talks are concerned. It is true the Soviet Union has gone forward with testing of multiple reentry vehicles, and we are going forward with testing MIRV-ed vehicles. We do not plan any deployment of multiple reentry vehicles until [deleted].

I wish to point out, for the benefit of the Record and for the benefit of the senior Senator from California, if he should need such information, that in this statement the Secretary of Defense make a clear distinction between multiple reentry vehicles and the multiple independently targeted reentry vehicles.

I think I have heard all the intelligence briefing before my subcommittee—indeed, I know I have. No evidence has been presented to my subcommittee that the Soviets have tested any multiple independently targeted reentry vehicle. They have tested some MRV's which fell in patterns which contain some interest to some people. On the contrary, the United States has tested, as the Secretary has said, MIRV weapons. So in this category the United States is far ahead, as the United States is far ahead in many other respects.

So if it comes to negotiating from a position of strength, I do not know how we could reasonably assume that the United States would be in a more advantageous position next year or the year after or any other time in the future. Indeed, as I tried to say to the Senate on Tuesday, the United States and the Soviet Union, though not on a basis of equality in destructive capacity, are on a basis of equality in one respect—they have the capacity to destroy each other several times over.

Now, when two nations are in such a juxtaposition, does the Senator know of any measure of their mutual security so great as an understanding on the limitation of further deployment and possible use of nuclear weapons?

Mr. PERCY. I think the distinguished Senator has brought out an exceedingly important point, and it is a point that I really tried to get at in my speech.

In the remarks I made, I tried to separate those who are just for deployment today, those who are for having the capability to deploy but who are against deployment now, but are for continuing research, development, testing, and so forth, and those who simply—and I think we should categorize them and isolate them—are against doing anything with the Soviet Union "because you cannot trust the Russians." If that is their philosophy and if that is their approach, then I think they clearly should stand up and say: "We oppose the President of the United States on this policy matter. We oppose the Joint Chiefs of Staff, the Defense Department, the State Department, and everyone else, because we are against negotiating with the Soviet Union."

Let them then not hide behind this general opposition or general proposition of deploying the ABM. Let us argue

that out, on whether or not, as a matter of national policy, we want to sit down and see whether we have a community of interest in stopping the arms race.

As I understand the President of the United States, he has clearly said, "I am willing to sit down and negotiate." In fact, he set a date and said he would be flexible as to where those talks are to be held. There is no question in my mind that MIRV and ABM and other nuclear offensive and defensive systems will be on the agenda. This action has been approved by the National Security Council.

As to those distinguished colleagues and friends of ours who simply are going to fight any attempt to agree with the Soviet Union on anything, we should clearly have them isolated in one separate category and separated from many of their colleagues—the vast majority in the Senate—who feel that it is utter madness for us not to see whether we do not have a community of interest.

I should like to ask a technical question of the distinguished Senator from Tennessee, because he has participated in all the discussions that have taken place before the subcommittee of which he is chairman.

Is it not important that we reach a mutual agreement to cease the testing, because once we have finished the testing, design, and development, and begun the production and deployment of MIRV, we would then require on-site inspection, and our present methods of satellite reconnaissance would not be adequate to insure the integrity of the agreement? I believe, and I believe that he believes, we should have agreements with the Soviet Union, the integrity of which can be preserved by our known technology.

Mr. GORE. In reply to the distinguished Senator, I wish to refer once again to the statement of the Secretary of Defense that "MIRV is certainly something that is negotiable as far as any arms limitation talks are concerned."

So the answer to the Senator is affirmative, in the view of the senior Senator from Tennessee, but affirmative in the view of the position of the administration, also.

(At this point Mr. SAXBE assumed the chair.)

Mr. JAVITS. Mr. President, will the Senator yield?

Mr. PERCY. I yield.

Mr. JAVITS. I came in at the end of this discussion, but heard both arguments.

I believe it is important to emphasize—and I should like to check with the Senator from Illinois, who I know has made a very fine and thoroughgoing speech in defense of our position—that there are two separate ideas here, both very valid.

I like very much Senator PERCY's concept that if you do not trust the Russians, then make no agreements with them at all, and you do not have to trust them to make an agreement. We just have to look at the history of previous agreements to which they have agreed to see whether they have stuck by them. They horse around in a big way and will take us any time they can when there is no agreement; but the disarmament

agreements, like the nuclear nonproliferation and the testing in the atmosphere, have been observed, as have others.

There is another thought in what the Senator from Tennessee has said, which I would like to confirm, and that is the question of risk. I spoke on that yesterday. I debated it with the Senator from Texas (Mr. TOWER).

The question is, Which is the greater risk? We are not saying that there is no risk in not deploying; but we say the greater risk is in deployment, rather than in nondeployment, because we are so far committed without a commensurate benefit that we lose on the exchange and the hope of freezing the nuclear arms race at this point.

The question I should like to ask the Senator is this: The argument made against that point, which both Senators made and which I made yesterday, is that suppose the people who argue that way may be correct. It may very well be that there is a great difference in risk between the two, but the Russians say that they do not care if we deploy or not. Therefore, they are not going to be inhibited by a consideration of whether we deploy or not. Therefore, the situation will be in the same position if we do not deploy.

I wish to ask this question. Is not the difficulty with that argument, "Sure, the Russians are being very conservative. They are operating the same way. They have their hands in the same cookie jar. Their leaders are doing exactly what we are doing."

Somebody has to have the enterprise to lift this whole operation above that mundane grocery store level—without any disrespect to grocery stores—but everybody is thinking the same thing: Arms under the sea bed.

I wonder if the Senator would care to comment.

Mr. PERCY. I am not a Soviet expert but I have talked with them as I have with our national leaders as to whether or not we have a mutuality of interest here. The best information I have is that the Soviet Union finds that when they are spending a high proportion of their gross national product on defense systems and strategic systems that they are feeling the effect. They have people who want more and more consumer goods. They have all these unmet needs such as housing, automobiles, or whatever it may be.

As they look at Eastern European countries, particularly the window on the West, and into Western Europe, they see great dissatisfaction on the part of the people if they are not provided what they have come to expect all these years.

They have a great mutuality of interest because they know if they continue the race we will have a greater offset because we have a greater capacity to produce. They can simply appropriate the money without having the matter debated in Congress, but they do know they have to fulfill the promises they have been making to the people for some time. They have a great community of interest.

We could offset each other by the actions we take and continue the race and build and build and build; but I cannot feel any safer with all the weapons we have built in the last 10 years

than I did 20 years ago. In fact, the reign of terror is substantially greater. I think it is time we deescalated. However, someone always says, "Let us try this new system we have. We have an ABM that we would like to produce. We have a MIRV that we would like to produce." Then, the other side will say, "We have another system we would like to produce." When is this race going to end? Mr. JAVITS. Never.

Mr. PERCY. The time is now. There is a great mutuality of interest. As I listened several days ago to the distinguished Senator from Washington, (Mr. JACKSON), I was afraid when he was speaking that he was really leading up to saying, "You cannot trust the Russians and, therefore, do not negotiate." I was exceedingly pleased at the end of his analysis when he said, "Of course, I want negotiations; we all want negotiations."

I was very interested yesterday in listening to one of the proponents for the deployment of the ABM, the distinguished Senator from Idaho (Mr. JORDAN), a revered and respected colleague. I have now read every word of his statement because I have tremendous respect for him. Both of us serve on the Joint Economic Committee. He said:

The most compelling need of the present times is to stop this devastating nuclear arms race. This is a long, hard road—but like any long journey, it must start with a single first step. That first step is serious negotiation by the principals at the bargaining table. Whether steps to deploy a Safeguard ABM system would advance or retard negotiations is again a matter about which the experts disagree. Frankly, I do not know. The President thinks we need the start that this bill gives us and he thinks we need it now. He thinks we are protecting valuable leadtime should negotiations fail. Personally, I might be willing to take that "risk for peace" which proponents endorse.

I repeat once again that the safety of this country depends on two things: our capacity to retaliate against anyone who deals a first strike, and our willingness to use that capacity and strike if we have ever been struck. Let the Russians or the Chinese never doubt that we have the capability—no matter what they throw at us—to devastate them and that we have the will to do it should they dare strike against us. With that sufficiency on our part and, I presume, a sufficiency on their part, is not today the day to say, as the Senator from Washington and others have said, that we have a basis for agreement?

Mr. JAVITS. I agree and the way to do it is to say that we propose to move in view of the proven fact it does not jeopardize our security.

Mr. PERCY. Mr. President, I yield to the Senator from Maryland.

Mr. MATHIAS. Mr. President, I wish to thank the Senator from Illinois for a very thoughtful discourse today and to note that his discourse is based not only on his long experience in business affairs and his experience as a Member of the Senate, but it is also based on the experience he has had as an industrialist and businessman in a highly technical industry which has given him insight into this very difficult and complex situation, which is denied a great many of us. I appreciate the leadership he has

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taken and the time he has taken today to wrestle further with this very difficult problem.

In the last few minutes there has been reference by our good friend, the Senator from California, and in the quotation which the Senator from Illinois just read from yesterday's debate with respect to the role Congress should play in this matter. The Senator from California—and I regret he has temporarily left the Chamber—said the primary responsibility lies with the President to make these determinations; that the President spends many sleepless nights.

I think we all appreciate the tremendous burdens that rest on the President in matters which relate to national security. I do not think anybody in any way can diminish the role of the President as Commander in Chief of the armed services and in connection with the security of the United States. I do not think anybody in any way wants to pretend that this tremendous burden is not one that is very heavy for any man to bear.

However, this is the point at which not only do we have to be clear ourselves but I think also the country has to be clear. I was at a meeting last night, and I think it is all too easy for people to fall into the frame of mind that if the President wants it it is automatic that it has to be that way.

That is not the way the Constitution says it. In article I of the Constitution, section 8, it states that the Congress shall have the power to provide for the common defense. As if to underscore this power of the Congress and the discretion vested in Congress, the same section further provides that Congress shall declare war and do various other acts in relation to the armed services.

I do not say this in derogation of the President's powers in this area, but merely to emphasize that we have a role to play here, which is not to rubber-stamp, not merely either to approve or veto, but to make a subjective judgment.

That is what the Senator from Illinois, I think, has done. He has made a subjective judgment which weighs not just the mere question of cost, but the question of the desirable course of action, what the effect of that course of action will be, does it actually increase the security of the Nation, or could, in fact, a given course of action decrease the security of the Nation?

That is our job. It is not a job that any member of the executive branch, be he President, Secretary of Defense, or a member of the Joint Chiefs of Staff, or anyone else, can do for us. It is our job.

The Senator from Illinois, I think, has illustrated the intelligent way to go about that job.

Mr. PERCY. Would the distinguished Senator from Maryland, who has served in the other body and now in the Senate, give me the benefit of his judgment on an answer that might be given to those who merely say that the President wants this, he has said it is in the national interest, and in the interest of national security that we have it, and

therefore we have an obligation to vote for it?

This has been said not only in this Chamber many times but also by many of our constituents, by the newspapers in our home States, and certainly in some very, very tough letters I have received.

If this principle had not been followed at another time, we might have questioned the decision of two Presidents which took us into a land war in Asia, something that the Joint Chiefs of Staff, General MacArthur, and other military authorities have said above all else we must avoid. Would it not have been far better for this country if Congress had been able to stand up and prevent that action from carrying us from an advisory role to a fighting role and putting the whole interests of Presidents of this country on the line in a guerrilla-type war 11,000 miles away? Would not our national security have been better off if Congress had resisted two Presidents of the United States in the decisions that they made, decisions which were made in utter honesty, with complete devotion to the country, and patriotically, feeling that what they were doing was in the national interest?

Today, would not Congress, looking back, and would not the country, looking back, say that Congress somehow, should have prevented those decisions from being made as they were made?

Mr. MATHIAS. The very best answer I can give to the Senator is to refer to the vote which was taken in the Senate a few weeks ago on the national commitments resolution. A great majority of Senators who voted on that resolution—and a great majority of Senators voted for it—were Members of either one House or the other of the Congress during the tragic period in which we became more and more deeply involved in Vietnam. Out of the bitterness of that experience, we rolled up the kind of majority behind that national commitments resolution which is now a part of the history of the Senate.

Mr. PERCY. Although I realize my distinguished colleague was in the House last year, and not in the Senate during the debate on the Sentinel system—and I voted against deployment of the Sentinel system—the argument was used in this Chamber, by editorial writers, and by constituents writing to me, "How can you possibly vote against the deployment of an ABM system when the President of the United States has said it is necessary in the national interest?"

At that time, I, together with some of my colleagues, declared that we were voting against it in conscience because we felt it was wasteful, that it would not do the job it was presumed to do, and that it could not defend the cities. We felt we must not lead the country to believe that the cities would be protected once we dragged in the bombs and put them around the cities, for it would escalate the nuclear arms race because it was provocative.

What does one do then, when we say the policy is to support the President, when the next President that came in

said that in the national interest we would not deploy the Sentinel system? In this instance, I think President Nixon was absolutely right. One of the great decisions he has made was to take away the potential for the deployment of a thick system which he himself, by word and implication, said was wasteful and could not accomplish what it was pledged to do. He himself said it would be provocative and would call forth retaliation from the Soviet Union, just as we responded when we thought they were building an effective ABM system.

So that I hope we never hear this argument again on this floor, that we must vote for something merely because the President in his judgment says it is in the national interest. I simply could not feel, in principle, that that should be the principle that governs us. If each of us is governed by conscience and what we think is right, we have a deep responsibility to create and form our own judgment because we are a totally separate and distinct branch of Government.

Mr. MATHIAS. The Senator is absolutely correct. As a Member of the other body last year, the same question was before the House, whether to deploy the Sentinel system. I voted against it last year. I do not believe that we are yet at the point that we should deploy.

However, how easy our job would be, easy to the point of being superfluous, if all we had to do was accept the President's recommendations. In fact, I venture to say to the Senator from Illinois that neither he nor I should be here. If that is the way Congress has to act, I do not believe any of us should be here.

This is a duty of conscience as well as of judgment. As the Senator from California said, the President undoubtedly has spent many sleepless nights considering this question. I think that all of us have devoted a great deal of thought and conscience to it.

As I have said before in the Senate, I walked through the atomic ashes of Nagasaki and Hiroshima less than 30 days after both bombs had been dropped. Thus, I know what happens when atomic or nuclear devices fall upon a city, because I have seen the results. If one needs anything to stimulate his conscience, just have that experience.

I know that this body is not only discharging the duty which is provided for it in the Constitution, but it is also discharging the duty which every one of us is called upon by our consciences to perform. That is why I am extremely grateful for the manner in which the Senator from Illinois is conducting this debate this afternoon.

Mr. PERCY. I thank my distinguished colleague very much.

Several Senators addressed the Chair. Mr. PERCY. Mr. President, I am happy to yield to the distinguished chairman of the Armed Services Committee, the Senator from Mississippi (Mr. STENNIS).

Mr. STENNIS. I thank the Senator from Illinois for yielding to me. I commend him for his closely reasoned and well put together speech in which he stated his points with clarity and in a challenging way.

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I think he is really contributing to this debate, although I think his contribution is on the wrong side; but still it is a contribution, and I am glad to salute him.

Let me ask the Senator this question. Virtually all of us here have agreed that there should be a continuation of the research and development program as to the ABM; that it is not only desirable, but necessary. Is that correct? That is the Senator's position, anyway, and I do not know of any dissent from it.

Mr. PERCY. Absolutely. I think that should be clarified once and for all, because in oversimplifying the reporting of the debate, some newspapers and news media have called us pro-ABM and anti-ABM. I do not know of anyone who is anti-ABM or against our having the capability and capacity to deploy, if needed, the finest, the best ABM system that we know how to put together. It is a question of whether we are ready for deployment and do we have to go into deployment now, on the eve of negotiations?

Mr. STENNIS. I think there is unanimity on the part of all of us about the need for continued research and development, which recognizes that there is a problem here that must be contended with.

Mr. PERCY. And evaluation and testing.

Mr. STENNIS. Some Senators have agreed—and I understand the Senator from Illinois has said—that sometime later we may have to have an ABM system. That was one of the points the Senator made. Is that correct?

Mr. PERCY. That is correct.

Mr. STENNIS. So all Senators, then, including the Senator from Illinois, recognize by those positions that there is a threat confronting us, and that we should not just be dilatory; we should be moving to some degree in trying to face that threat.

Mr. PERCY. There is a potential threat, without any question whatsoever. We must guard ourselves against that threat and have the capability for meeting it.

Mr. STENNIS. And try, with the limitations the Senator puts on it, to be able to meet it.

That brings the Senator to the field, then, that his only limitation on the ABM is its deployment and advance testing. That is what the Senator objects to primarily, so far as the weapons are concerned?

Mr. PERCY. I have one other departure, which I should like to make clear, in which I differ with Senators who have opposed deployment. I simply feel that we should give the Department of Defense a little extra leeway. I have to look at it as a man who has spent his entire life in industry. If we cannot reach agreement, if these talks fail, and if we are convinced that we have a system that is reasonably invulnerable and can be deployed and can be truly effective and a deterrent for our second-strike capability, I want to be sure we minimize the loss of time and that we complete the design.

So I would be willing to include as a part of the \$345 million in the bill—this

is not a military spending attack; this is not a charge against the military industrial complex; this is a judgment of whether we should go ahead—a provision to authorize the production of certain long leadtime component parts which take considerably longer than other parts in that design. So these funds would be used not only to perfect the design, but even to take the risk that we might throw away these parts and never use them, but to get the production lines going on those parts that are most difficult to complete.

I would be glad to illustrate, if it is necessary, what I mean by that modification.

Mr. STENNIS. To describe the long leadtime items, does the Senator mean?

Mr. PERCY. The type of components and parts which I have in mind.

Mr. STENNIS. If the Senator wishes to, now would be a good time to do it. It would be well to do it, if it is not classified.

Mr. PERCY. It certainly would not be classified. This is simply a principle. Rather than take the ABM system, which is highly complex, which is composed of computers, radars, missiles, and so forth, let me take an illustration of something which is simpler, but serves the purpose.

Suppose we decide now, with the interest in outer space, to develop, and take the great deal of time needed to develop, a far-out-reach telescope which would permit us to see into the universe much more than we can now discern. The design of a telescope, which we have never put together, has been completed. We have never built it. In fact, it is in the same state of the art as the ABM system is today. We have tested certain parts of it, but not the whole. Say we need 100 of them deployed around the world. Do we go to the deployment of all 100, or do we complete one and build it and test it functionally before we build any parts?

My compromise or suggestion is that what we do is go ahead with our evaluation and testing and build one model and make sure it works, but at the same time we test the parts in the telescope. It would have metal, cylinders, springs, washers, all sorts of retaining rings, and glass components. Some would be simple glass components and some would have deep curves which would be difficult to grind and which would require hand honing. Some of these take years to build, just as parts of the ABM do.

I would be quite willing to authorize the production of those components of the optical system that will take perhaps twice as long as all the other components. If we started grinding 100 sets of the glass and we went ahead with the deployment, we would not have lost a bit of time, because all the other parts of the components could be completed before we completed the long lead-time parts. If we decided they would not work, or perhaps there was some other national priority and we decided not to build the 100 telescopes, then we would have to throw away the lenses that had been made, and we would have thrown away only one or two percent of the cost of the total component parts.

Mr. STENNIS. I thank the Senator.

The Senator recognizes the potential threat, as he calls it, and that something ought to be done about it toward preparation to meet it. So the Senator's objection really goes to that part of the bill which is in the field of diplomacy or international political situations. At least, that is the major part of it. That is where the President comes in. I am one of those who have said that the President's position is entitled to a great deal of consideration. No one stands stronger than I for the legislative branch, the Congress, in making its judgments, and that is a direct mandate in the Constitution, which we have to make here. But is not the President, whoever he may be, probably the best judge of what he needs to take to the negotiating table with him? That is my point. After all is said and done, this is not a matter of opinion; it is a matter of judgment; it is a matter of projecting into the future. It pertains to weapons. After all is said and done, is not the Chief Executive's opinion of what he needs to represent us entitled to a great deal of weight and the most worthy consideration?

Mr. PERCY. I think it is due a great deal of weight. If I may be somewhat partisan, I would say, on the part of a Republican who respects the President and has worked with him over the years, to know I am opposing a man whose judgment I respect so much has given me great cause for sleepless nights. But I also know that, in the end, the President, in this particular instance, though his opinion should be given more weight than anyone else's, is not infallible.

I would like simply to illustrate that by citing the judgment of another President, Lyndon Johnson, who took the advice of the Joint Chiefs of Staff when they said the only way to bring about negotiations was to bomb in the north.

There were many people who believed that for a long time. I did for a long time. I took a position opposite the position of some of my colleagues in my class in the Senate, on national television, opposing the cessation of bombing at that time.

But over a period of months, after many, many deaths, and after agonizing reappraisals, I finally came to the conclusion that the only way to bring about negotiations would be to cease the bombing; and the President of the United States himself rejected his former judgment, he ceased the bombing, and the negotiations in Paris began.

It is another question as to how to make the negotiations successful. But in that case, I could not simply say the President's judgment was infallible and I should not exercise my own conscience and judgment. I did in that case, and I am doing the same thing in this case.

Mr. STENNIS. I do not object to the Senator's exercising his judgment. My point is a good deal farther down the line than that, and, with all deference to the Senator, the bombing, stopping the bombing and starting it, were matters involving an act of war itself, an act of a shooting war going on, where men were dying by the hundreds every day, and we had committed, at that time, close to a

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half million men before the bombing ever started.

With all deference, I do not think the Senator's analogy will hold up. Here we have involved diplomatic relationships at a negotiating table, involving the question of limitation of arms, and so forth. The President of the United States, who is our chosen representative—it makes no difference about party, as the Senator says—needs this weapon at that table, as well as for a part of our national arsenal. I think that if we just withdraw that, or hold back, and say, "You shall not have it, now run along and represent us at this international table," we are cutting the rug out from under him, and will be doing a great injury. I know others think otherwise, and I respect their opinions.

I am confident that ultimately this proposal will prevail. No one can be certain, no one has an absolute answer, no one knows what will be the conditions in 1975.

I conclude by saying again, I think the Senator has put together a mighty good, cogent piece of reasoning here, and I commend him for it. I can tell from the tone of his voice that he is concerned about this matter, and wants to go just as far as he possibly can without supporting the ABM as it is in the bill.

I think the President of the United States did not want to go any farther than he thought was necessary. He has always trimmed these matters down, and, while I do not like to use the word "compromise," he has been very reasonable about it; and I think this is a minimum.

I do not see how anyone can condemn him for changing from the Sentinel to the Safeguard ABM when he did it all in one sentence. Even if his judgment was bad in part, I do not see how it can be upheld in one part and condemned in another. It was his judgment, and a very courageous judgment, too, because the simple thing would have been to say, "Well, in view of all the other troubles we have, let this one go." But he did not do that, and I commend him for taking his stand.

I thank the Senator very much for yielding.

Mr. PERCY, Mr. President, I am very grateful for the Senator's generous and gracious comments, and would like to simply state for the record the deep gratitude that I think this country should have for the distinguished chairman of our Committee on Armed Services. In the past, when the Department of Defense urged deploying Nike-Zeus and Nike-X, Congress had to have an independent judgment in those cases, and the President had to have an independent judgment. President Eisenhower decided not to go ahead; President Kennedy decided not to go ahead; and, if my recollection is correct, though I was not in Congress at the time, I believe that the distinguished Senator from Mississippi was deeply concerned about committing this country to the deployment of a system that might possibly be obsolete before it was finished, that might not be—in the light of the cost-conscious economy and the state of the budget—worth the kind of money we would be

putting into it, and technically might not be ready for production.

I think we were saved \$20 billion to \$40 billion by the Senator's judgment and by his patience. I know that he feels that today conditions are such that it is wise to go ahead. I do not feel that we are hurting the President's hand in negotiations simply because of the word "capability." We have talked about the Russian capability of destroying us many times over. I do not think there is a member of the Politburo who would ever question our capability to produce an ABM system, and a better system than they could ever produce. They have the utmost respect for our technical competence and for our scientific community. But I think they must have read, and certainly read carefully, all of the scientific testimony that we have had about the problems that are involved in this particular system at this particular time.

It has not been fully put to work. That is a statement of fact. It has not been fully tested; that is a statement of fact. It is nowhere near certain that it will provide the kind of deterrent protection that we think it will.

We have mentioned before on the floor of the Senate the vulnerability of the MSR. We know it would be a lot better, now that we are designing for point defense, to have multiplicity of radars and hardened radars. I am not permitted to mention, in open session, the vulnerability of that particular radar; but the Senator knows full well that the SS-9 would never have to be used to knock out that radar today.

A question that has never been raised on the floor of the Senate, to my recollection, and a point of interest to me as I have been trying to research this system, and determine where it is strong and where it is weak—and where it is weak is not from debating holes in it—by asking the Department of Defense what we are doing to strengthen that end of it, because I want us to have the ability to deploy the best system, if we ever need it. The power source alone gives me pause.

I ask the Senator if he would be satisfied with the power source, which today depends on commercial power. We know ourselves, in the midst of a snowstorm—I was in New York City one time when the power went out, and we had to walk up and down all the stairs. We know that power blackouts occur just through natural phenomena, just from overloading, much less a few hydrogen bombs exploding around us.

Can we feel content and absolutely safe with a system using normal commercial power sources, and only shifting to hardened diesel generators if need be, or if as some member of the Department of Defense said, "The balloon goes up"?

We all know, and I know, having been in the military service 3 years, the degree of maintenance that is required for generators, and how to keep them in absolutely tiptop condition, you have to turn them over; and if we have 30 minutes' notice to turn them over, do we know that we would even have a power source to operate this vast complex of

computers, radars, and all of the other paraphernalia required? I mention this, not as a debating point, but as a point that I am probing deeply now, to see what more we may need to strengthen and improve, test and evaluate the integrity of this system, so that, should we ever have to go into one, we will go into a good one.

I do not think the Russians are impressed one bit by our rushing into production today with a system that is as vulnerable as Safeguard is, and that offers as little protection to our second-strike forces as it would, considering the whole complex of second-strike forces we have available to us should we ever need them. We have them and would use them, and they had better not ever believe we would not.

Mr. STENNIS, I do not know whether they are impressed with our moonshot or not. We made pretty good headway, but we had to take that one step at a time, so we started early. I know we have to take this one step at a time also, and I think the bell is already ringing for us to make this much of a start, anyway, this year.

I thank the Senator again for yielding to me.

Mr. DOMINICK, Mr. President, will the Senator yield?

Mr. PERCY, I am happy to yield to my colleague from Colorado.

Mr. DOMINICK, Mr. President, I simply wish to say to the Senator that, while I did not hear all of his talk, I did hear a good deal of his colloquy with the Senator from Maryland concerning the question of the President's requirements. I wish to emphasize a point that I think has been made by the Senator from Mississippi, and also the Senator from Illinois in his colloquy with the Senator from Mississippi, and that is: Because the President has said that in his opinion it is essential to national security, a great deal of weight should be given to that opinion.

Some talk has been reported in the Senate and in the newspapers that merely because the President suggests something, some Senator ought to oppose it automatically. I have heard it said over and over again that, "I am not going to be influenced by what the President's opinion is."

It strikes me that in this kind of a situation, what the President's opinion is and what the Soviet Union's opinion is would be very important to the security of our country. I think the Senator would agree with that.

Mr. PERCY, I would agree. Not only that, but within the last 30 minutes, I have indicated that this is what has caused me sleepless nights and deep concern and caused me to cast aside many projects that I wanted to work on so that I could go back and do research to make certain that my judgment was not wrong in this particular case.

I feel that the President's judgment and the judgment of the National Security Council should be given greater weight than any other single factor and should be taken into account. However, I point out that they have made decisions in the past that have been wrong.

They may be making decisions at present that are wrong. It is possible that they can make decisions in the future that will be wrong.

We have a totally separate responsibility to make our own judgment.

Mr. DOMINICK. I completely agree. As a matter of fact, some 4 years ago I started making speeches and pointing out the need for the Senate and the Congress as a whole to regain some more influence and exercise more judgment in the foreign relations field.

I totally agree with the Senator. The problem as I see it is that a lot of people do not understand this, and that, therefore, as an exercise in independent judgment, they automatically oppose what any President suggests, be he Republican or Democrat. I know that the Senator is not like that, but some others are.

Mr. PERCY. Mr. President, automatically, under either a Democratic or Republican President, I presume that the President for the most part is always acting in the national interest and that he at that stage is above purely partisan action. That is not to say that he is not partisan on occasion. However, when it comes to national security, I could not imagine and could not name any President who has ever been partisan in that respect.

I am naturally partisan in many matters. It is only with the deepest of misgivings that I take a position contrary to that of the President and the National Security Council.

Mr. DOMINICK. Mr. President, in connection with the decision concerning the position the country might be placed in if we do not go forward with the Safeguard system, it would seem to me, having listened to the arguments over a period of about 2½ or 3 weeks, that those who are against the Safeguard system are in fact relying on the offensive capability of our country to inflict a second strike in the middle 1970's.

If our land-based ICBM's that we now have deployed are in fact threatened, then the only position that those who do not want to put up the Safeguard system can take is to say, "We increase our offensive weapons, or we make a preventive strike."

I personally do not want to do either. I do not want to see the number of offensive weapons increased because it might create a real holocaust in the world.

I think, therefore, that when we deploy an ABM system which will defend our credibility, we are doing our best to protect the security of our country. We cannot then be increasing the number of offensive weapons. Does the Senator agree that there is logic in the argument?

Mr. PERCY. Mr. President, I think that there is, except for one point. I think the decision has already been made by the President and the National Security Council that we would not build an ABM system if the Soviet Union does not. So, that decision has been made. Secretary Rogers reiterates the position, as does the Department of Defense and the administration, backed up by every witness we have heard, that if they want to go ahead with an ABM system, we will

go ahead with an ABM system. So, with relation to all of the talk about a Chinese strike and an accidental launch, or whatever it might be, there has been a thorough analysis and appraisal and a balance has been reached on the judgment that if the Soviets want to go out of the ABM business, we will go out of the ABM business.

I regard that as a very significant decision. And I assume that the distinguished Senator would support that decision of the President and the National Security Council and, in fact, advise—as doing the distinguished Senator from Washington—talks getting underway to see if we can reach agreement.

Mr. DOMINICK. That is totally correct. I think in each instance that this has been said, it has also been added that they do not anticipate that the Soviet Union would leave itself wide open to an attack by the Chinese and that, therefore, they would retain a degree of their defensive capability in the ABM system, and that we should, too.

Mr. PERCY. Here I think we are coming into accord. This demonstrates that the proponents and the opponents are not really as far apart, if we clarify the matter, as we did with the distinguished Senator from Mississippi.

It is a question of whether we rush into production. I think we are together here, because I have said many times that if as a result of those negotiations, we both decide that it would be well to deploy an ABM system, I would be perfectly willing to go ahead and do so, because then that would not be provocative. That would not be escalating the nuclear arms race. We would be starting to work together in an area where we think we have a mutuality of interest, to stop the arms race.

I think that would be sensible. But let us wait and see. The President said, "Let us go ahead and get the talks under way by the end of this month."

I do not have any inside information as to what the Soviet Union is willing to do. Perhaps Ambassador Dobrynin is in Moscow now, seeing about the talks.

Let us get under way with the talks and see if they have any real basis for reaching agreement. If so, why should we rush into production at this particular point of an invulnerable ABM system?

Mr. DOMINICK. That is exactly the phrase, "rush into production," that I wanted to question the Senator on.

We are talking about \$345.5 million today, because that is the only deployment phase involved. Included in that figure there is \$600,000 for long leadtime missile components.

We do not have any actual procurement of the missiles involved. We do have the ability to test this system on a deployed basis if we go forward with the long leadtime items we are talking about.

This is not what I would call rushing into production on all the items, in the context that is usually taken. Is that not true?

Mr. PERCY. No; that is not true in the context in which I would say rushing into production. Certainly the distinguished Senator from Colorado has had a great deal of experience with the mili-

tary. And I think I have, not only as an officer in charge of production control a quarter of a century ago in the Navy here in Washington, but also as a defense contractor for some 24 years, and a part of the industrial-military complex.

I am deeply impressed with the inertia of these things once they get going. I would like to reiterate one illustration of what it is like when we get into production and then try to stop it.

Mr. DOMINICK. We cut off the F-111B with no problem last year. We took \$2 billion out of the pending bill with no problem.

Mr. PERCY. Mr. President, I have seen and experienced this inertia and I feel that once we get the production lines geared up and going, we will have 1,000 reasons why we should not stop production.

There is psychologically quite a difference between not going into production on something and going into production on an item and then stopping production. If we try to stop production, there will be thousands of employees and thousands of contractors in 172 different congressional districts which are touched by the ABM.

I think it is exceedingly difficult. And as I have tried to point out before, I think that by going into production while we are still designing, we will lose time in the end. I think the best way to put an item into production is to put it into production after we have finished the research, design, evaluation, and testing. We can then put one together and know that it works.

Then we can go into production. But if we start to go into production on pieces, parts, components, and segments, and such things, and then rush the program through at the same time that change orders, modifications, research, design changes, and testing are being made, we will cause a great waste of money and a considerable waste of time.

Mr. DOMINICK. A philosopher has said that a long journey starts with but a single step. But that does not necessarily mean there must be a long journey every time one takes a single step.

Mr. COOK. My President, will the Senator yield?

Mr. PERCY. I am glad to yield to the Senator from Kentucky.

Mr. COOK. I should like to clear up one point with the distinguished Senator from Colorado. When we talk about improving our offensive capabilities and creating nuclear havoc throughout the world, we ought to make it clear that, as of now, this country—and obviously it is public knowledge—has 1,054 ICBM's. If we MRV them—and that means at least three nuclear warheads apiece—we will have 3,162. If we MIRV them, we can go as high as 10,540.

I should like the RECORD to show, so far as I am concerned, that if it is said we can create a nuclear holocaust by increasing our production of ICBM's, we already have the needed capability for producing a nuclear holocaust. We have enough nuclear warheads to destroy any enemy throughout the world. We have the capability to do that.

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When the American people are given—and I am not saying that the Senator from Colorado has done so—the impression that if we improve our offensive capabilities and produce more, we are in fact putting this country in a position to cause nuclear havoc throughout the world, the people ought to know that the Nation indeed has that capability. I wanted to get this point into the Record.

Mr. PERCY. It is a very valid point.

I think the most important word that has been added to the defense vocabulary was added by President Nixon, who used the word "sufficiency." I feel that we have a sufficiency of second-strike capability as not to cause anyone, other than an utterly mad person, to push that button if they know that we have the capability and will to retaliate, as we certainly do have.

Mr. PELL. Mr. President, will the Senator from Illinois yield?

Mr. PERCY. I am glad to yield to the Senator from Rhode Island.

Mr. PELL. Following up on the point made by the Senator from Illinois, the Disarmament Subcommittee of the Foreign Relations Committee asked a panel of distinguished scientists what would be the effect of a nuclear exchange with present weapons. His reply was that it would not only destroy the Soviet Union and the United States, but that it would also make the Western Hemisphere uninhabitable. So I think the question is whether we will make it uninhabitable or more uninhabitable.

I should like to return to a point the Senator from Illinois mentioned, which struck a chord in my memory. He spoke of first-strike and second-strike capabilities. Am I correct in saying that the Pentagon's definition of first strike is that it means one side can knock out the other side without any appreciable harm to the first side?

Mr. PERCY. That is correct; that the other side does not have the capacity to strike back.

Mr. PELL. Is it not to our advantage, basically, that the present balance of terror be retained? That means that neither side has the capacity for a first strike, but that both sides have the capacity for a second strike. That would be the best way of avoiding nuclear war. To my mind, nuclear war may come from an accident or because of automaticity of response. But it will not come because of a thoughtful decision to the effect taken either in the Kremlin or the White House.

Mr. PERCY. I think that would be my understanding.

Mr. PELL. So it would be best for both sides to avoid having a capacity for first strike. Along the same line, would it not be correct to say that when we examine our present arsenal and add to it the MIRV and the ABM, we will have a capacity for a first strike?

Mr. PERCY. I think the closer we get to that possibly the greater will be the fear on the other side. I am always concerned about someone who deals from fear.

Possibly the buildup by the Soviet Union is giving them the feeling that they can now afford to negotiate. Still, they also know what the buildup is cost-

ing them. They may feel that they now have such a sufficiency to retaliate against us that we will not need a first strike.

I was interested to probe whether there was fear in the Soviet Union that we might make the first strike. It is not possible to test these reactions accurately. I have not talked to any Soviets about it, but I have talked with persons from countries that deal with them. I was shocked to find that there is a considerable body of fear that we will use our weapons. That fear exists among allies and friends in neutral nations. So we can well imagine the fear the Soviet Union might have, because we have dropped the bomb, and we do have a tremendous capacity.

They have escalated, out of fear, to develop a second strike. I do not believe they have the capacity for a first strike. I think they are rational enough human beings to know what would hit them if they ever tried it, because they do not have first-strike capability, in my judgment.

I have heard it said that the Soviet Union is the only country to have a first-strike capability. If by that is meant that they have the capacity to hit us so hard that we cannot retaliate, I have no intelligence that would lead me to that conclusion.

The distinguished Senator from Rhode Island is a member of the Committee on Foreign Relations. He has heard the testimony of many persons and has the advantage of their views. I wonder if he would concur in that judgment.

Mr. PELL. I would. But I think that neither side has first-strike capability today.

Looking at the record, thinking of what has been said in the past, and thinking back to the time of Korea, when some serious leaders in the country discussed the possibility of using nuclear weapons, one can well imagine that the Soviet Union would become anxious and nervous, and that that would be the time when an accident could occur. Therefore, it seems to me that it would be wisest to concentrate on a policy of both sides having a second-strike capability, but neither having a capacity for a first strike. That argument seems to me to be pretty compelling.

Mr. PERCY. The distinguished Senator from Rhode Island has made a valuable contribution to the colloquy. I have not heard the point better expressed.

Mr. TOWER. Mr. President, will the Senator yield?

Mr. PERCY. I yield to the distinguished Senator from Texas, a member of the Committee on Armed Services and a seatmate of mine.

Mr. TOWER. I think the Russian intelligence is probably very good. I am sure that as a result of their intelligence, they are aware that we do not have a first-strike policy. As to the institution of a first-strike policy, we are not so deployed as to be able to launch a first strike. I do not think any Senator would, under present circumstances, authorize a first-strike capability on our part.

The Senator from Texas, who is often regarded as a hawk, would certainly not support that notion. I think there are

reasons to believe that the Soviets, though they may not now have the kind of first-strike capability that would cause them to launch a first strike against us with impunity, be building in that direction. We should not think only in terms of the current situation, but in terms of what the conditions will be in the mid-1970's. That is what we are looking at—not the situation as of now, but the situation as it will be in the mid-1970's.

Mr. PERCY. I think that is the responsibility of the President, the Department of Defense, and the Committee on Armed Services.

Certainly, I know the distinguished Senator from Texas has been called a hawk and I have been called a dove. I am not an ornithologist. I do not know what those terms imply exactly. However, no one should imply that I would not be cognizant that our greatest security does lie in strength and in our will as a people to use that strength, and also in the degree of sacrifice we are willing to make to provide the defense establishment that will put us in a position where we will always have a second-strike capability against any adversary. I would say that I would adopt that as a policy.

Our only question relates to today, 1969. Do we need to take this action in connection with what I consider to be a vulnerable system, to go into production on something that has not been fully proved and tested?

If the Senator could take me to see a Safeguard system so that I might see a complete testing of that system—which I do not think is possible—I certainly would feel we should look at it in the context of what is happening, possibly, in 1975. However, our actions are too often geared to what we think they might possibly do, rather than to what we think they might rationally do.

In my judgment, in the judgment of one of my dearest friends who was Deputy Secretary of Defense in the Eisenhower administration and who was in that Department for 8 years, and in the judgment of many other distinguished and knowledgeable people, it is felt we do not need to deploy, nor should we deploy, the Safeguard system today to maintain a second-strike capability.

Mr. TOWER. Mr. President, those of us who are proponents of the ABM system—and that is, the whole bag of research, development, and deployment—are accused of proceeding on assumptions. I, in turn, have accused opponents of proceeding on assumptions. I am prepared to agree to a stipulation at this point that both sides are proceeding from assumptions. If all of us are honest with each other we can concede that. Certainly, we are making assumptions.

I think my side proceeds more on enlightened and educated assumptions. However, be that as it may, the fact is that if we are proceeding on assumptions, again we come back to what sounds like "old saw" around here and that is that in proceeding on assumptions, if we are going to err, let us err on the side of safety.

To return to testing and evaluation, those two words have been left out of the discussion too much. We talk too

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much about research and development. However, there must necessarily follow, as night the day, testing and evaluation. The fact of the matter is that Admiral Rickover—and I have made reference to this quotation two or three times in this debate and will probably refer to it five or six times more—has said:

You can go through all of the research and development and you can keep on researching and development; but eventually if you are going to determine whether or not the thing will work you are going to have to haul off and make one.

We feel that in a testing and evaluating situation it can proceed on a much more effective basis and provide much more knowledge in time and at much less cost over the long haul.

Mr. PELL. Mr. President, will the Senator yield?

Mr. PERCY. I yield to the distinguished Senator from Rhode Island.

Mr. PELL. Mr. President, I have one question in connection with one of the points raised by the Senator from Texas. I would agree with him that we do not have a first-strike policy. There is no question about that. However, would it not be a correct statement that successful MIRV plus successful ABM equals first-strike capability?

Mr. TOWER. I must say we could not develop a first-strike capability. I do not foresee that we will. At least, we will not be so arranged as to be able to implement a first-strike capability. We are treading on the narrow edge of classified ground here and I am a little hesitant to pursue it much beyond this point. I think it is an enlightened assumption but I think the assumption is that we will not have a first-strike policy.

Mr. PELL. I agree with the Senator that we do not have a first-strike policy.

Mr. TOWER. Indeed, we would not have unless Congress approved it and there will be no first-strike deployment without the knowledge of the Committee on Armed Services, the Committee on Foreign Relations, and this body.

Mr. PELL. I agree with the Senator, but I also wish to add a further thought. I do not wish to push this matter too far. I agree with the Senator's statement about the delicacy of the ground we are on. However, if both the ABM and the MIRV were a success, we would have the capacity, although certainly not the policy; and I think it is very dangerous in this world to even have the capacity.

Mr. TOWER. Even with MIRV, it depends on when there is deployment and whether it is aimed at missile sites or aimed at cities.

Mr. PERCY. Mr. President, I think the colloquy this afternoon again has demonstrated the deep and strong feelings which we all have. We are trying to deal with the facts and we look at the facts in different ways.

Mr. TOWER. Mr. President, will the Senator yield?

Mr. PERCY. I yield.

Mr. TOWER. May I say that that is today's massive understatement.

Mr. PERCY. I believe we do have the second-strike capability. The Russians know it. Let them never be uncertain of the fact that we will continue to keep our

capability so that if we are ever struck we will strike back.

With the program we have for not only hardening, but the deep-rock hardening of our missile silos, our ICBM's, the tremendous power we have in our nuclear submarine fleet, the capability we have to keep that capability ahead of anything the Soviets could throw against it, the thousands of intermediate missiles we have deployed in Europe, with all the hundreds of bombers available for take-off in moments, armed with nuclear weapons, I cannot see that any attack would be made on us or would be made on us by anyone who was rational, or who would not recognize, those things being so, that they would bring forth their own total destruction.

I do not feel that the ABM Safeguard system adds one iota to our national security or our national interest. I think the forthcoming talks, on which we all agree, would get underway in a better atmosphere if we were not in production or going into production on another nuclear system, whether it is offensive or defensive in character.

I yield the floor.

Mr. BYRD of West Virginia. Mr. President, I suggest the absence of a quorum.

The PRESIDING OFFICER. The clerk will call the roll.

The bill clerk proceeded to call the roll.

Mr. BYRD of West Virginia. Mr. President, I ask unanimous consent that the order for the quorum call be rescinded.

The PRESIDING OFFICER. Without objection, it is so ordered.

PROMOTION OF HEALTH AND SAFETY IN THE BUILDING TRADES AND CONSTRUCTION INDUSTRY

Mr. BYRD of West Virginia. Mr. President, I ask unanimous consent that the Senate proceed to the consideration of Calendar No. 311, H.R. 10946.

The PRESIDING OFFICER. Is there objection?

There being no objection, the Senate proceeded to consider the bill H.R. 10946 to promote health and safety in the building trades and construction industry in all Federal and federally financed or federally assisted construction projects, which had been reported from the Committee on Labor and Public Welfare, with amendments, on page 2, line 3, after the word "or" strike out "contractor" and insert "mechanic"; in line 8, after the word "on" strike out "the record after an opportunity for an agency hearing," and insert "proceedings pursuant to section 553 of title 5, United States Code, provided that such proceedings include a hearing of the nature authorized by said section."; and in line 22, after "U.S.C." insert "38,".

Mr. WILLIAMS of New Jersey. Mr. President, on behalf of the Committee on Labor and Public Welfare, I reported H.R. 10946, Calendar No. 311, on July 15, 1969, with an accompanying report, No. 91-320. The act would require all construction contractors and subcontractors to meet health and safety standards on construction projects under contracts

entered into under legislation subject to Reorganization Plan No. 14. Construction is a very hazardous occupation in terms of both the frequency of accidents and their severity. Data for 1966, from the National Safety Council, show that the construction industry had an accident frequency rate of 12.24 per million man-hours worked—a rate that was almost twice the all-industry rate of 6.91.

Department of Labor statistics, higher for most industries than those of the National Safety Council, show very high rates for construction, ranging from 20.7 per million man-hours worked for electrical work, to 24 for heavy construction, to 28.8 for general building, to 43.9 for roofing and sheet metal work.

Additional evidence of the hazardous nature of construction is found in the data which reflect the severity of injuries. The severity rates, indicating how badly workers are injured, place construction with a higher number of days lost to accidents per million man-hours worked than any industry except mining, lumber, and marine transportation.

Put another way, the men who risk their lives erecting the buildings that house the Government of this country, who build our roads and bridges, our State universities and hospitals, these workers do not have the benefits of protective legislation. There are no requirements that safe and healthful working conditions prevail for them. This bill corrects this inequity.

I wish to make some observations concerning due process as part of the legislative history of this bill.

Section 107(d)(3) provides that any person aggrieved by the Secretary's action under subsections (b) or (d) may obtain judicial review. This section is designed to assure complete judicial safeguards for contractors and subcontractors who are aggrieved by actions of the Secretary of Labor.

Other elements of the bill are designed to insure due process in enforcement. For example, the Secretary, under section 107(b), can only determine noncompliance after a formal agency hearing. So too, is a formal agency hearing required prior to the Secretary's determinations under section 108(d)(1).

Mr. President, the report of the committee should be corrected as follows:

First. On page 7, line 5 of section 107(a): delete the word "owrk" and insert in lieu thereof "work".

Second. On page 7, line 8 of section 107(a): delete "," after the word "health".

Third. On page 7, line 9 of section 107(b) after the word "section" insert "after an opportunity for an adjudicatory hearing by the Secretary".

Fourth. On page 7, line 14 of section 107(b) delete the words "a violation" and insert in lieu thereof "noncompliance".

Fifth. On page 7, line 14 of section 107(b) after the word "Secretary" insert "after an opportunity for an adjudicatory hearing by the Secretary".

Sixth. On page 8, line 1 of section 107(d)(3): delete "paragraph" and insert in lieu thereof "subsections".

Seventh. On page 8, line 2 of section 107(d)(3): delete "(1)" and insert in lieu thereof "(b) or (d)".

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nations on the Executive Calendar, beginning with "New Reports."

There being no objection, the Senate proceeded to the consideration of executive business.

The ACTING PRESIDENT pro tempore. The nominations on the Executive Calendar will be stated, beginning with "New Reports."

DEPARTMENT OF JUSTICE

The assistant legislative clerk proceeded to read sundry nominations in the Department of Justice.

Mr. MANSFIELD. Mr. President, I ask unanimous consent that the nominations be considered en bloc.

The ACTING PRESIDENT pro tempore. Without objection, the nominations are considered and confirmed en bloc.

AMBASSADORS

The assistant legislative clerk proceeded to read sundry nominations of ambassadors.

Mr. MANSFIELD. Mr. President, I ask unanimous consent that the nominations be considered en bloc.

The ACTING PRESIDENT pro tempore. Without objection, the nominations are considered and confirmed en bloc.

ORGANIZATION FOR ECONOMIC COOPERATION AND DEVELOPMENT

The assistant legislative clerk read the nomination of Joseph A. Greenwald, of Illinois, to be the representative of the United States of America to the Organization for Economic Cooperation and Development.

The ACTING PRESIDENT pro tempore. Without objection, the nomination is considered and confirmed.

Mr. MANSFIELD. Mr. President, I ask unanimous consent that the President be immediately notified of the confirmation of those nominations.

The ACTING PRESIDENT pro tempore. Without objection, it is so ordered.

LEGISLATIVE SESSION

Mr. MANSFIELD. Mr. President, I move that the Senate resume the consideration of legislative business.

The motion was agreed to, and the Senate resumed the consideration of legislative business.

THE CALENDAR

Mr. MANSFIELD. Mr. President, with the concurrence of the distinguished senior Senator from South Dakota (Mr. MUNDT), and with no loss of time to him, I ask unanimous consent that the Senate proceed to the consideration of measures of the calendar, beginning with Calendar No. 313 and the succeeding measures in sequence.

The ACTING PRESIDENT pro tempore. Without objection, it is so ordered.

MR. AND MRS. WONG YUI

The bill (S. 92) for the relief of Mr. and Mrs. Wong Yui was considered, ordered to be engrossed for a third reading, read the third time, and passed, as follows:

S. 92

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That, for the purposes of the Immigration and Nationality Act, Mr. and Mrs. Wong Yui shall be held and considered to have been born in China.

Mr. MANSFIELD. Mr. President, I ask unanimous consent to have printed in the RECORD an excerpt from the report (No. 322), explaining the purposes of the bill.

There being no objection, the excerpt was ordered to be printed in the RECORD, as follows:

PURPOSE OF THE BILL

The purpose of the bill is to deem Mr. and Mrs. Wong Yui to have been born in China.

SFC. PATRICK MARRATTO (RETIRED)

The bill (H.R. 3379) for the relief of Sfc. Patrick Marratto, U.S. Army (retired), was considered, ordered to a third reading, read the third time, and passed.

Mr. MANSFIELD. Mr. President, I ask unanimous consent to have printed in the RECORD an excerpt from the report (No. 323), explaining the purposes of the bill.

There being no objection, the excerpt was ordered to be printed in the RECORD, as follows:

PURPOSE

The purpose of the proposed legislation is to relieve Sfc. Patrick Marratto, U.S. Army (retired), of Springfield, Mass., of liability to the United States in the amount of \$786.20, the amount of an overpayment of compensation as a member of the U.S. Army in the period beginning June 1, 1950, and ending January 31, 1967, because of an administrative error. The bill would also authorize the refund of any amounts withheld or repaid by reason of the liability.

MR. AND MRS. A. F. ELGIN

The bill (H.R. 6585) for the relief of Mr. and Mrs. A. F. Elgin was considered, ordered to a third reading, read the third time, and passed.

Mr. MANSFIELD. Mr. President, I ask unanimous consent to have printed in the RECORD an excerpt from the report (No. 91-324), explaining the purposes of the bill.

There being no objection, the excerpt was ordered to be printed in the RECORD, as follows:

PURPOSE

The purpose of the proposed legislation is to pay \$317.40 to Mr. and Mrs. A. F. Elgin, of Spokane, Wash., in full settlement of their claim against the United States for reimbursement for the cost of transporting the automobile of their son after they had received official notification that the son was killed in action in Vietnam.

Mr. MANSFIELD. I thank the distinguished Senator from South Dakota for his graciousness.

The ACTING PRESIDENT pro tem-

pore. Under the previous order, the Chair recognizes the Senator from South Dakota (Mr. MUNDT) for an hour and a half.

SAFEGUARD: STRATEGIC NECESSITY AND PATHWAY TO FUTURE DISARMAMENT

Mr. MUNDT. Mr. President, I rise today in support of the appropriations bill for military procurement, as reported by the committee, and against the amendments to delete funds for production and deployment of the Safeguard system.

During the debate that has preceded, Senators have presented carefully reasoned arguments both for and against deployment. Extensive hearings have been held before both the Foreign Relations and Defense Appropriations Committees, on which I am privileged to serve. In addition, we have had much evidence provided to us by our Central Intelligence Agency as it regularly appears before the oversight group headed by the Senator from Georgia (Mr. RUSSELL), on which I also serve. We have listened to many expert witnesses in these hearings. From these lengthy deliberations in three different committees, as well as the Senate debate on this item, I cannot but conclude that it would be dangerous to delay action on Safeguard as is proposed by amendments now before the Senate.

This judgment arises from two factors basic to the future security of the United States. First of all, we must keep the Soviets and any other adversary convinced that no combination of their offensive and defensive weapons could be used against the United States without incurring swift and devastating retaliation. That is what the militarists refer to as deterrent.

Past history clearly demonstrates how easy miscalculation on the part of the enemy can lead it to make an attack which has resulted in our entry into war. As long as an adversary thinks the weapons deployed on both sides are in balance or that advantage is enjoyed by the United States, it would not start an attack. This is the premise. I shall develop the arguments bearing on this concern later in my remarks, but before doing so I wish to comment on the second factor which may be overlooked by the opposition to my point of view.

The objective of all good and sane men on this earth is to reduce and ultimately eliminate the risk of a military nuclear exchange between massively armed powers. I am certain that it is this threat that has opinion so vigorously divided on the issue before us. To many Senators opposed to Safeguard, there is the view that this system if deployed will be a further expansion of the arms race. They argue that as defensive weapons improve, it only triggers greater escalation of counterimproved offensive weapons. One begets the other. And there is some merit to what they say. After all, what has been happening these last 20 years?

LIMITS TO OUR RESOURCES

As a Senator representing a constituency underdeveloped in terms of re-



United States
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Congressional Record

PROCEEDINGS AND DEBATES OF THE 91st CONGRESS, FIRST SESSION

Vol. 115

WASHINGTON, TUESDAY, JULY 22, 1969

No. 122

Senate

The Senate met at 11 o'clock a.m. and was called to order by Hon. MIKE GRAVEL, a Senator from the State of Alaska.

The Chaplain, the Reverend Edward L. R. Elson, D.D., offered the following prayer:

O Thou who art above and beyond but ever near, we stand in Thy presence this day to thank Thee for man, for the majesty and mystery of his person, for the brilliance and ingenuity of his mind. We rejoice that "when the morning stars sang together" at the dawn of time, Thou didst crown all creation by making man in Thine own image, and breathing Thy creative spirit into him.

Eternal Father, we thank Thee now for the new dimensionless and unfathomable vistas opened to all mankind, as by his wisdom and in Thy good providence man has slipped the bonds of earth and soared to lunar lands and spaces. Give Thy servants journeying mercies on the return voyage to the haven of home amongst us on this planet.

As we offer our thanks and praise for the wonder of the realms beyond, we enlist anew in the service of Thy higher kingdom to abolish poverty, to eliminate injustice, to banish hate and war that the sins of earth may not be exported because Thy kingdom of righteousness has first been fulfilled here. Amen.

DESIGNATION OF ACTING PRESIDENT PRO TEMPORE

The assistant legislative clerk read the following letter:

U.S. SENATE,
PRESIDENT PRO TEMPORE,
Washington, D.C., July 22, 1969.

To the Senate:

Being temporarily absent from the Senate, I appoint Hon. MIKE GRAVEL, a Senator from the State of Alaska, to perform the duties of the Chair during my absence.

RICHARD B. RUSSELL,
President pro tempore.

Mr. GRAVEL thereupon took the chair as Acting President pro tempore.

THE JOURNAL

Mr. MANSFIELD. Mr. President, I ask unanimous consent that the reading of the Journal of the proceedings of Friday, July 18, 1969, be dispensed with.

The ACTING PRESIDENT pro tempore. Without objection, it is so ordered.

MESSAGE FROM THE HOUSE

A message from the House of Representatives, by Mr. Hackney, one of its reading clerks, announced that the House had passed, without amendment, the following bills of the Senate:

S. 38. An act to consent to the upper Niobrara River compact between the States of Wyoming and Nebraska; and

S. 1590. An act to amend the National Commission on Product Safety Act in order to extend the life of the Commission so that it may complete its assigned tasks.

The message also announced that the House had passed the following bills, in which it requested the concurrence of the Senate:

H.R. 7517. An act to amend the Canal Zone Code to provide cost-of-living adjustments in cash relief payments to certain former employees of the Canal Zone Government, and for other purposes;

H.R. 11363. An act to prevent the importation of endangered species of fish or wildlife into the United States; to prevent the interstate shipment of reptiles, amphibians, and other wildlife taken contrary to State law; and for other purposes;

H.R. 11609. An act to amend the act of September 9, 1963, authorizing the construction of an entrance road at Great Smoky Mountains National Park in the State of North Carolina, and for other purposes; and

H.R. 11651. An act to amend the National School Lunch Act, as amended, to provide funds and authorities to the Department of Agriculture for the purpose of providing free or reduced-price meals to needy children not now being reached.

HOUSE BILLS REFERRED

The following bills were severally read twice by their titles and referred, as indicated:

H.R. 7517. An act to amend the Canal Zone Code to provide cost-of-living adjustments in cash relief payments to certain former employees of the Canal Zone Government, and for other purposes; to the Committee on Armed Services.

H.R. 11363. An act to prevent the importation of endangered species of fish or wildlife into the United States; to prevent the interstate shipment of reptiles, amphibians, and other wildlife taken contrary to State law; and for other purposes; to the Committee on Commerce.

H.R. 11609. An act to amend the act of September 9, 1963, authorizing the construction of an entrance road at Great Smoky Mountains National Park in the State of North Carolina, and for other purposes; to

the Committee on Interior and Insular Affairs.

H.R. 11651. An act to amend the National School Lunch Act, as amended, to provide funds and authorities to the Department of Agriculture for the purpose of providing free or reduced-price meals to needy children not now being reached; to the Committee on Agriculture and Forestry.

ORDER FOR RECOGNITION OF SENATOR PACKWOOD, SENATOR GOLDWATER, AND SENATOR PERCY

Mr. MANSFIELD. Mr. President, I ask unanimous consent that immediately following the speech of the distinguished Senator from Hawaii (Mr. IWOUYE), the distinguished junior Senator from Oregon (Mr. PACKWOOD) be recognized for not to exceed 20 minutes, to be followed by the distinguished junior Senator from Arizona (Mr. GOLDWATER), for not to exceed 30 minutes, to be followed by the distinguished junior Senator from Illinois (Mr. PERCY), for not to exceed 30 minutes.

The ACTING PRESIDENT pro tempore. Without objection, it is so ordered.

LIMITATION ON STATEMENTS DURING TRANSACTION OF ROUTINE MORNING BUSINESS

Mr. MANSFIELD. Mr. President, I ask unanimous consent that at the conclusion of the remarks of the distinguished Senator from Illinois (Mr. PERCY), there be a period for the transaction of routine morning business, with statements therein limited to 3 minutes.

The ACTING PRESIDENT pro tempore. Without objection, it is so ordered.

COMMITTEE MEETINGS DURING SENATE SESSION

Mr. MANSFIELD. Mr. President, I ask unanimous consent that all committees be authorized to meet during the session of the Senate today.

The ACTING PRESIDENT pro tempore. Without objection, it is so ordered.

EXECUTIVE SESSION

Mr. MANSFIELD. Mr. President, I ask unanimous consent that the Senate go into executive session to consider nomi-

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sources available, for many years I have grappled with the ever-mounting burden of military expenditures. So in serving on both the Subcommittee on the Department of Defense of the Appropriations Committee and on the Foreign Relations Committee, I am concerned when resources are depleted at the expense of urgent necessities to develop our country in agrarian and urban areas—not for ourselves alone, but for the crying needs of the world as well. Practical and credible disarmament would unleash funds to promote the humane objectives upon which this Nation was founded.

So here we are. The dilemma seems to extend endlessly to the future. The threat to national security must be countered. To do so requires larger and larger appropriations and less and less return from the revenues collected. The temptation is strong to cash it all in and hope that the Russians, seeing our good intentions and faced with the same problems, will follow suit.

CHINESE MISSILE THREAT

However, a new problem intrudes. Hardly a week has passed in recent months that the press fails to report a fresh border incident between China and the Soviet Union. These accounts are vague, but some of these incidents have been pretty large scale. And the Chinese have demonstrated under test conditions that they can build thermonuclear warheads. Speculation is frequently voiced that they will begin deploying missiles with nuclear warheads by 1972. Some disagree about the day, month, or year, but no one has said that they are not going to do it sometime in the reasonably early future. Thus, the Russians must be intimidated by the bellicose attitude of the Chinese growing more and more belligerent as an arsenal of nuclear missiles in China draws nearer.

Under these circumstances, it would be foolhardy for either the United States or the Soviet Union to scrap all of its missiles. Some must be kept to preserve the balance against China if not against each other. China must remain convinced that it cannot launch a successful surprise attack. So some minimum level of missiles must be kept by all sides to deter another's possible aggression.

SAFEGUARD AND DISARMAMENT

All right, then, that is the base line toward which we must negotiate. How do we get rid of the rest of the missiles, and stop the submarine and bomber production races? I contend that the salvation is the development of a defensive system such as Safeguard in which both sides, that is the U.S.S.R. and the United States, share the conviction that their defensive missiles are adequate to offset any threat which could be posed by reduced numbers of offensive missiles. That, to me, is the critical but perhaps realizable objective of future negotiations.

There was support for this opinion expressed early in the hearings before the Committee on Foreign Relations. The Senator from Tennessee (Mr. GORE) made the full text of the statement available to Senators, who can find it on pages S3439-S3440 in the CONGRESSIONAL RECORD for April 1, 1969. The witness was

Dr. Donald G. Brennan, recognized as an outstanding mathematician and a highly regarded scientist in the field of arms control. Quoting briefly from his statement, here is what he said:

We might begin at once with a Soviet-American understanding about a ceiling on offensive forces, expressed in inspectable terms such as gross weight, and an understanding that we might both build up defenses. Such an agreement is clearly in the common interest of both the United States and the Soviet Union and should prove realizable. By the mid-1970's, if the defenses are in place and appear to have the capabilities now expected of them, there should be enough confidence in them to begin some gradual reductions of the offensive forces on both sides, reductions which would require only modest inspection because the defenses would (if suitably deployed) sharply diminish the effectiveness of clandestine missiles. The defense would then become even more effective against the then-reduced offensive-force threat, which would facilitate further reductions in offensive forces. Just how far this process might go would depend on the technological and political circumstances then prevailing, but I should not be surprised to find that by 1980 one might reduce the risk of Soviet-American strategic nuclear war to negligible proportions. The defensive forces themselves might, of course, be reduced along the route, but not eliminated. It should be clear that there would be some effective "disarmament" of the offensive-force potentials as soon as the defenses were working, even before direct reductions of the offensive forces.

It is this prospect persuasively argued by Dr. Brennan that is our avenue toward successful disarmament, through Safeguard which I hope those now disposed to the contrary will seriously consider. I think it is vital that we look at the pitfalls that could ensue if we remove this option from any future negotiating table.

RISK OF SOVIET MISJUDGMENT

Returning to the first point, that is, insuring that the Soviet leadership remains convinced of our ability to impose unacceptable counterdamage to their territory and populace if Russia attacks the United States, I should like to bring up some additional points. There are two considerations: intentions and capabilities. The former is difficult to weigh; the latter perhaps not as much so. I am concerned with what these capabilities are, but equally important, what they are believed to be in the minds-eye of Soviet leadership. Here, I cannot help but recall an old Indian saying:

Great father keep me from judgment until I have walked a mile in the other brave's moccasins.

We must very definitely dwell on what the Russians are thinking. They look at our annual "Posture Statement." That is the document that is released each year by the Department of Defense when the Secretary presents the President's proposed military program for the following fiscal year. I am sure Senators are familiar with it. The Russians do not accommodate us quite as well. However, to get the word out to all the officers and in turn the troops from border to border, they do have something somewhat like ours. It is now in its third edition. This very interesting document is entitled "Military Strategy" and is edited by Marshal V. D. Sokolovsky. The ex-

tracts which I will be quoting are from the third edition published in Moscow in 1968. The English translation is not available yet in published form but a copy of the translator's transcript has been made available to me.

In reading the second edition, published in 1964, and the third, published in 1968, the changing attitude among the military leadership of the Soviet Union is very pertinent to the decision the Senate will make on Safeguard.

In my reading of this document, the following quotations are new to the earlier version, portending a greater confidence, false or well-founded, to mount a successful strategic conflict against the West. The document says:

The success of world socialism, which is becoming the decisive factor in the development of human society, the bankruptcy of the colonial system, the unsolvable contradictions of the capitalistic camp, and the desire of the peoples of the world for peace, clearly show the legality of the historically unavoidable downfall of the obsolete world system of imperialism. This strongly motivates the imperialists, primarily those of the USA, to forestall the imminent destruction of their dying system and, by means of war, change the development of world events so unfavorable to them. It is for this reason that modern imperialism threatens the peace and security of nations.

In describing the essence of war, Marxism-Leninism uses as its point of departure the position that war is not an aim in itself, but rather a tool of politics.

Politics prepares war and creates, for the benefit of strategy, favorable conditions in the economic and ideological respects.

The acceptance of war as a tool of politics determines the relation of military strategy and politics, based completely on the dependence of the former on the latter.

The main attention of military strategy is directed to studying the conditions under which a future war may arise, a detailed study of the peculiarities of the strategic deployment of the armed forces, the methods of delivering the first strike and conducting the first operations, as well as the method of strategic utilization of the different services of the armed forces.

The preparation of foreign policy for war includes such measures as the signing of treaties, the formation of coalitions, the safeguarding of the neutrality of neighboring countries, and others.

It is important for military strategy to assure neutrality of a number of countries or of individual countries; this task is also assigned to diplomacy.

The wars between States with different social systems, the highest form of class struggle, are particularly decisive. In wars between States with the same social system, when there are no social contradictions between the antagonists, the political and strategic aims, the experience of imperialist wars show, are usually limited. In such wars, long before economic and military exhaustion of the belligerent states is reached, compromises of various types are possible.

The nature of military strategy is often influenced by such factors as the general historical, national, and political traditions of a country. For instance, Britain in its foreign policy always adhered to a clearly pronounced policy of watchful waiting, over-safeguarding, having someone else do their dirty work for them. This influenced their military strategy, which avoided decisive engagements, refused to take even reasonable risks, and always looked for devious, indirect roads to victory.

It is apparent that when the very outcome of the war depends largely on the number and the effectiveness of the strikes at the

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very beginning of the war, it is hardly reasonable to count on the potential capabilities of a country and to reserve a large part of the manpower for military operations during later periods of war. An overwhelming majority of military theoreticians in the highly developed countries of the world is coming to these conclusions.

Diplomatic and economic struggle does not stop in wartime, but these forms of political struggle are entirely dependent on the decisive form, that of armed conflict.

Under conditions of nuclear rocket war, the resolution of the main aims and problems of war will be accomplished by strategic rocket troops, by delivery of massed nuclear rocket strikes.

Mr. President, I interpolate here, for the benefit of those opposed to the ABM deployment, to suggest that they read this statement with care, direct from the top military strategists of Moscow, made just 12 months ago when they say, "by delivery of massed nuclear rocket strikes."

Mr. President, that is what this debate is all about.

Are we going to stand here and accept with no effective defense against it that kind of massed nuclear rocket strikes which the Russians have told us less than a year ago they expect to deploy against us if war comes?

Surely, Mr. President, Senators should have learned something from reading "Mein Kampf," in which Hitler told the free world in advance what he was going to do, and then did it.

Here we have it in black and white, in the Russian language, translated from their military papers.

They tell us now that if war comes, they expect to deliver massed nuclear rocket strikes against us.

I ask those in this body with little faith in our Defense Establishment, or in the capacity of the great, inventive genius of America—which just last Sunday placed men on the moon for the first time in the history of mankind—to build the comparatively simple devices required in the ABM in order to protect us against the very massed nuclear rocket strikes the Communists, in cold print, have told Americans they will launch against us if war comes, to read their statements very carefully.

Mr. President, that is the nubbin of this debate.

The burden of argument shifts to those who say: "Do nothing, or delay doing something, or engage alone in research and development, but do not deploy the weapon you have built."

What are those Senators going to say to their constituents when those constituents question them as to what they have done to protect America and its people against the announced intention of the Russians to strike us with massed nuclear rocket strikes?

Now, Mr. President, reverting to reading from this very interesting Russian document, I continue:

Ground troops with the aid of aviation will perform important strategic functions in a modern war; by rapid offensive movements they will completely annihilate the remaining enemy formations, occupy enemy territory, and prevent the enemy from invading one's own territory.

Consequently, over-all victory in war is no longer the culmination, nor the sum of indi-

vidual successes, but the result of a one-time application of the entire might of a state accumulated before the war.

Mr. President, let me interpolate again: Let those Senators among us who question the intention, or desire, or capability of the Russians to launch a first strike attack against us, let those Senators who do their homework, read what the Russians have said to their own troops in their military papers in their own language. They put it very clearly. The debate between those Senators who shrug it off and say, "They are not going to try anything very devastating such as an overwhelming first strike. We do not have to be much concerned about that," and get all involved in the forensics and the semantics of what a first strike means, let them read what the Russians have actually said from the top down to their own generals and their troops.

Let me read it again because it is cruelly cold when we see it in print in black and white, as translated from the Russian language. Here it is:

Consequently, overall victory in war is no longer the culmination, nor the sum of individual successes, but the result of a one-time application of the entire might of a state accumulated before the war.

We better be sure we are ready for whatever the Russians mean by "a one-time application of the entire might of a state accumulated before the war." Remember, Senators, the Russians said that we did not. I continue to read from what I believe to be one of the most revealing and significant documents thus far made available to Senators in the course of this debate:

Once the military operations on land and on sea have been started, they are no longer subject to the desires and plans of diplomacy, but rather to their own laws, which cannot be violated without endangering the entire undertaking.

In response to the statement made by the English military theoretician, Kingston-McCloughry—"In the event of such a war, nuclear war, all politics would come to an end and universal mutual annihilation would begin"—Marshal Sokolovsky remarked:

It is quite evident that such views are a consequence of a metaphysical and anti-scientific approach to a social phenomenon such as war, and are a result of idealization of the new weapons. It is well known that the essence of war as a continuation of politics does not change with changing technology and armament.

My reading of Marshal Sokolovsky's "Military Strategy" draws me inevitably to the conclusion that the Soviet military mind, at a minimum, grows ever more strident as their confidence in the proficiency of their weapons has increased. Summarizing my reaction to this document from the study and analysis of this rather amazing and highly illuminating Russian document, the following comments seem valid:

First. The Soviet military-political complex is concerned with the attitude of the Soviet citizen toward the United States. It is using the current Vietnam war to advantage to explain why "mod-

ern imperialism threatens the peace and security of nations."

Second. The Soviets have not changed the doctrine that war is a tool of politics.

Third. In preparation for war, the Soviets continue to adhere to the practice of using diplomacy for signing treaties, forming coalitions, and safeguarding the neutrality of neighboring countries.

Fourth. Under conditions of nuclear war, Soviet military strategy dictates the delivery of a massive number of nuclear rocket strikes and the on-time application of its entire might at the very beginning of the war.

Fifth. When military operations begin, contrary to what they espouse for us, Soviets will not rely on diplomacy because such action could endanger the entire undertaking.

Sixth. The statement, "It is well known that the essence of war as a continuation of politics does not change with changing technology and armament," is very significant. In short, it appears that the Soviets find nuclear war acceptable if it can serve their political objectives.

Other documents are available which are important to our consideration. In "Soviet Rocket Troops," edited by Col. Gen. V. P. Tolubko and published in 1969, the statement is made:

The Armed Forces have now received rockets which operate on new, highly effective fuel including solid fuel. The new propellant has made the operation of rockets extremely reliable and simple. In addition, the new propellant has made it possible to store rockets for lengthy periods and to maintain them in a high degree of readiness for launching. With regard to the Rocket Troops, the author stated that they can perform underground launchings not just of single rockets, but also salvo launchings.

In a broadcast Moscow Radio reported on April 20, 1968, that Soviet ICBM's have highly maneuverable launchers that constantly change their launching position and are always ready for immediate action.

SOVIET ABM EFFECTIVENESS

Turning from the broad scope of Soviet strategic beliefs, I should now like to discuss the Soviets' attitude toward their own ABM. In "Commanders of Fiery Arrows," published in 1964, Marshal Malinovsky is quoted as saying to the 22d Congress of the Communist Party that Soviet scientists and engineers had successfully solved the problem of destroying missiles in flight.

In a book written by T. W. Wolfe, entitled "Soviet Military Policy Trends Under the Brezhnev-Kosygin Regime", Soviet Colonel Rybkin is quoted. He declared that the damages of a nuclear war could be limited by, first, achieving a quick military victory over the enemy, and second, using ABM systems to counter the enemy's missile forces. With regard to the position that nuclear war should be avoided, Rybkin stated that such a position was theoretically false and politically dangerous.

Mr. President, this might be a little statement that our disarmament representatives, soon to be sent somewhere to meet with the Russians, should tuck away in their hatbands when they sit down for their conferences, with Russian theoreticians on record with that statement with

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regard to the position that nuclear war should be avoided. Rybkin stated that such a position was theoretically false and politically dangerous. If nothing else, this thinking on their part should suggest that when, as, and if we negotiate, wherever we meet with them, wherever they meet with us, we negotiate at arm's length and insist, as we always have, and as I hope we always shall, on unchallenged and unchallengeable mutual inspection as a basic point in any disarmaments which are agreed upon.

It is significant that Lt. Col. E. Rybkin also stated that the damages of a nuclear war could be limited by achieving a quick military victory over the enemy and using ABM systems to counter the enemy's missile forces. In other words, nuclear war is practical if you hit the enemy sufficiently hard in your first strike. The deployment of a Soviet ABM system indicates that the Brezhnev-Kosygin regime subscribes to the same theory. It should also be assumed that the Soviet ABM system conforms with Soviet political objectives in the manner outlined by Marshal Sokolovsky in "Military Strategy."

Extracts from still another document, "Soviet Rocket Forces," authored by P. T. Astoshenov and published in 1967, are even more chilling:

The USSR far outstripped the United States not only in creation of intercontinental and other rockets, but also in the area of antimissile defense. All of us with a sense of patriotic pride grasped the report of the Minister of Defense of the USSR about the fact that in our country we have successfully solved the problem of destruction of rockets in flight.

Mr. President, I think I should read that again, for the benefit of Senators who may not have heard it on the floor, but who will get it from reading the RECORD, Senators who are still on the fence or who may have made a hasty decision, on the basis of inadequate evidence, to oppose the ABM because it cannot work, or because, for some curious reason, a Senator sitting under the dome of the Capitol has decided that an ABM around Moscow is unworkable and, on that basis, he has made his decision. I think he would have a hard time discussing with his colleagues, on the basis of what Mr. Astoshenov says, the author of "Soviet Rocket Forces," written in Russian for the Russians, not in English for Americans, but translated for us so we now know what he says, in which he says very definitely:

All of us with a sense of patriotic pride grasped the report of the Minister of Defense of the USSR about the fact that in our country we have successfully solved the problem of destruction of rockets in flight.

Mr. President, that stands as clearly as the path to this country's schoolhouse. We may have beaten the Russians to the moon—we know we have—but they have beaten America to the creation of a defense system for the people against ICBM's—and we know that also. I hope we will not let false pride in an achievement as great as putting a man on the moon cause us to be reckless about our own defenses, on the assumption that the Russians are unable, because they did not get there first in their effort to

get a man on the moon, to have established an ABM system in which they have confidence and in which, they tell their people in their language, they take great pride in having developed.

Continuing to quote from this highly revealing and somewhat disturbing and chilling document of P. T. Astoshenov:

One of our antimissile complexes included long-range pilotless interceptors. During training firing, with the aid of such antimissile missiles, we clearly intercepted the warhead of a ballistic missile flying at cosmic velocity ((orbital velocity)) . . . Still more effective is another Soviet antimissile missile. It is able to destroy the warhead of ballistic missiles at a great distance from the protected objects.

My reason for dwelling on the subject of Soviet attitudes toward nuclear war, strategic missiles, and the interaction of offensive and defensive weaponry is to forestall misimpressions and possible delusions concerning the latitude of choice which they believe they enjoy.

COST OF SOVIET ARMAMENTS

Senators will remember that in the Export-Import Bank debate, having to do with the question of lending U.S. money to the Soviet Union for a Fiat plant—built by Italians, financed by Americans, located in Russia, to make implements of war.

I developed the evidence that the Soviets since 1963 had stripped the domestic sector of their economy to increase the military industrial base. Increases at that time in the Soviet military budget amounted to a staggering 12 percent annually. Studies prepared by the Joint Economic Committee indicate that by 1968 the Soviet military industrial base had surpassed that of the United States. For years now the Soviets have doubled U.S. expenditures for strategic forces. Fortunately the Senate stopped the Fiat deal.

The toll of these investments is high. For, as is known Soviet total production is less than half of ours. The agriculture and consumer-goods sectors have been shoved aside, so much so that productivity in these industries is less than that realized during the Tsarist regimes, taking into account population growth.

So what does this tell us? From 1963 to now, we have consistently reduced our strategic weapon plans, both deployed and for replacements. We have scrapped thousands of bombers; we have limited our interceptor forces; we have stalled and slowed down production of Polaris submarines. And what has the Soviet done? The gesture seems wasted. They have ignored the evidence. Instead, they have redoubled efforts to surpass the strategic posture of the United States.

PROJECTED SOVIET CAPABILITIES

These commentaries from Soviet policy document, written in Russian and now available to us in translation, do not suggest to me that their intentions are growing more peaceful. As I mentioned before, intentions are part of it.

The second part of this concern with respect to the Soviet strategic posture concerns the present and projected Soviet capabilities. Of course, very specific information is highly classified. Some of it we have received in our secret ses-

sion of the Senate. Senators sitting on the appropriate committees have of course learned it long ago.

The chairman of the Committee on Armed Services has made available to Senators a letter which was recently addressed to him in response to his request by Mr. Melvin Laird, our Secretary of Defense. In this letter, the full text of which can be found on page S7865 of the CONGRESSIONAL RECORD of July 10, 1969, the Secretary recounts the great growth in Soviet capabilities as a consequence of the heavy investments. The heart of this assessment, in which CIA Director Richard Helms concurs, is told in the concluding paragraphs from which I will now quote:

1. The Soviet Union could acquire a capability to destroy virtually all of our Minuteman missiles. To be able to do so, in the present context they would need: (a) at least 420 SS-9s with three independently-targeted re-entry vehicles which have a capability of separating from one another by some relatively small number of miles; (b) each of these re-entry vehicles would have to have a warhead of approximately 5 megatons and a reasonably good accuracy; (c) the SS-9s would have to be retargetable; and (d) the range would have to be sufficient to reach all of the Minuteman silos.

2. The Soviet Union could acquire a capability to threaten severely the survival of our alert bombers. To do so in the present context they would need; (a) a force of about 15 Y-class (Polaris-type) submarines on station off our shores; and (b) the ability to launch the missiles on a depressed trajectory.

3. Although we confidently expect our Polaris/Poseidon submarines to remain highly survivable through the early to mid-1970s, we cannot preclude the possibility that the Soviet Union in the next few years may devise some weapon techniques or tactic which could critically increase the vulnerability of those submarines. Nor can we preclude the possibility that the Soviet Union might deploy a more extensive and effective ABM defense which could intercept a significant portion of the residual warheads. In any event, I believe it would be far too risky to rely upon only one of the three major elements of our strategic retaliatory forces for our deterrent.

In summary, Mr. Chairman, it is entirely possible that the Soviet Union could achieve by the mid-1970s a capability to reduce, in a surprise attack, our surviving strategic offensive forces below the minimum level required for "Assured Destruction," and thus gravely weaken our deterrent. In my judgment the overall strategic balance between the United States and the Soviet Union is much too close to run that risk. Therefore, something more must be done now to ensure a favorable strategic balance in the mid-1970s and beyond.

Short of achieving a workable agreement with the Soviet Union on the limitation of strategic armaments, which will take some time, we are convinced that the approval of Phase I of Safeguard would be the most prudent and economical course we could pursue at this particular juncture. This action would place us in a position to move forward promptly not only with the defense of our Minuteman and bomber forces should the Soviet threat develop as I have described, but also with the defense of our population against the Chinese ICBM threat should that emerge during the next few years.

In your letter of July 3rd, you also asked whether the Director of Central Intelligence, Richard Helms, concurs in my formulation of the threat. I have furnished a copy of this letter to Director Helms and he assures me

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that he has no disagreement with the statements concerning the potential Soviet and Chinese Communist strategic capabilities as seen from the intelligence point of view.

The Senate has debated ABM and delayed development and deployment for 5 years now since the Soviets began deployment of their system. The Soviets, from the information I have related previously in my remarks, properly see this to their advantage. The country-to-country comparisons are going down, down, and down on our side and up, up, and up on theirs.

As I have said before, we must have nuclear disarmament. I share the opinion of others that the world's needs cry for a stop to this folly of continuing nuclear stockpiling of arms, one country as against the other.

I look forward to promising results when the President's proposed arms limitations talks begin. But I am a realist. Having made this huge investment, at great sacrifice to their economy, what do you think the Soviets are going to say when we propose, "You break up your antimissile system and we'll tear up our blueprints?" Why, of course, they will laugh at us; the terms are not equitable; they would never enter into such a one-sided concession, and they should not be expected to do so.

Beyond this, returning to the point previously made concerning the legitimate apprehension that both the United States and the Soviet Union must share toward the day Chinese nuclear missiles appear on the launching pad, I firmly believe the avenue for successful disarmament is toward the direction of "light offense—heavy defense." Technology and the pace of earlier developments leave too little promise for other alternatives.

As Senators, by our oath of office to support the Constitution, we are pledged to provide for the common defense. Greatly expanded quantities of Soviet nuclear weapons and higher confidence in them held by the Soviets if not offset by matching United States defense will, in my opinion, leave us short on that oath. The time to ante up is here; though the cost be high, we cannot shortchange our Defense Department experts who say we must increase the deterrent of the United States.

To my knowledge, no other weapon system has been subjected to such intensive and protracted research as the Safeguard. Dr. John Foster, who before committees of the Senate has established a record for avoiding premature commitments, states that an ABM system is now ready for production. He had expressed reservations in years before. In 1966, 1967, and 1968, he said there was more testing to be done, more experiments required. Now, he says, we can have confidence. He is the Government's No. 1 expert in these matters; we are not. I abide by his counsel. If we are ready and the requirement is clearly there, and I believe it is, let us get on with it, thankful that through Providence we are prepared to fulfill our obligations to our fellow countrymen and support the President.

ABM IS AMERICA'S BEST INSURANCE PURCHASE

Mr. President, it is now very apparent that even among those Senators who op-

pose President Nixon's Safeguard ABM package, some are having serious "second thoughts" about the wisdom and defensibility of their all-out opposition, including some who curiously enough voted to support the ABM program sent us by President Johnson a year ago, although that was a far more extensive and expensive program, but who now with a Republican President have announced opposition to the far less expensive and more effective ABM program sent us by President Nixon. Some of those who have consistently opposed this defensive installation whether proposed by a Democratic or a Republican President are also backing down a bit from their earlier all-out opposition to ABM.

We have before us a variety of amendments which while different in detail, all propose that we continue the research and development expenditures for ABM but that by one device or another we delay and deny the deployment without which, of course, the R. & D. expenditures lose their reality of purpose. Certainly, if we do not intend to install and deploy the results of the research and development, it occurs to this Senator we had better spend our money on some other weapons systems designed to protect our lives and security rather than to go on the record for spending vast sums of money for research and development of an ABM system we decline to test out in the laboratory of life through early deployment.

Still, many Senators who just do not quite trust the early judgments they have made to curtail this ABM development which our military leaders and experts tell us is so important to the protection of our peace and our people, now urge us to adopt an amendment which would still provide all of the research and development dollars required but then deny our country the benefits and the protection which can come only from actual deployment on the sites selected as essential to our national defense. To me, Mr. President, this is an inconsistent position for any Senator to take on an issue of this magnitude.

It seems to me it is inconsistent to attempt to straddle the fence by financing the expensive blueprints but denying the dollars required to complete the construction and installations required for the blueprints, or the research findings if you prefer, to be put to effective use.

And how much, Mr. President, is involved in that part of this appropriation required for the deployment phases of ABM? I asked that question of Secretary of Defense Melvin Laird when he was a witness recently before our Senate Committee on Foreign Relations. That was a closed session, but subsequently portions of the testimony were released. The part I am about to read is part of that which was subsequently made available to all Senators.

Mr. President, here are the facts as recorded in those hearings and I quote, now beginning on page 41 of our committee report date June 23, 1969:

Senator MUNDT. Mr. Secretary, can you give us the exact difference in terms of dollars between research and development on ABM which everybody seems to favor, and the controversial phase of deployment?

Secretary LAIRD. As far as this year's budget is concerned, Senator, the total amount involved we have asked this Congress for is—

The CHAIRMAN. That is 1970.

Secretary LAIRD. 1970.

The CHAIRMAN. Fiscal?

Secretary LAIRD. \$800 million in fiscal year 1970. President Johnson and Secretary Clifford asked the Congress in their original fiscal year 1970 budget for \$1,800 million in NOA. (New obligatory authority). This has been reduced by President Nixon's request to \$800 million for procurement, R. & D.—the total program as far as Safeguard is concerned—for fiscal 1970.

Senator MUNDT. I have seen Secretary Packard quoted on the difference in cost if we did what everybody wants to do, which is research and development, and if we started the deployment preparation for this next fiscal year, which would be \$400 million.

Secretary LAIRD. That is approximately correct because of the total amount in this budget about \$400 million is in the research and development area.

Senator MUNDT. What we are really arguing about then, to make it clear, is whether or not to put \$400 million in this budget for deployment.

Secretary LAIRD. That is approximately correct. That figure is not exactly \$400 million. I will supply the exact figure for the record. (The following note was later added by the Defense Department: the revised fiscal year 1970 budget includes about \$393 million in NOA (new obligatory authority) for deployment.)

I think it is about time in this debate, Mr. President, that we get down to specifics and to precise cost figures about the controversial question "to deploy or not to deploy?" The fruits of the research and development program which virtually all Senators now appear to favor.

How much is a billion dollars? With a total American population of slightly over 200 million people, Mr. President, a billion dollars is almost exactly five dollars per man, woman, and child in the United States. With this in mind, any school boy can use his competence in division and determine that the \$393 million involved in the deployment costs and aspects of this debate on ABM come to substantially less than half a billion dollars—less than \$2 per man, woman, and child in America, in that portion of this appropriations bill required for the current fiscal year.

In other words, Mr. President, we can buy the protection provided by the full Nixon Safeguard ABM program by adding the cost of less than \$2 per individual American more than what even the most determined opponents of ABM appear willing to spend for research and development of the same weapons system.

For \$2 per American, we can buy this important insurance against national catastrophe for an entire fiscal year. Next year and for the next several years—if Russia remains adamant and refuses to join with us in some nuclear arms limitation formula—we would continue to pay approximately \$2 for each of us to keep this insurance policy in force against the potentiality of an atomic attack.

Mr. President, verily, I believe the Safeguard ABM system is indeed America's best insurance purchase. Many people spend more than \$2 for trip insurance on a single vacation trip by air. Others thoughtlessly buy a \$2 ticket at a race

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track and think nothing of it. In New York City, for example, one "night on the town"—one visit to a theater, a night spot, or a first-class restaurant would cost the customer much more than his entire share of the Safeguard system for the next 10 years—once you separate out the deployment costs from the total ABM package, and I repeat again, even many of the opponents of ABM—perhaps most of them at this time in the debate—have now come around to recognizing the merit of this system by demonstrating a willingness to finance the research and development required. They object only to the \$2 per year per individual in this country which is the additional cost involved in providing the essential deployment required to make certain that what has been designed as a protective weapon will function effectively as such.

Mr. President, while I totally disagree with the position, I can understand a Senator's motivation when he denounces the entire ABM concept and votes to deny, unilaterally, to the United States the means to defend itself. While I think a Senator is terribly and dangerously in error when he votes to kill entirely the ABM defensive weapons system to protect the United States on the basis "we might better use the money for educational purposes, for pollution control, or to enrich life in our urban centers," I can also understand the motivation causing him to make this unthinking and unreasoned mistake in his choice of spending priorities. But what I cannot understand, is either the logic or the motives of a Senator who says he is willing to vote what the Defense Department requests for research and development of an operative and effective ABM complex and then also votes to deny his Government the right to test it for workability and to deploy it at its operational sites so that we can learn from the laboratory of life whether we have come up with the optimum answer to our self-defense or whether still additional research is required to eliminate any possible deficiencies in the system.

A SUMMARY OF THE ARGUMENTS INVOLVED

Mr. President, after the lengthy and significant debate in the U.S. Senate, it seems to me that the arguments pro and con with regard to this ABM decision boil themselves down to five significant areas of disagreement. It would seem that any Senator evaluating this debate who decides for himself that on as many as three out of five of the controversial issues the weight of the argument is with one side or the other, that Senator would want to vote "Yes" or "No" depending upon where his judgment leads him in deciding these basic issues. In fact, since the security and survival of our country are involved, I would think that if on any one of these five basic issues a Senator is driven by judgment or conscience to accept the affirmative side, he should vote "Yes" and support the President's ABM position.

I would now like to summarize what I believe to be the pertinent points in controversy.

First, there appears to be dispute among us as to the "Do we need to make a maximum effort to safeguard our

country against a possible attack from Russia or China" argument?

On this point, Mr. President, I sincerely believe the weight of evidence overwhelmingly supports the thesis that the United States of America must never permit itself to lag behind the military strength of its potential enemies if our lives and our freedom are to remain secure. The surest path to war insofar as the United States is concerned is to permit our defenses to become outmoded or inadequate to the point where some foreign power or creed is led to believe that it can blackmail us into capitulation or, failing in that, that it has the military power to impose its will upon us. Thus, I firmly believe that to remain free, we must remain strong, and that to enjoy peace, we must endure the costs of a totally adequate and sufficient defense system.

Second, is the "Will it work effectively" argument as related to the proposed Safeguard-ABM defense proposal?

It appears to be on this issue that a large part of the controversy has developed. Equally competent nuclear scientists are divided on this issue, although the predominant expert military opinion believes the ABM to be both an effective and a necessary development if we are to come up with the capacity to take a possible first strike from a foreign foe and have the retaliatory power not only to strike back but—and this is most important—to demonstrate to such a foe that a surprise attack launched against us would be suicidal from the standpoint of the attacker. Once a potential enemy comes to believe that we can recover from a surprise attack and return against that enemy a thoroughly devastating strike against him, there is little likelihood that he will engage in such a self-defeating act of war.

However, Mr. President, debate will never determine an accurate answer to the question, "Will it work?" The only way to be sure on that point is to research, develop, design, and deploy an ABM system which can be tested on its operative site. Additionally, I should add that if those of us who believe it will work are wrong and should win the vote, all we shall have lost is the money expenditure involved, but if those who oppose the ABM and believe it will not work are wrong and should win the vote, we may, indeed, have lost everything dear to all good Americans—including a second chance to try to rectify this tragic error in judgment.

Mr. President, I submit it is far better to have the ABM system developed and not need it than it is to need it and not have it available.

Third comes the "Can we afford it" argument as related to the ABM.

Earlier in this presentation, I have pointed out that there is, indeed, a very small dollar involvement in this debate between those who would proceed with research and development and deny deployment and those of us who would spend the added \$2 per year per American individual required to add the needed deployment to the costs of research and development.

I just cannot see the wisdom in spending vast sums for the research and de-

velopment of a weapons system and then enacting a legislative prohibition against utilizing the fruits of these efforts through testing them thoroughly by deployment on their sites of proposed operation. On this point, Mr. President, I believe more Americans are concerned about the question, "can we afford longer to delay this necessary addition to our defense system?" than are concerned about the question, "can we afford the \$2 per year per individual required to make sure we are able to defend ourselves and our military deterrent to the maximum required?"

Fourth, we have heard much in this debate about the "will it help or harm our efforts to enter meaningful negotiations with the Russians on nuclear disarmament" argument?

Mr. President, Russia, as we all now know, already has an ABM system installed around Moscow and is testing and developing additional antiballistic missiles. We have none. I completely favor pressing forward with nuclear disarmament talks with the Russians because, in the end, I firmly believe the only complete protection against possible mutual annihilation through a nuclear war is to set up a system of complete nuclear disarmament accompanied by unchallenged and unchallengeable mutual inspection rights on both sides.

To bring this about, however, we must mutually disarm and both sides must cut back and destroy their nuclear armaments to a degree that neither side has any advantage over the other and neither has the capacity to make an effective attack against the other—whether by surprise or following some demanding ultimatum.

On this point it seems to me every realist in the Senate must recognize that for the United States to have any chance of inducing the Russians to join us in such a mutual disarmament of our nuclear weapons, it is imperative that we do not permit the U.S.S.R. to out-strip us or to out-arm us in any important aspect of nuclear armament. And, make no mistake about it, Mr. President, the monopolized capacity—or the believed capacity—to ward off any atomic attack through use of antiballistic missiles is too great an advantage to give to any potential foe of the United States.

Certainly, should the Senate deny our Government the right to proceed with an ABM system we would be sending our negotiators with the Russians to the conference table devoid of any "trading stock" in this area of discussion.

Does any Senator really believe that any American negotiator could go to such a conference and successfully say to the Russians, "We propose as an important step in disarmament that you tear down and demolish your ABM installations on which you have spent many billions of dollars, and in return we shall promptly tear up our blueprints and shut down our research laboratories." To assume that, Mr. President, is to attribute to the Russian Communists a naivete and a stupidity which they simply do not have.

Fifth, the final major point in controversy is the argument involving the "should we concentrate on producing of-

fensive nuclear weapons of greater and greater sophistication and destructive power or should we balance our military posture by including an effective defense against the other fellow's striking power?"

On this point we should remember that this is the United States that we are arguing about. Were we a totalitarian power, bent on aggression, and subject to the whims of a single individual, quite an argument might be made in favor of developing a striking power so fearsome and so destructive that we could rely upon our will and capacity to kill or to frighten any potential foe from ever making an attack against us. However, we want neither war nor domination nor imperialistic acquisition. We want peace in these United States.

We will never launch a surprise nuclear attack against any foe. All Americans know that. More important, Mr. President, all foreigners also know that. Therefore, unless we maintain a safe balance of our defenses against our offensive striking power we sharply lessen the deterrent to war represented by our nuclear might.

I should also like to emphasize with regard to this issue, the very practical and perceptive point made the other day in the highly persuasive and effective speech made by Senator WIN PROUTY, of Vermont, when he was outlining his reasons for supporting the ABM. Once we have developed an effective defense against the other fellow's intercontinental missiles, we shall have evolved a procedure whereby we need not rely solely upon launching our own missiles on a murderous trip through the skies to kill hundreds of millions of people in other lands. Once we have the capacity to intercept and destroy incoming missiles, we will have "bought ourselves some highly valuable time" to first ascertain the source of an attack upon us, and to determine whether by accident or by design, before being compelled to launch against an enemy our highly destructive nuclear missiles.

A protective screen capable of warding off an atomic attack against us and capable of providing protection for our retaliatory striking power—and perhaps, eventually, for many of our centers of population and production—gives us a "second choice" before committing our country to the callous business of exterminating an entire nation as our sole and only available defense against an attack against us which conceivably might emanate from the impetuous action of a single madman or even come as the result of accident rather than intention.

Mr. President, on balance, it appears to me that there is only one sound, prudent, and responsible decision we can make when it comes time to vote on the President's request to move forward with his proposed Safeguard ABM system. We should comply with that request.

We should vote to approve the modest request for funds and the meaningful request for authority to assure our fellow countrymen that our country will never fall prey to any foreign power seeking to impose its way of life and its domi-

nation over us. To do that safely and surely in this modern era, we must research, develop, and deploy the best available offensive and defensive weapons system that the state of the art provides. In the instant case, Mr. President, that means we should approve the committee's report in support of ABM.

Mr. President, I suggest the absence of a quorum.

The ACTING PRESIDENT pro tempore. The clerk will call the roll.

The bill clerk proceeded to call the roll.

Mr. INOUE. Mr. President, I ask unanimous consent that the order for the quorum call be rescinded.

The ACTING PRESIDENT pro tempore. Without objection, it is so ordered.

ORDER FOR RECOGNITION OF SENATOR ALLEN

Mr. BYRD of West Virginia. Mr. President, I ask unanimous consent that following the address by the Senator from Illinois (Mr. PERCY), the distinguished and very able junior Senator from Alabama (Mr. ALLEN) be recognized for not to exceed 20 minutes.

The ACTING PRESIDENT pro tempore. Without objection, it is so ordered.

ORDER OF BUSINESS

The ACTING PRESIDENT pro tempore. Under the order previously entered the Senator from Hawaii is recognized.

ANTI-BALLISTIC-MISSILE STATEMENT

Mr. INOUE. Mr. President, the most crucial decision facing this first session of the 91st Congress, and perhaps this and a number of subsequent Congresses, is the decision now before us on deployment of the antiballistic system known as Safeguard.

This decision has been much debated. It has been the subject of much controversy in our Nation's press and our Nation's colleges. It has been the subject of extensive hearings and debate in our Armed Services Committee and here on the floor of the Senate. It has been debated throughout the life of this Congress and this administration and was debated in preceding Congresses. Despite this lengthy and full examination of the Safeguard system it continues to divide men of good intention, of deep concern and commitment to the welfare and security of this Nation.

The debate divides our experts as it divides our citizens and the Members of this body. This division is no less real among those of us on the Armed Services Committee who have heard all the secret testimony than among the Members of the Senate as a whole, who have now also heard a summary of that testimony. And as a measure of the profoundness of this issue we see a public equally polarized.

The division is not a partisan one albeit a larger percentage of the President's party supports his proposal than is true of the opposition. But the division

is real, and the decision we are about to make is of critical importance to the future of this Nation and the peace of the world.

A number of issues have been raised about this system's deployment which casts doubt as to its cost, its workability, its justification, and which question its potential effect upon our security, upon our adversaries' decisions, and upon the very future of civilization.

While the decision we are about to make is a most crucial one I would suggest its true significance is not based on the question of technical feasibility, although serious doubts are justified. The inability to test this system operationally will always limit our knowledge of its reliability. We are being asked to approve a system indescribably complex. We are being asked to authorize deployment of a system for which some components are still undeveloped and untried.

I do not question our ability to develop a system which will destroy some incoming nuclear warheads in flight. But whether the ratio destroyed is one in four or three in four will not alter my opposition. Even if we accept the estimates that our ABM could destroy more than 70 percent of incoming nuclear warheads those which will not be stopped will make the halting of others a matter of small moment.

The degree of its perfectibility is not the crucial issue, however. How many strikes, fifty or more times as powerful as the bomb at Hiroshima or Nagasaki, are we willing to consider acceptable? I refuse to support a national policy which envisions such destruction as acceptable.

Neither is the decision we are about to make of such significance because of its cost. This is true whether we calculate that cost to be merely the \$759,100,000 in this authorization bill, or \$7.9 billion, \$12 billion, \$40 billion, or even an eventual several hundred billion dollars, as has been estimated by some. Demands on our resources have never been greater, nor our unmet needs more obvious or more pressing, but savings alone do not justify my opposition.

Yes, we have good reason to question the allocation of our resources when this Government requests \$44 for the education of each American boy and girl while requesting \$20,400 for ammunition for each North Vietnamese, and Vietcong regular or guerrilla estimated to be in South Vietnam.

We have good cause to be concerned when we find an administration so short for funds at home that it will slash \$25,000 from our tuberculosis program in Hawaii while going forward with the development of an F-14 fighter plane which will have a price in excess of 100 times that for each plane.

We have good cause to question our system of national priorities when we cannot find funds to feed poor children or save our cities, while the billions spent in the name of national security go largely unquestioned and unchecked. But cost is not the primary reason for my concern.

Nor is my concern primarily a response to the changing rationale being put forth in defense of the deployment

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of an ABM system although we have good reason to question its shifting rationale. A system is suspect which is sold first as the answer to a possible attack by the Chinese on our cities only to be repackaged—after objection by those to be saved from such an attack—with but slight modification. It is now sold as the ideal weapon to protect our missile silos from a Russian first strike and our cities from accidental attack. We have good reason to question a defense system designed against an assumed threat which the Secretary of Defense and the Director of our CIA cannot agree as being a goal of the Soviet high command. But my deepest concern is not primarily because this is indeed a "missile in search of a mission."

Nor is my concern so great because of the inconsistencies of those who advocate deployment, although this too causes me some uneasiness. We find the President defending a two-site system while his Secretary of Defense refuses to endorse a proposed compromise because it fails to provide authorization for the acquisition of 12 sites.

While I am concerned with the testimony which demonstrates that our Safeguard system can be overwhelmed by the enemy through only a relatively small increase in his offensive capacity neither is this the reason for my ultimate objection. Rather that objection is based on my firm belief that we are now at one of those watersheds in our Nation's history when we must decide our course for administrations and generations yet to come.

I believe we must make a decision now as to whether our security and our future lies in the direction of ever increasing levels of armed might and another great step in the arms race, or whether we will finally also take some risks in the name of peace. For let there be no question about it—an additional giant step in this arms race—even with a so-called defensive weapon—will only heighten the level of terror. To deploy Safeguard is not to embark on a course without risk. It is not a harmless American "security blanket."

We Americans have spent a thousand billion dollars in defense against a possible Russian attack since World War II. Many billions of these have been wasted as we now know. This is not to say that the threat was not real but rather that our mutual response has provided no real security but only an increase in the level of terror.

In his June 4 Air Force Academy address, President Nixon stated:

The adversaries in the world today are not in conflict because they are armed. They are armed because they are in conflict and have not yet learned peaceful ways to resolve their conflicting national interest.

I believe that such a view of the world is unreal and unrealistic. The level of arms is not alone the result of conflict but also increases the level of conflict. Our response in the Cuban missile crisis was not a response to a new level of conflict but a response to the introduction of a new level of armed threat. We developed MIRV in response to Galosh, not because Galosh represented a new

level of conflict; but, rather, because it might make inoperative some of our retaliatory power.

Today we are at long last moving toward negotiations with the Soviet Union over our mutual level of armaments. For us at this time to upset the delicate parity which presently describes our relationship is to destine those negotiations to failure.

I say this not because I believe the Soviets will automatically respond favorably to a unilateral reduction in our military capability, for I do not believe they will. Nor do I take this position because I believe the Russians will respond to a sign of weakness on our part with restraint on theirs. They will not.

I oppose present deployment of the ABM Safeguard system because it will in fact frustrate our efforts at achieving a higher level of security. Security can only be achieved through a mutually agreed upon limit on the level of our armaments. The Russians will never agree to negotiate meaningful reductions from a position of announced inferiority. If we seek to negotiate with a new weapon system as one more high card in our deck, then they will refuse until they likewise have acquired an added increment of power—and so the cycle continues while our cities smoulder, our poor remain underfed, our air grows ever more polluted, and our dreams for a better future are daily tarnished and frustrated by the demands of today's escalating arms race.

We must, therefore, move forward to the pending negotiations while in a period of delicate balance—as equal participants—seeking a mutual victory over the forces of conflict which have so dominated our thoughts and our lives. If we have learned a single lesson from these past 25 years of negotiation and competition with the Soviet Union, it is that every stimulus we provide engenders their response. The atomic age and the age of intercontinental ballistic missileery has brought us to that stage where there can be no hope for peace nor for victory over a like armed adversary through increased power. The only possible victory is a mutual victory over the continuing upward spiral in the level of armaments. This, then, must be our search.

Our deterrent capacity remains. Such deterrence is based not alone on our land-based ICBM's but includes our Polaris fleet, our strategic bombers, and the additional nuclear striking power we have in our arsenal at sea and abroad.

I urge, therefore, my colleagues in the Senate to join with me in opposition to this so-called Safeguard system. We are at an important juncture in our Nation's history, and indeed in the history of man. The choice is clear. The time is now.

ORDER OF BUSINESS

Mr. GOLDWATER. Mr. President, I suggest the absence of a quorum.

The ACTING PRESIDENT pro tempore. The clerk will call the roll.

The bill clerk proceeded to call the roll.

Mr. GOLDWATER. Mr. President, I ask unanimous consent that the order for the quorum call be rescinded.

The ACTING PRESIDENT pro tempore. Without objection, it is so ordered.

The Chair would advise the Senator from Arizona that the Senator from Oregon, who was to speak next, is not in the Chamber and, therefore, under the previous order, the Senator from Arizona (Mr. GOLDWATER) is recognized.

Mr. GOLDWATER. Mr. President, I thank the Chair. I will be very happy to yield to the Senator from Oregon when he comes into the Chamber, with the understanding that—

The ACTING PRESIDENT pro tempore. The Chair would suggest to the Senator from Arizona that he should proceed now with his entire statement.

Mr. GOLDWATER. I thank the Chair.

ABM DEBATE—GENESIS

Mr. GOLDWATER. Mr. President, as a member of the Committee on Armed Services and as a concerned American citizen, I wish to address my colleagues at this time on the military procurement bill with special emphasis on that part of it which deals with the administration's request for the Safeguard ABM system.

As my colleagues are aware, I returned to the Senate this past January after a 4-year absence. And because of this, I have taken the trouble recently to go back and trace the genesis of the argument for a missile defense in this country to counter, in part, the vast, three-stage Galosh system which the Soviet Union has been deploying over the past 5 years.

Mr. President, I think that we have heard so many arguments pro and con and listened to so many different kinds of scientific experts and military strategists that we may have obscured the most simple, fundamental reason why this Congress must approve an ABM.

That reason is that President Nixon, acting in his capacity as Commander in Chief of the armed services, has recommended the Safeguard system as an essential requirement for the defense of the American people. Since this dispute arose some years back, two Presidents, three Secretaries of Defense and succeeding members of the Joint Chiefs of Staff have all argued the necessity of erecting a missile defense in this country.

It is imperative, I believe, for us to understand that the officials with the very best information about this Nation's defenses and this Nation's vulnerabilities are in agreement on the need for an ABM. Against this, we have the very active and vocal opposition of many members of this Senate and of the intellectual and scientific communities.

Let me make it abundantly clear that I mean no disrespect to my colleagues, nor for the distinguished professors and scientists who oppose ABM, when I state that the safety of the American people is far too important to be left to the judgment of non-experts.

The American people elected President Johnson as their Commander in Chief in 1964 and he recommended an ABM system for their protection. He was supported in this decision by former Defense

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Secretaries Robert McNamara and Clark Clifford. By the same token, the American people elected Richard Nixon as their Commander in Chief in 1968, and he recommended an ABM system for their protection. In this he was supported 100 percent by the present Secretary of Defense Melvin Laird.

I believe it makes a great deal of difference—much more difference than it has been accorded during these days of debate—to understand that it is one thing to stand outside the arena of direct responsibility and oppose a system for the defense of 200 million Americans, and it is quite another thing to act as President or Secretary of Defense and carry on your shoulders the very heavy and very direct burden of responsibility for the safety of our people.

It is easy enough for a member or even all the members of the Senate Foreign Relations Committee to decide a matter of military importance and argue the point on the Senate floor in connection with this military procurement bill. It is even something different for members of the Armed Services Committee—who come closer to that arena of responsibility of which I spoke—to stand in opposition to our Commander in Chief, to our Secretary of Defense, and to our military Chiefs of Staff.

But I wonder how many of the opponents, if they were to find themselves tomorrow sitting in the oval office of the President and feeling the awesome weight of official responsibility, could reject the advice of his military advisers and forgo the deployment of a missile defense system designed to protect the people he has been elected to lead.

Mr. GORE. Mr. President, will the Senator yield?

Mr. GOLDWATER. I am happy to yield.

Mr. GORE. The Senator has just raised a question of the propriety of acting contrary to the recommendation of the Joint Chiefs of Staff with respect to the deployment of an ABM or other methods to protect the people. Is that correct?

Mr. GOLDWATER. I would not say that was correct in my interpretation. I can understand how the Senator could understand it that way. I said previously that I made no criticism, nor would I deny any Member, the right to act as he feels. I merely say that I do think deference should be paid to people who have been trained throughout their lives in strategic and tactical problems and weaponry. That is my position.

Mr. GORE. I thought I heard the Senator correctly. Would the Senator mind reading the last sentence he read just before I asked him to yield?

Mr. GOLDWATER. I wonder how many of the opponents, if they were to find themselves tomorrow sitting in the oval office of the President and feeling the awesome weight of official responsibility, could reject the advice of his military advisers and forego deployment of a missile defense system designed to protect the people he had been elected to lead.

Mr. GORE. Now will the Senator yield?

Mr. GOLDWATER. Yes.

Mr. GORE. The reason why I asked the Senator to yield at that point was that it was the Sentinel model of the ABM system that was designed to protect the people of our cities. The Joint Chiefs of Staff urgently recommended that; urgently recommended the deployment of an antiballistic missile system around our principal cities. Indeed, they said it was necessary for our national security that the people of our principal cities be protected by the deployment of an ABM system.

It would be interesting to know the precise date when the Joint Chiefs of Staff changed that recommendation. This is one secret that we have not learned. So far as the record shows, the Joint Chiefs of Staff recommended the deployment of the Sentinel model of the ABM until, after a little political commotion in Boston and Seattle and Chicago, there was a political recommendation that the deployment of ABM be changed from about the cities to around two missile complex sites in Montana and North Dakota. These facts make the sentence which the Senator just covered quite interesting, indeed.

Mr. GOLDWATER. Of course, the Senator realizes that I was not here when the system he is referring to was voted by the Senate. I returned either shortly before or shortly after the decision on Safeguard was made. So I do not think I can say any more than what I have said in the sentence the Senator asked me to reread. I do not think I would change it unless I were privy to what went on here when the so-called thin system was voted on.

Mr. GORE. What I wished to suggest to the Senator was that the present ABM deployment is not, in fact, designed to protect the lives of the people. Instead, it is proposed to protect certain missile silos. So when I heard the Senator make the statement, I rose to suggest to him that he might wish to revise the sentence.

Mr. GOLDWATER. No; I would not wish to. Because of the Senator's reference to people, I think that the defense of any weapon system is a defense of the people. It may be a roundabout way, but to put all our eggs in the defense of the cities, I think even the proponents, as well as the opponents, of the ABM will admit would be a very difficult task. We developed a weapons system that was designed to protect this country by its being a threat. If we do not protect it and it is not a constant threat, it offers no retaliatory possibilities at all. I look upon this deployment as a people saver, even though it is indirect, a defense of weapons.

Mr. GORE. Will the Senator yield further?

Mr. GOLDWATER. I yield.

Mr. GORE. In the context of nuclear war technology, and in view of the enormous stockpiles of offensive nuclear weapons possessed by both the United States and the Soviet Union, it appears to the senior Senator from Tennessee that the only measure of protection of American lives, the only measure of security for either country is the avoidance of nuclear war. And in that context,

it is difficult indeed for me to see how the proposed ABM system provides any protection, whatsoever, to the American people. Indeed, after months of study, it is my conclusion that it would render the people less secure, not more secure.

Mr. GOLDWATER. Well, of course, I think that is one of the bases on which the opponents and proponents disagree in this matter. I see in this ABM system a system that will protect our weaponry, and therefore a system that can add to our retaliatory capability.

I will join the Senator from Tennessee in hoping and praying that we can have a meaningful discussion with the Soviets on disarmament. I would be the chief advocate for it. But I have not seen anything in my years that would lead me to believe that such a discussion either is imminent or that it would be productive. I hope I am as wrong as I can be. I have no more choosing for this type of weapon than does the Senator from Tennessee.

Mr. President, I continue with my statement.

I would ask each and every Member of this body to try and place himself behind that Presidential desk flanked by the American flag and decide once and for all that he could afford to rest the safety and the security of all peace-loving Americans on the assumption that our potential adversaries will conclude an honorable agreement for arms limitations.

Sitting in such a seat of responsibility, can any of us here today state definitely that the construction of a purely defensive system comparable to the one that already exists around the major Russian cities would set off another round in the so-called arms race?

Could any of us, sitting in that seat of responsibility, decide that domestic problems were far more important than the possible safety of the people involved in those problems? Could we convince ourselves that the rebuilding of our inner cities and the construction of badly needed urban renewal projects would lessen the danger of a possible enemy attack?

Could any of us sit at that desk and say to ourselves because some scientist believed that the Safeguard will not work, we should not attempt it at all? In fact, I might say, Mr. President, that after what happened this past weekend, I cannot believe that any scientist or any American can say about any idea, "It will not work." What we did in reaching and walking on the moon called for much more precise computerization and activity than would be required with the weapons system we are talking about.

Do we not remember that other Presidents were told that the A-bomb would never work and that development of an H-bomb was not feasible?

Are we not eternally grateful to the late President Franklin D. Roosevelt for moving ahead with the Manhattan project and obtaining what was then considered the ultimate weapon before it fell into the hands of the madman, Adolf Hitler? Are we not grateful to former President Harry Truman for his courage and foresight in overriding the opposition

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man's total experience. We honor them for journeying into the unknown and for bringing back to us some of the experiences of man's feeling when he walks on another planet.

On July 15, 1969, I placed in the CONGRESSIONAL RECORD at page S8148 a petition from my constituents in Texas asking that the day man walked on the moon be declared a holiday. On July 16, President Nixon declared Monday, July 21, 1969, a day of participation for all the people of this Nation, in man's first landing on another celestial body. Not only did this Nation participate; virtually all of mankind with access to broadcast news media participated. Never in the history of mankind have so many people of so many different nations participated with such elation at one event in the history of man.

The victory of Armstrong, Aldrin, and Collins was no military victory; it was no conquering of people; it was no laudation of man over his fellow beings. It was an exploration in space for all mankind, a conquering of space, a conquering of the realm of the unknown, in the hope that man might find there benefits to humanity.

Some writers say that man seeks another Eden. I think that he seeks whatever is unknown. It is the intellectual curiosity of man to unlock the secrets of nature and the secrets of the universe and to apply those secrets, not selfishly to his own use, but unselfishly for the progress of the human race. It is in this spirit that I commend Neil Armstrong, Edwin "Buzz" Aldrin, and Michael Collins, and congratulate NASA and all those who participated, for this great achievement in the history of the human race.

CONCLUSION OF MORNING BUSINESS

The PRESIDING OFFICER. Is there further morning business? If not, morning business is closed.

AUTHORIZATION OF APPROPRIATIONS FOR FISCAL YEAR 1970 FOR MILITARY PROCUREMENT, RESEARCH AND DEVELOPMENT, AND FOR THE CONSTRUCTION OF MISSILE TEST FACILITIES AT KWAJALEIN MISSILE RANGE, AND RESERVE COMPONENT STRENGTH

The Senate resumed the consideration of the bill (S. 2546) to authorize appropriations during the fiscal year 1970 for procurement of aircraft, missiles, naval vessels, and tracked combat vehicles, and research, development, test, and evaluation for the Armed Forces, and to authorize the construction of test facilities at Kwajalein Missile Range, and to prescribe the authorized personnel strength of the Selected Reserve of each reserve component of the Armed Forces, and for other purposes.

The PRESIDING OFFICER. The Senator from Tennessee is recognized.

Mr. BYRD of West Virginia. Mr. President, will the Senator yield for the purpose of a short quorum call, with the

understanding that he will not lose his right to the floor?

Mr. GORE. I yield.

Mr. BYRD of West Virginia. Mr. President, I suggest the absence of a quorum. The PRESIDING OFFICER. The clerk will call the roll.

The bill clerk proceeded to call the roll.

Mr. BYRD of West Virginia. Mr. President, I ask unanimous consent that the order for the quorum call be rescinded.

The PRESIDING OFFICER. Without objection, it is so ordered.

ABM, DEFENSE AND SECURITY

Mr. GORE. Mr. President, the destructiveness of nuclear war today makes the avoidance of war between the nuclear powers the only measure of their mutual security.

Never before have two great nations had such a mutuality of interest as now exists between the United States and the Soviet Union. It is the mutuality of self-preservation—the first law of nature and man.

This places a very high value on deterrents—deterrents to the initiation of nuclear war. This equation of deterrence has particular application today between the United States and the Soviet Union.

When the proposed deployment of an anti-ballistic-missile weapon system is considered in its broad context, it is my opinion that it would endanger rather than enhance our security. It would likely make an armaments limitation agreement more difficult, if not impossible, to attain, and thus ultimately could degrade our deterrence.

We foresaw years ago that our strategic bombers were becoming vulnerable. We decided to build the Minuteman.

We foresaw the possible vulnerability of the Minuteman, so despite the great cost, we built a fleet of nuclear missile submarines. Rightly or wrongly, our offensive capability in this regard is now being augmented by replacing the Polaris missile with Poseidon missiles.

Now, in spite of the fact that each of our 41 nuclear submarines may soon have the capability of destroying 150 cities, an addition to all other destructive power, it is urged that we must now deploy an anti-ballistic-missile system around two missile sites in Montana and North Dakota.

This ABM system is a weapons system in search of a mission. We have heard every possible kind of argument for it, and many of these are contradictory. We were told at first that we had to have an ABM because of the Chinese threat. The Chinese do not even have an ICBM.

Next it was said that we had to have an ABM because the Russians had an ABM of their own around Moscow. But now it is clear that this system is mostly of the kind that we considered obsolete years ago, and that it has only 64 interceptors to stop our thousands of warheads, in the event they were used.

We were told next that we must have an ABM system because the Russians were building a missile defense throughout Russia. But now it is clear that this Tallinn system has no significant capability against missiles.

Until a few months ago, were told by

the Joint Chiefs of Staff that our security required deployment of ABMs around 25 or 50 cities to protect our people. Then all of a sudden we were told that defense of the people in our cities is impractical and impossible. Apparently because of a commotion in Boston and Seattle, it is no longer necessary to the security of this country that we protect the people of our cities.

We are told that we must begin to deploy the ABM so that we can test its operational capability, something that can better be done at Kwajalein, where our test facilities are located.

Finally, we are told that we have to protect our deterrents. Even if this were necessary, the proposal would at the very best, or very most, involve only a small fraction of our nuclear weapons and, according to many experts, ill-suited to the purpose.

So, this weapons system, though eagerly searching for a mission, surely has not yet found it.

Former Secretary of Defense Clark Clifford, in a recent speech, said:

The hard fact is that we may never again expect to be in as favorable a position as we now enjoy for entry into talks about a freeze in strategic nuclear armaments. Technological developments may well make any arms limitation agreement more difficult to develop and enforce a year from now, or 6 months from now, than it is today.

The Senate has ratified a treaty, the Nuclear Nonproliferation Treaty, which obligates us to enter into good faith negotiations for a limitation of the nuclear armaments race. The conference, we hope, is soon to begin. The 18-nation Disarmament Conference is underway in Geneva. Yet another escalation in the nuclear armaments race is now proposed.

Our real security rests in stopping the nuclear armaments race, not in promoting it.

The Constitution assigns to the President the responsibility of being Commander in Chief of the Army and Navy of the United States. But it assigns to the Congress the broad responsibility to "provide for the common defense and general welfare of the United States" and the specific powers "to raise and support armies" and "to provide and maintain a navy."

The responsibility of the Congress to provide, through legislation, for the common defense is not optional but obligatory and carries with it, pursuant to the principle of the separation of powers, the duty to reach independent judgments. The powers of the national government were deliberately divided because, as Madison wrote in the Federalist:

The accumulation of all powers, legislative, executive, and judiciary, in the same hands, whether of one, a few, or many, and whether hereditary, self-appointed, or elective, may justly be pronounced the very definition of tyranny.

There are other definitions of tyranny—and other forms. The strong can be tyrannical—but so can the weak. Pride often tyrannizes—and so does fear.

William Pitt once said:

Necessity is the argument of tyrants, it is the creed of slaves.

Tyranny has been called the antithesis of law; it might also be called the enemy of choice.

We in the Congress are now facing a choice. We must choose wisely and not under the compulsion of pride or fear.

The Congress is now in the process of discharging its responsibility through its annual review of the request of the President for authority and funds to be allocated to the Department of Defense.

The use of nuclear weapons at Hiroshima and Nagasaki—the only times they have ever been used in warfare—ushered in a new age in the development of arms and armaments. But compared to the destructive power of the nuclear weapons now in the arsenals of the United States and the Soviet Union, the atomic bombs of Hiroshima vintage are as but mere toys. The awesome destructive power of modern weapons employing the principles of hydrogen explosion, and the capacity of both ourselves and the Soviets to produce and deliver them has led to the kind of arms stalemate that has aptly been called "a balance of terror." The sophisticated nuclear devices deployed today in silos and in submarines, as well as in long-range bombers, are perhaps the first weapons of which it might accurately be said that they were produced, not for use in war, but as a means of avoiding war. Rational men of whatever persuasion are bound to understand that there can be no winner in a nuclear exchange. Surely the leaders in the Kremlin, our major nuclear adversaries, understand this, and I daresay that the leaders in Peking will understand it as their nuclear capability becomes more sophisticated and as they join the still limited club composed of major nuclear powers.

All this is but another way of saying that we do not produce and deploy nuclear weapons to further any desire on our part to destroy the Soviet Union, or anyone else. We produce and deploy nuclear weapons primarily for the purpose of convincing any potential enemy that a nuclear attack upon the United States will bring sure and sudden destruction upon the attacker.

Today both the United States and the Soviets have what can properly be called a credible deterrent. We have the capacity, even though struck a mighty first blow, to retaliate sufficiently to destroy any attacker—and our leaders would have, I believe, the will to retaliate. On the other hand, the Soviets could likewise inflict upon us so much damage in the way of lives and destruction as to make meaningless any discussion of who might be the winner of a nuclear conflict.

Thus, the basic underlying issue in the debate on the Safeguard ABM system is whether deployment of this system, as proposed by the President and the Department of Defense, would enhance or damage our chances of avoiding nuclear war and the devastation that nuclear war would bring. This was the theme that underlay the arguments for and against the system as presented to the Disarmament Subcommittee, and this is why I stated to Secretary Laird when he ap-

peared before the subcommittee that I wished to "join issue" with him on this, his principal argument.

Although proponents of ABM deployment still from time to time pay lip service to the mission of defending against a Chinese attack in the 1970 time period and to defense against accidental launches, neither of these alleged missions for Safeguard is seriously advanced as justification for deployment. Militarily, proponents rely almost entirely upon the mission of defending Minuteman missiles from possible attack by the Soviet Union as justification for ABM deployment.

And so, Mr. President, let us examine this proposal in the light of the only true measure of whether it will enhance the security of the people of the United States—will the proposed ABM deployment aid our efforts to avoid the outbreak of nuclear war? Will Safeguard make more credible our capacity and our will to retaliate and thus deter a would-be attacker from launching an attack he might otherwise launch?

It is my considered opinion that an ABM system is not needed to establish or preserve a credible nuclear deterrent and that it would not effectively contribute to our deterrent if a need could be established. Further, it is my view that deployment of Safeguard at this time would intensify the arms race, make more difficult if not impossible the attainment of an arms limitation agreement, and thus imperil, rather than enhance, the security of the people of the United States.

The characteristics of a credible deterrent include both the capacity to retaliate and the will to do so. It is not sufficient that we possess the capability and the will to use it—it is also necessary that potential adversaries know that we have the capability and that they believe we would employ it. Thus, in order to analyze the effect of Safeguard deployment it is necessary that we consider not only what it is and what it might be capable of doing, but also how it might be regarded by the Soviets and what would be their reaction to it.

In fact, granted all the assumptions of ABM proponents concerning the threat, a strong case can be made that deployment of any kind of defensive missile system would actually degrade the credibility of our deterrents. As I pointed out earlier, the effectiveness of our deterrents is a function of both our capability and our will. No matter how many weapons might survive an attack, their existence will not effectively deter a would-be aggressor unless he believes we would use them to retaliate. If we possess only offensive missiles, then the only means we would have with which to respond to an attack would be the counterattack. If an aggressor should conclude that we might delay launching missiles at him until we learned the results of our efforts to shoot down the missiles he had launched at us, he might more readily conclude that he could attack without unacceptable risk of damage to himself. Many military tacticians have relied on the adage that "the best defense is a good offense," and, until recently, this has been the approved concept of our nuclear defense posture. Now, apparent-

ly, the administration professes to believe we can no longer rely on this concept because it presumably believes that our offense is not good enough. I do not agree. If any aggressor knows that the only way we can react is to send death and destruction his way, he is more likely to use restraint than if he is permitted to think we may have a choice between defense and offense.

Mr. President, it seems clear to me on the basis of the facts as they appear from evidence submitted to the Disarmament Subcommittee that this Nation does not need the Safeguard system to preserve the credibility of our retaliatory capability; that the proposed plan would, at best, be only marginally effective and quite expensive; and that its deployment well might degrade credibility of our determination to retaliate. On this basis, some might argue that we should go ahead because we just might be wrong about our nuclear strength vis-a-vis the Soviets and that no harm could come from adding defensive capability to our offensive capability.

But much more than just the expenditure of enormous sums of money is involved. Continued escalation of the nuclear arms race constitutes inherent danger of the greatest magnitude. The action-reaction phenomenon that has characterized the arms race for the past two decades has already resulted in the production and deployment by both ourselves and the Soviets of sufficient weapons to destroy each other many times over.

If this madness continues, it may well be, as Dr. Herbert York puts it, that we shall have to rely upon machines to determine whether doomsday has arrived.

The Disarmament Subcommittee, which I have the honor to chair, held a series of hearings on how to protect and defend the United States, at which arguments for and against the Safeguard system were heard. Secretary of Defense Laird, Deputy Secretary of Defense Packard, and Gerard Smith, Director of the Arms Control and Disarmament Agency, and others presented the administration's case before the subcommittee. Secretary of State Rogers did so before the full Foreign Relations Committee. And Secretary Laird and CIA Director Richard Helms discussed various questions relating to the ABM before the full committee in a classified executive hearing, a sanitized transcript of which is on each Senator's desk. The outside experts who testified before the subcommittee, in the order of their appearance, were:

Dr. Hans Bethe of Cornell University, former director of the Theoretical Physics Division at Los Alamos, member of President Eisenhower's Science Advisory Committee, winner of the Nobel Prize for physics in 1967.

Dr. Donald G. Brennan, of the Hudson Institute, a past president of the institute.

Dr. Daniel J. Fink, of General Electric, former Deputy Director of Defense Research and Engineering in the Department of Defense.

Dr. Carl Kayson, director of the Institute for Advanced Study, Princeton University, Deputy Special Assistant to

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President Kennedy for National Security Affairs.

Dr. James R. Killian, chairman of the Board of MIT, Special Assistant to President Eisenhower for Science and Technology.

Dr. George B. Kistiakowsky, of Harvard University, President Eisenhower's Special Assistant for Science and Technology and member of the President's Science Advisory Committee in both the Eisenhower and Kennedy administrations.

Dr. Wolfgang Panofsky, director, Stanford Linear Accelerator Center, Stanford University, member of President Kennedy's Science Advisory Committee.

Dr. George W. J. Rathjens of MIT, Director of Weapons Systems Evaluation Division of the Institute for Defense Analyses, former Chief Scientist for the Advanced Research Projects Agency, Department of Defense and also former Special Assistant to the Director of the Arms Control and Disarmament Agency.

Dr. J. P. Ruina of MIT, former Director of the Advanced Research Projects Agency and former president of the Institute for Defense Analyses.

Dr. Marshall D. Shulman, director of the Russian Institute, Columbia University.

Dr. Allen S. Whiting, Center for Chinese Studies, University of Michigan.

Dr. Herbert York, of the University of California at San Diego, former Director of Defense Research and Engineering in the Department of Defense and member of President Eisenhower's Scientific Advisory Committee.

Dr. Jerome B. Wiesner, provost of MIT, Special Assistant to President Kennedy for Science and Technology.

Dr. Edward Teller, associate director of the Lawrence Radiation Laboratory, University of California and former director of the Livermore Laboratory.

Dr. Donald F. Hornig, vice president, Eastman Kodak Co., Special Assistant to President Johnson for Science and Technology and presently a consultant at large to the President's Science Advisory Committee.

Dr. Gordon J. F. MacDonald, vice chancellor, University of California, Santa Barbara, former executive vice president of the Institute for Defense Analyses and a member of the President's Science Advisory Committee.

Dr. Eugene P. Wigner, professor of mathematical physics, Princeton University, recipient of the Nobel Prize for Physics in 1963.

Collectively, these men represent great wisdom and experience in scientific and foreign policy matters. All of them have held high government positions. All are recognized and acknowledged leaders in their fields. Not all of them were opposed to the deployment of the Safeguard system but most of them were, as will be clear from my remarks today, and among those opposed were all four former Presidential Science Advisers—Drs. Kistiakowsky, Killian, Wiesner, and Hornig.

In his testimony before the subcommittee on March 21, the Secretary of Defense listed five objectives of the so-called Safeguard system. For the sake of orderly examination, I will discuss them

in the order in which he listed them, not in the order of their importance.

The first objective was described by Secretary Laird as follows: He told the subcommittee.

It clearly rejects a provocative expansion into a heavy defense of our cities against a Soviet attack.

Secretary Laird then went on to observe that, first, the original Sentinel system could have been construed as a provocative deployment because it would have been deployed around cities. The Soviets could thus have concluded that it was aimed at making it possible for us to strike first because we would be able to defend against a retaliatory attack. The Safeguard system, on the other hand, cannot be construed as provocative because it protects missile sites which shows that we are interested only in insuring that a Soviet first strike could not destroy our capacity to retaliate; and second, thus, the Safeguard system's "direction is away from arms escalation" because it will "require no reaction at all from the Soviet Union—provided the Soviet Union has a responsible deterrent nuclear war policy, as we do here in the United States."

The subcommittee hearings brought out the following points regarding this first objective listed by the Secretary of Defense.

While the Department of Defense has declared that the decision to deploy Safeguard "rejects a provocative expansion into a heavy defense of our cities," merely declaring that a decision is not provocative obviously does not insure that others will agree with that declaratory judgment. Despite the fact that we are ahead of the Soviet Union in the number of nuclear warheads we can deliver, and the further fact that we have more than enough nuclear warheads to destroy the 50 largest cities in the Soviet Union many times over, we regard their ability to deploy about the same number of ICBMs as we have deployed, and their construction of a primitive and ineffective ABM system around one of their cities, as provocative. At least, the administration has been provoked into recommending the deployment of an ABM system, justifying it on many grounds, as will be clear in my remarks, but principally on the ground that the Soviets are deploying a number of missiles with large megaton warheads similar, it should be noted, to the Titan II missiles that we decided years ago were not as effective as Minuteman missiles with smaller warheads. We have a tendency to regard the deployment of almost any Soviet weapon or weapons system as provocative. Why should they not regard as provocative our deployment of an ABM system which is more effective than theirs and will have many times more interceptors?

Was the Sentinel system rejected, or to put it more accurately amended, because the Soviets considered it provocative—or because the Americans it was designed to protect considered it provocative? The Secretary of Defense told the subcommittee that the fact the decision to amend the Sentinel system was announced soon after public protests

against the construction of certain sites was "coincidental" as far as he was concerned. The coincidence, I must admit, strains my credibility.

I also find it difficult to understand why the Soviets should agree with Secretary Laird that we have a "responsible" deterrent policy and that therefore deployment of the Safeguard system will not "require" them to react. As a number of eminent witnesses before the committee pointed out, we first developed multiple reentry vehicles, or nuclear warheads, and then multiple independently-targeted reentry vehicles, or MIRV's, as well as Poseidon missiles on our submarines in response to their development of an ABM system. Secretary Laird was the sole witness to deny that our MIRV was a response to their ABM. He claimed that MIRV was "not related to Galosh"—the ABM system partially deployed around Moscow—"because we started appropriating funds for the development of this program prior to the time we knew Galosh was in being." But his own deputy, Mr. Packard, does not agree, for when talking about the Soviet installation of "an ABM system around Moscow" he commented that "we had a proper counter to the Soviet moves and possible intentions for we were developing multiple guided warheads that could be installed on strategic missiles," and he made it plain that in his mind there was "no question that the appropriate response to the ABM defense of cities is a large number of small multiple warheads." Dr. Kistiakowsky said flatly that the development of MIRV's was undertaken "upon learning of the start of the deployment of the Soviet ABM." And both General Wheeler and Secretary of the Navy Chafee, in their testimony before the Armed Services Committee, said that the development of Poseidon was necessary because of the Soviet ABM system. I quote General Wheeler's statement:

Poseidon is necessary to assure the continued effectiveness of our fleet ballistic missile system against Soviet targets as they become defended by anti-ballistic missiles.

I now quote Secretary Chafee:

Therefore, we must continue our efforts to insure that we anticipate Soviet technological advances and avoid the loss of our deterrent effectiveness. Such a development is the Navy's Poseidon missile, designed to maintain the effectiveness of our sea-based strategic weapons despite the introduction of Soviet anti-ballistic missile systems. The Poseidon weapon system will be ready to meet this threat and to continue the sea-based deterrent strength that has been so important to our security in the sixties.

Thus, anticipating an effective Soviet missile defense—anticipating a fact that is not yet a fact—we began to deploy weapons to neutralize that defense. Faced with part of an ABM system around only one Soviet city, Moscow—the so-called Galosh system of 64 defensive missiles, to use the figure provided by Secretary Laird, which would be ineffective against an American missile attack of more than 64 missiles or a smaller number of American missiles using sophisticated penetration aids—we began the steps which could increase the number of our targetable missile warheads by fitting land- and sea-based mis-

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siles with between three and 10 or more multiple independently targeted warheads. And now, anticipating a future Soviet threat to our land-based missiles—again anticipating a fact that is not yet a fact—we propose to deploy Safeguard to defend against that unrealized capability. Given our reaction to anticipated Soviet developments in the weapons field, how can we expect them not to react in anticipation of the continued growth of ours?

Dr. Herbert York told the subcommittee:

No one today can outline in detail what kind of a chain reaction a Sentinel or a hard-point defense deployment would lead to.

Dr. York termed the view that the deployment of the Safeguard system would mark the end of the chain reaction the "fallacy of the last move"—the assumption that we could make a move in the nuclear weapons field and expect that our nuclear adversary would not react. And proceeding with phase I of the Safeguard system—the deployment of defensive missiles around two complexes of offensive missile sites—is, of course, not one last move but two, for there is little reason for the Soviets to assume that we will not proceed to phase II and the deployment of defensive missiles in 12 sites throughout the country and around the Nation's Capital.

In explaining the "option" to move to a second phase, Mr. Packard showed the subcommittee a chart which called for constructing the full number of 12 sites if there were a "greater" Soviet submarine threat to the SAC bomber force or if the "Chinese ICBM threat continues to increase." Surely we cannot expect the Soviet Union to stop their production of Polaris-type submarines when they have only eight and we have 41 and when we are in the process of replacing Polaris with Poseidon, which will multiply the number of our submarine-launched missiles by a factor of 10 or more. And as the Chinese are still testing missiles, but do not yet have an ICBM, it seems likely that the "Chinese ICBM threat" will continue to increase. Thus, if the "option" to complete the 12-site system is conditioned on either a Soviet attempt to narrow the gap between their nuclear missile submarine capability and ours, or on a Chinese attempt to deploy ICBM's, there is no "option" at all, as far as moving to phase II is concerned. That "option" is, rather, a foregone conclusion.

Expecting the Soviets not to react to our deployment of an ABM system, implies—it seems to me—a faith in Soviet restraint completely at variance with the administration's view of other aspects of Soviet behavior. I will discuss at a further point Secretary Laird's comments on the increasing Soviet military threat, a development that he considers to be the very denial of restraint. How can the administration expect the Soviets to be so restrained as not to react to our deployment of the Safeguard system when the administration rests its case for Safeguard deployment on the lack of Soviet restraint in military spending and in the development and deployment of nuclear missiles? Is this selective restraint a verifiable and predictable char-

acteristic of Soviet behavior and, if so, how has it been verified and on what assurance can it be predicted? Or is it a combination of wishful thinking, self-deception, and artful—but fallacious—argumentation? Which is it? It cannot be both.

So much for Secretary Laird's first stated objective. I turn now to the second objective which is the principal ground on which the administration's argument for Safeguard rests. Secretary Laird said about the Safeguard:

It offers more protection, as needed, to our deterrent forces.

In his statement before the committee he restated this objective by saying that the chief value of the Safeguard system was that it "protected the credibility of our deterrent." The Secretary and the Deputy Secretary explained that:

First. The credibility of our deterrent depends on how many of our offensive Minuteman missiles can survive a first-strike nuclear attack, for in order to deter a potential attacker that attacker must be positive that enough missiles or bombers will survive to destroy him.

Second. The Soviet Union has decided to develop a first-strike capability. There is no other explanation for the recent increase above 200 in the number of Soviet SS-9 missiles, a missile able to carry up to a 25-megaton warhead, which is a larger megatonnage than that required to destroy cities but is of the size required to destroy hardened missile sites. There had been a "feeling," as Mr. Packard put it:

The (number of) SS-9 was going to level off at a number somewhere below 200.

Furthermore, the Soviets are testing multiple warheads on the SS-9. To quote the Secretary directly:

With the large tonnage the Soviets have they are going for our missiles and they are going for a first-strike capability. There is no question about that.

Third. Our Polaris submarines by themselves will not be a "sufficient and credible deterrent" from 1972 on.

Fourth. Our bombers are vulnerable to missile attack on the ground unless they receive sufficient advance warning. The long-range perimeter acquisition radars, which are part of the Safeguard system, would give our bombers "greater warning time" against long-range missile attacks. Furthermore, the Soviets have launched eight or nine nuclear missile submarines and can now build "one a month," as the Secretary of Defense told the subcommittee on March 21, or eight per year, as he told the House Appropriations Subcommittee on May 22. If large numbers of Soviet submarines carrying missiles are stationed close to our shores, the short flight time of these missiles to our bomber bases would reduce the takeoff time available to our bombers. These missile-carrying submarines thus limit the potential effectiveness of our bomber force. The Soviets are outpacing us in both strategic offensive and defensive forces by a ratio of 2 to 1—4 to 1 in proportion to GNP—and, as of today, "have in being and under construction more ICBM launchers than the 1,054 possessed by the United States."

Fifth. If we do not deploy an ABM system, but merely continue research and development, we would be left, in the words of Secretary Laird, "with no option to provide defense for our deterrent on the schedule that might be required by the Soviet threat if we do not reach an agreement with the Soviets on limiting strategic forces." If we build only a prototype ABM installation at this point, and hold up deployment until the prototype had been tested, we would delay any kind of an ABM system by "3 or more years," to quote Secretary Laird.

Sixth. For all of the above reasons, the decision to deploy cannot be delayed beyond the budget for fiscal year 1970.

Testimony before the committee revealed that:

First. The Safeguard system will, in phase I, protect, as Secretary Laird stated the case, "30 percent of our Minutemen." But even assuming that this statement is correct—which I assume only for purposes of argument—why is it so important to protect 30 percent of our Minutemen? The implication is that the Soviets could destroy the remaining 70 percent of our 1,000 Minutemen; our 41 Polaris submarines each of which now carries 16 missiles but which will, in the near future, carry at least 160 warheads; and our 650 intercontinental bombers.

Second. But are we protecting even 30 percent of our Minutemen? Testifying before the Armed Services Committee, Dr. Panofsky pointed out that the protection offered by the Safeguard system in phase I could be offset by an increase in Soviet offensive forces of only a small percentage. Even in phase II, according to Dr. Panofsky, given the limited number of Spartan and Sprint defensive missiles in the Safeguard system, our Safeguard could be offset by a Soviet offensive increase "on the order of 10 percent."

Third. The administration contends, and I agree, that the credibility of our deterrent depends on a potential adversary's sure knowledge that a sufficient number of our deliverable nuclear weapons will survive an attack to be able to inflict unacceptable damage on the attacking country. That being so, it is obvious that a nuclear attack on the United States would have to be massive and synchronized for it to succeed in destroying our deterrent whether or not we have an ABM defense system. Most, if not all, of our Minuteman missiles, Polaris submarines on station, and strategic bombers would have to be destroyed—enough of them destroyed at any rate, to render retaliation ineffective.

Dr. Panofsky expressed "considerable skepticism" to the subcommittee that "an attack of the kind envisaged by the Department of Defense witnesses could be mounted by the Soviets with any confidence of success." Testifying before the Armed Services Committee, he went further. He called a first strike threat an "extremely implausible projection of our available intelligence, including that concerning the SS-9," said that he knew of "no technical prospects or of any current intelligence" indicating a threat to Polaris and argued that destruction of both bombers and land-based missiles

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together was itself "extremely implausible." Dr. Wiesner pointed out that the Soviets would also need "large numbers of high-accuracy multitude warheads, a much better air defense system, an effective ASW capability and a truly effective nationwide ABM system." He added:

Clearly the Soviet Union is far from having these combined capabilities now, and there is essentially no reason to believe that they will move into such a position by 1975 or even later.

Finally, there is the question of whether the Safeguard system would work at all, given the highly complicated technology involved in what Dr. Wiesner has called the most sophisticated and intricate system that man has attempted to build. Now I do not make any pretense at being a physicist, a mathematician, or an engineer. Yet at the same time I am going to be faced with the responsibility of having to vote on the question of providing funds for a system which I have no way of knowing personally will or will not work. It would certainly seem to me that I would be acting irresponsibly if I were to ignore expert scientific opinion. Yet a number of scientists—among the most eminent in our country—told the subcommittee that they had grave doubts about the system from a purely technical point of view. Dr. York, a former Director of Defense Research and Engineering, spoke of the possibility of a "catastrophic failure" in which no interceptors at all might fire. Dr. Kistiakowsky, a former Presidential science adviser, agreed with Dr. York that—

Massive failure cannot be excluded for a system that must function the very first time it is tried out as a whole.

Some scientists who appeared before the subcommittee argued that further research and development was necessary to develop a more efficient system. Dr. Panofsky called the Safeguard a poor engineering decision because it took the components from the Sentinel system, which had been designed to defend cities, which are soft targets, and used them for the different purpose of a hard point defense system. While it is necessary to intercept at high altitudes to protect cities, he pointed out, missiles attacking hard point targets can be intercepted at low altitudes, which means that the system designed for hard point defense—including the radar components—can be simpler and less expensive than the system designed to defend cities or soft targets. Summing up his argument, he said that "did not make sense" to take a city defense system and give it a dual capability of hard point defense and bomber defense, and that if we needed a hard point defense system, one should be specifically designed for that purpose.

Dr. Hornig remarked:

But the uneasy feeling persists in my mind that, although Presidents may change, Secretaries of Defense may come and go, and the philosophies enunciated by our political leaders may change, the design of our ABM system hardly changes at all. It includes the same radars, the same rockets and largely the same deployment which was contemplated for the "heavy" defense.

Safeguard continues to look like a first step toward a much bigger, much more expensive and still ineffective system.

A number of witnesses commented on one particularly ill-designed component of the Safeguard, ill-designed given the declared objective of the system: the missile site radar. It was pointed out that the radar was badly matched to a defense of missile silos because it was far more vulnerable than the silos themselves. It cannot be hardened; it has far less resistance to shock wave or nuclear blast than a missile; and there is only one per Safeguard site. Thus, it would be a prime target for the attacker because if the radars were destroyed the whole system would collapse. The radars are thus a useful target for the smaller Soviet SS-11 missiles, and there are far more SS-11 missiles than SS-9 missiles in the Soviet inventory. Hence, the SS-11's could knock out the Safeguard system by blinding it so that Safeguard would not be able to neutralize a single SS-9 missile.

It was also pointed out that the system will go into production before the components have even been assembled and before some have even been built—the Par radar being a case in point—that there are no working examples of computer programs of the scale required by the Safeguard system, and that furthermore the computer will never be able to be tested in its operational environment because of the impossibility of simulating nuclear attack. Even Dr. Teller, an advocate of deployment, explained that he favored deployment because of the value of the experience that a "pilot operation" would provide. Admitting that "we do not know whether defense or additional offensive force will be cheaper and more effective," he concluded that "we shall never find out unless we make an actual attempt" by deploying. Dr. Teller subsequently defined the difference between his position and that of Dr. Wiesner in two sentences:

He says research and development. I say pilot operation.

To which Dr. Wiesner replied that testing could be done more effectively at Kwajalein.

I will turn now to the assertion that I have said I regard as the principal ground on which the administration's case must stand or fall: the statement by the Secretary of Defense:

With the large tonnage the Soviets have they are going for our missiles and they are going for a first-strike capability. There is no question about that.

The Secretary is quite wrong in at least one respect, for there is a question about whether the Soviets are going for a first-strike capability. That judgment is not supported by intelligence authorities, for example. The U.S. Intelligence Board, our top intelligence body, has never so found. Nor is that statement supported by the Secretary of State. Only some 2 weeks after Secretary Laird's statement, the Secretary of State said in a press conference:

I have difficulty in believing that the Soviet Union could initiate a first strike . . . Certainly it is difficult to understand why the Soviet Union is deploying SS-9s . . . And

I think when we enter the SALT (Strategic Arms Limitation) talks, one of the first questions we want to raise with them is why. Why would you have a 25-megaton missile? But insofar as whether they are doing it with the intention of actually having a first strike, I don't believe that.

If there were "no question" about the Soviets "going for a first-strike capability," the Secretary of State would hardly have spoken as he did. And if there is a question in his mind, is there any reason why the rest of us should not wonder?

But there are questions not only in the executive branch, but also in the mind of the Secretary of Defense. In a closed meeting of the full Committee on Foreign Relations on June 23, Secretary Laird suddenly changed his definition of first strike—changed it from the generally understood concept of a knockout blow to the more limited meaning of ability to attack our hardened missile sites. In my opinion, he thereby destroyed his own principal justification for requesting immediate deployment of the Safeguard system.

Fourth. The third argument of Secretary Laird's with respect to the need to protect our deterrent by protecting our missile sites was that our Polaris submarines would not be "sufficient and credible deterrent from 1972 on." The Secretary made it plain that he was referring to a growing Soviet capability to locate and destroy our nuclear submarines while on station but he offered no explanation of how this might be accomplished.

The Secretary's assertion would be disquieting if true but can we accept it with confidence? Only a year ago, in hearings before the Senate Armed Services Committee, the Chief of Naval Operations, Adm. Thomas H. Moorer, was asked:

Admiral, we have put a great many of our chips on the invulnerability of the Polaris submarines. Do you have a high degree of confidence that this invulnerability will be maintained, and what operations do you foresee in the event of a technological breakthrough on the part of the Soviets that would reduce or eliminate the invulnerability.

Admiral Moorer replied:

I have a very high confidence that this will be maintained for several reasons.

Present for a brief time at our subcommittee hearings was Representative ANDERSON of Tennessee, formerly captain, U.S. Navy, who commanded the first nuclear submarine to transit the Polar Cap. I asked him at the hearing what he thought about the Polaris submarines as a deterrent force. He replied, and his statement appears in the hearing record:

There have been statements made recently, leaving the implication that when we get to 1972, 1973, 1974, some of the technology that the Soviets are working on will be adequate to neutralize our Polaris submarines. I checked around some and I find no evidence whatsoever to support such a statement.

Finally, to clear up any possible uncertainty on this point, I wrote Secretary of the Navy Chafee on May 28 and asked him for a specific statement "on the vulnerability of Polaris submarines in the period 1970 through 1980." The Secretary replied in a letter dated June 12, which

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I had printed in the CONGRESSIONAL RECORD and which also appears on page 604 of the subcommittee hearings, and said that his views were in accord with those Mr. Packard had expressed before the House Armed Services Committee on April 14 at which time Mr. Packard had said:

We expect the Polaris to remain highly survivable until at least the late 1970's.

Secretary Chafee added, incidentally:

I have strong confidence in the continued effectiveness of Polaris-Poseidon submarines. To the best of our knowledge the Soviets have not been able to detect or track any of these submarines while on station. This is the principal reason for my confidence.

Fifth. The next point made by Secretary Laird and Mr. Packard related to the vulnerability of our strategic bombers to attack from land or submarine-launched missiles, the greater warning time the Safeguard system would provide and the relatively greater importance that must be attached to Minuteman as a second-strike weapon because of the vulnerability of bombers to submarine launched missiles.

I would like to make several observations on this point. First, Dr. Panofsky pointed out to the subcommittee that there would be sufficient time in the case of an ICBM attack on missile sites to get bombers in the air—and sufficient time in the case of a submarine attack on bombers to launch missiles. The extra warning time of a few minutes provided by the Safeguard long-range radar was thus not necessary, in his view. Second, the vulnerability of bombers on airfields can be countered by dispersing bomber bases—especially by moving them inland—and by keeping a number of bombers in the air on alert, as Dr. Wiesner, and several other witnesses suggested. Third, it has occurred to me that since our strategic bombers are stationed not only in the United States but on airfields abroad as well, a Soviet first strike would not only have to knock out all missile sites and air bases in the United States, and all of our Polaris submarines on station, but a considerable number of airfields in other countries as well. Finally, while Secretary Laird regards the growing Polaris-type Soviet submarine fleet as a potential threat to our bombers, our Poseidon submarine missile fleet is "designed to maintain the effectiveness of our sea based strategic weapons despite the introduction of Soviet anti-ballistic-missile systems," to quote again Secretary of the Navy Chafee's statement to the Armed Services Committee. How can it be that we and the Soviets have such different objectives for the same weapons system?

Sixth. Regarding Mr. Laird's statement that the Soviets are outspending us in offensive and defensive forces and have more ICBM launchers in being or under construction than we do, I must say that it would surprise me if the Soviets were not spending proportionately more than we are. The fact is, though, that while they may be devoting a greater percentage of their GNP to defense, our defense budget is running at about a third higher than theirs, and their spending on offensive and defensive

weapons has remained relatively constant for the past decade. And while the Soviets have a few more ICBM launchers deployed and under construction than we do, they still have fewer land-based ICBMs, around 1,000 compared to 1,054; fewer long-range strategic bombers, 150 compared to 650; and fewer nuclear ballistic missile submarines, eight or so compared to 41.

The further fact is that we are phasing out older missiles and replacing them at a more rapid rate than they are and that we are far nearer to having a MIRV capability than are they.

We have already had the experience of living through an illusory missile gap. I hope that we are not going to be presented now with a prospective delusory missile gap, the product of presenting only some of the relevant information; that relating to the number of ICBM launchers, in this case; without presenting all of the relevant information; that relating to strategic bombers and submarine launched ballistic missiles; and presenting, too, theoretical extrapolations of Soviet weapons development as though they were confident predictions.

Of course, there is a point beyond which offensive capability becomes unnecessary overkill. The United States presently has enough nuclear weapons to attack about 2,400 different targets in the Soviet Union; the Soviet can now attack about 1,100 different targets in the United States. Assuming that 250 warheads could devastate the 50 largest cities in either country, and that the capability of destroying the 50 largest cities in either country constitutes a credible deterrent, the United States has 2,100 more nuclear warheads than it needs to destroy these 50 cities and the Soviet Union has 845 more nuclear warheads than it needs to destroy the 50 largest cities in America.

This is one way of measuring overkill. A second way of measuring is to compare the number of separately targetable strategic warheads per city for the 50 largest cities in the United States and the Soviet Union. Dividing the number of warheads possessed by each country by 50, the United States has about 48 warheads per city and the Soviet Union 22. Yet one hit is sufficient for the awful task.

I am, therefore, not alarmed by Soviet defense spending and the prospect of parity with the Soviet Union in the number of land-based intercontinental missiles. We are still far ahead of the Soviets in the number of nuclear warheads. Both we and the Soviets have more than enough warheads to destroy each other. I am alarmed only at the senseless drive in both countries for more weapons when these additional weapons are not necessary. I am dispirited only at the lack of interest in taking advantage of a situation in which the Soviets are approaching parity in land-based intercontinental missiles to negotiate mutual controls instead of regarding the situation as requiring new weapons systems which not only do not add to our security but threaten to begin a new cycle of action and reaction in this expensive and dangerous area.

Seventh. A number of witnesses before the subcommittee disagreed flatly with

the assertion made by Secretary Laird and Mr. Packard that if we do not set in motion immediately steps to deploy an ABM system, but merely continue research and development, we will be left without the option of a ballistic missile defense for our deterrent by the time such a defense will be necessary. Most expressed the view that we could afford to wait for up to a year to see whether negotiations with the Soviet Union would be fruitful.

Furthermore, if we must have an "option" to defend against a threat of a Soviet first-strike capability, there are other methods of defending our deterrent which are more reliable, less expensive and involve shorter lead time. Putting more concrete around missile sites—superhardening—is one way. Building more nuclear missile submarines and more intercontinental missiles is another. But instead of considering these steps we have chosen a method which is extremely costly, which is of questionable reliability and which requires the longest leadtime of all.

The third objective stated by Secretary Laird was his claim that the Safeguard system "offers protection, as needed, of the entire country from a small attack, such as the kind of attack that could possibly be delivered by the Chinese Communists during the decade of the 1970's or from an accidental launch." Let me first discuss the Safeguard as protection from a Chinese attack.

As we all know, the Chinese do not now have ICBM's, and Mr. Packard told the subcommittee that the Chinese were "no further along" in developing a missile than they were 3 years ago. But the Cultural Revolution and other political disruptions notwithstanding, we must obviously assume that there may be Chinese missiles operational in the 1970's. Secretary Laird estimates that this will be in the "1972-73 time period" and "in the time period of 1975 and beyond that the Red Chinese could have the capacity and the capability to have 15 or more missiles," a statement he amended before the House Appropriations Subcommittee on May 22 to "10 to 25 operational ICBM's" assuming an initial operational capability in late 1972 which the Secretary implied he did not think would be achieved but was more likely to be delayed "perhaps as much as 2 or 3 years later." Nevertheless, to be prudent we must assume not only that the Chinese will have an ICBM capability in the mid-1970's but that this capability will grow and that the Chinese will also develop a full range of sophisticated accessories, such as decoys and other penetration aids. We must thus consider a theoretical system of defense against a Chinese nuclear missile attack in two stages: when China's ICBM capability is very limited, and when that capability is far greater.

When the Chinese missile force is small, we would not need a defense system which would preserve a percentage of our offensive missiles. A small Chinese force would, by definition, not be large enough to destroy more than a minute percentage of our missile force. What is needed when China's missile force is small, then, is not a system which would defend a few missile sites but a system

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which would provide "some protection over the entire country," as Dr. Fink pointed out to the subcommittee.

In phase I of the Safeguard system, of course, there will be protection of only a "footprint" area around the two defense missile sites. The rest of the country will be unprotected. Furthermore, the Par radars in Phase I "will have faces only to the north because that is the direction from which the Soviet threat would be expected," to quote Mr. Packard. Thus, protection against a Chinese attack requires going to phase II.

The Safeguard system, when fully deployed in phase II, will, its supporters claim, provide some protection for the entire country, but only some protection. Full effectiveness is not claimed. Some Chinese missiles would get through, especially if equipped with penetration aids. Dr. Bethe told the subcommittee that it was "entirely logical that the Chinese might develop such aids 'at the same time' as they develop the ICBM itself. The result would be some destruction in the United States, but in China the result of our retaliatory strike would be massive destruction ranging all the way to the verge of total annihilation. The sole effect of Safeguard, and this would be true only of the fully developed system, would be perhaps to reduce somewhat the destruction in the United States. Safeguard would not affect the credibility of our deterrent as far as the Chinese are concerned for it is thoroughly credible now, and will continue to be thoroughly credible, in the face of the projected limited Chinese ICBM capability.

When we talk about a Chinese attack during the period when China has only a limited ICBM capability we are talking about the possibility of an "irrational" Chinese action, for a limited Chinese attack which would surely result in a devastating attack on China could only be irrational. In his testimony before the subcommittee, Secretary Laird implied that the Chinese were "different" from the Soviets, as far as the area of rational action is concerned. Yet what arguments can be cited for assuming that the Chinese will act irrationally to the point of suicide? We have never argued that the Soviets might act irrationally in the matter of a nuclear attack. The Chinese have not acted irrationally as far as their foreign policy is concerned. Their words have been irrational but their actions have not been. Dr. Alan Whiting told the subcommittee:

I see no basis in fact or theory for attributing a significantly higher likelihood of irrationality to Chinese as compared with Russian decision makers.

Before the House Appropriations Subcommittee on May 22, Secretary Laird raised the specter of Chinese "nuclear blackmail" as an argument for Safeguard deployment. But it would be the height of madness for a country with a minuscule missile force to threaten to blackmail a country with the nuclear weapons we have at our command, for the obvious answer to such a threat is a pre-emptive nuclear strike. This argument, too, assumes a strong suicidal urge on the part of the Chinese, an assumption

with no basis in logic or in history, an argument which, in sum, clutches at straws or what we often call weak reeds.

How long will it be before China will have not a few missiles but hundreds with sophisticated penetration aids as well as nuclear missile-carrying submarines and ship-launched ballistic missiles? All of these "may be in the Chinese inventory in the next decade," Dr. Jack Ruina told the subcommittee. When this happens, of course, the situation will be exactly as it is now with respect to the Soviet Union. The same arguments will apply for and against a hard point defense system and for and against a defense of our cities. But there will be a double twist. For if the Soviet Union now regards a city defense as "provocative," a position with which Secretary Laird agrees as evidenced by his statement that the first objective of the Safeguard system is that "it clearly rejects a provocative expansion into a heavy city defense," presumably it will hold the same view in the future.

As Dr. York pointed out to the subcommittee, "to protect against China we will eventually have to build up an ABM to the point where it will be provocative to the Soviet Union." Thus, if we decide to attempt some defense against Chinese attack, we will be hoist by our own petard to a higher level of defense which we ourselves have admitted is provocative.

As for protecting against an accidental launch, I would certainly favor any system that could afford this protection. But there are those who should know who say that while with further research and development a system could be designed to attempt to achieve this objective, the Safeguard system—with its particular combination of radars, Sprint missiles and Spartan missiles—is not designed to meet this need. It should be realized that in phase I, the Safeguard system will protect against an accidentally launched missile only if that missile is headed toward the two sites at which Spartan and Sprint missiles will be deployed. Protection of the whole country against an accidentally launched missile is thus not even a theoretical possibility unless defensive missiles are deployed in all 12 sites. But even then, is there protection against an accidental launch? Dr. Panofsky has said that if an accidental launch included decoys or multiple warheads, the modified Sentinel system could be "penetrated." Even if only a single missile without decoys were involved, and assuming perfect reliability of the Safeguard system, this single missile could be stopped only if the "state of alertness of the system in peacetime can be kept at a high enough level."

Now the question of the state of alertness is a complicated matter. The chances are that a deliberate missile attack, even a so-called surprise attack, would probably be preceded by at least a noticeable change in the political atmosphere, if not a period of tension. An ABM system, like the rest of the Nation's defense establishment, would be placed in a state of alert. But there would be no such warning signs before an accidental launch. On the contrary, such an acci-

dent could occur at any time including a time of least tension. Thus, in thinking about protection against an accidental launch, it is well to recall Dr. York's comments to the subcommittee on the conflicting requirements of a "stiff trigger," to prevent the accidental firing of a defensive missile, and a "hair trigger," to provide a sufficiently rapid intentional firing of a defensive missile in the case of surprise attack. Both intentional and accidental launches are possible in any missile system—offensive or defensive.

But the chances of an accidental launch are, in fact, greater in the case of a defensive system. This is so because the time in which the decision to launch must be made is so short—10 minutes at the maximum, according to Mr. Packard—that it is inevitable that the responsibility for launching would necessarily be delegated to lower command echelons and eventually, as weapons improve and machines become more complex, to computers. Mr. Packard told the subcommittee that there would be "adequate time to assume command and control by the President," but 10 minutes does not strike me as long enough to insure presidential action, given the communications problems involved. Thus, the more effective a system is for intercepting accidental launches, because the finer its "hair trigger," the greater the chances the system will itself err and launch a missile accidentally, because the looser its "stiff trigger" will be.

The accidental launch of a defensive missile would not be a cause for great concern if it could definitely be detonated or intercepted at a sufficiently high altitude so that no damage would be caused. But the accident that launched the defensive missile might cause other related accidents as well. Having launched a defensive missile in error, a computer might also erroneously instruct it to explode at a low level. Or the missile might, again accidentally, trigger an automatic Soviet reaction and bring a retaliatory attack. Thus, in developing a system to protect us from accidents, we may well increase the likelihood of accidents so that the rise in the level of risk will be far higher than the rise in the level of protection.

Furthermore, if we are entitled to a system which we allege will, among other things, protect us from accidental launches, surely the Soviets and the Chinese will make a similar claim. But since protection against accidental launches requires a general area defense system, and not a system which can protect only hardened missile sites, this justification, like the others used, inevitably forecasts an escalation of the arms race with proliferating finely tuned defensive systems and new offensive systems to neutralize them. But this subject belongs more properly in my discussion of Secretary Laird's fourth and fifth objectives.

Secretary Laird described the fourth objective of the Safeguard system in the following way:

It offers the Soviet Union an added incentive for productive arms control talks.

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In the course of testimony before the subcommittee, Mr. Packard and Mr. Smith, and Mr. Rogers in his appearance before the full committee, also said that:

First. As even the first two Safeguard system installations will not be operational before 1973, there is ample time to negotiate agreements with the Soviet Union, so that Safeguard "opens the door wider to mutual arms control." Furthermore, "it should not take us years but months to determine if the Soviet Union is seriously interested in entering into arms control arrangements," to quote Mr. Smith, and if they are, deployment of the Safeguard system, which will be subject to annual review and appraisal, can be stopped. On the other hand, Secretary Laird told the subcommittee that "if the Soviets should slam the door on an agreement, the modified ABM would permit us to continue steps toward protection of our retaliatory forces" which would be important because "a Soviet rejection of meaningful negotiations would demonstrate a Soviet determination to continue to build toward a low-risk, first-strike force."

Second. The Safeguard system "requires" no military response from the Soviet Union, as would be the case if we were increasing the number of our offensive missiles and bombers. "It shows them that any effort on their part to achieve a successful first strike is fruitless" to quote Mr. Packard, but does so "without threatening their second strike deterrence."

Third. As a result of our announced intention in 1967 to deploy the Sentinel system, it is likely that any Soviet military reaction is already in train and would not be further affected by the deployment of the Safeguard system. Nor will the prospects for negotiations be affected because the Soviets had first indicated their willingness to negotiate after the decision to deploy Sentinel was announced and have reaffirmed their willingness to talk on several occasions since in public and in private talks with American officials.

Fourth. As the Soviets deployed their own ABM system first, they can hardly criticize us for deciding to do likewise or argue that our decision prejudices arms talks particularly since their system is already in place and ours is not.

Fifth. Quoting Secretary Rogers' statement to the Foreign Relations Committee on March 27:

We cannot predicate our security decisions, that we have to make now, on the potential success of future endeavors in the disarmament field.

Sixth. The Safeguard system will be a "further incentive" for discussions on the limitation of both offensive and defensive weapons.

Proceeding first to the point that there is time to negotiate agreements before the first Safeguard sites become operational and time—anywhere along the line—to stop the process of deploying the Safeguard system if the negotiations are successful, it seems to me that this argument assumes that we can make time work only one way—for us but not against us. Faced with the prospect of an ABM system that will be

operational in 1973, either the Soviets will enter into an agreement with us before that date, which will make it unnecessary for us to go ahead, or, if no agreement has been reached, deployment will begin and the objectives Secretary Laird claims for the system will be achieved. Heads, we win; tails, they lose.

But will they lose or will we? If the Safeguard system is as ineffective as many contend, and the Soviets are willing to ignore it, it will not affect the negotiations and will not have resulted in a Soviet reaction. But we will have spent billions of dollars for a system that does not protect us and that has not given us a negotiating advantage. The assumption that the Soviets will be willing to ignore it as either ineffective or harmless—to conclude, as stated in the second point above, that Safeguard "requires" no Soviet military response—would, again, call for considerable restraint on their part. In fact, as I have pointed out before, it would require more restraint than we ourselves have shown in response to their Galosh ABM system. Not only have we developed MIRV's and Poseidon missiles in response, but the administration's arguments imply that Galosh is another reason which justifies our deploying Safeguard. In how many ways must we react to new Soviet weapons systems? And in how many ways do we expect them not to react to new weapons systems of ours?

Of course, if the Safeguard system is effective, the Soviets will surely react. Even though the system is to be deployed around missile sites and thus does not affect Soviet second strike capabilities, how can they be sure that, once developed and deployed, it will not be turned into a "thick" system which would affect their second strike capability, despite Secretary Laird's assertion that Safeguard "cannot develop into the thick system surrounding our cities that the other proposed Sentinel system could have developed into." If "we cannot predicate our security decisions, that we have to make now, on the potential success of future endeavors in the disarmament field," to quote Secretary Rogers again, surely neither can they.

Time will work in another way as well. Once begun, weapons systems are difficult if not impossible to stop. The best time to stop them is before they are started, before rationales and justifications can shift, as has already been true in the case of our ABM, and before programs develop large and powerful constituencies.

As for the argument made by Safeguard proponents that the Soviets' military reaction to a Sentinel-type deployment was probably already in train and would not be affected by any deployment on our part, Dr. Marshall Shulman told the subcommittee:

I don't see how we can know that they have discounted it. As a matter of fact, you could probably make as strong a case for the opposite view.

Whether or not the Soviets have "discounted" the deployment of Safeguard, the point is that while the Soviets have continued to be willing to enter into

arms limitation talks—and initially indicated their willingness after the decision to deploy the thick and "provocative" Sentinel system was announced—they are, at the same time, adding to their arsenal of nuclear weapons. The arms race is still escalating, literally before our eyes.

There is one final comment that I would like to make on the subject of the "incentive" this decision is said to offer the Soviet Union for arms control talks. The use of the word "incentive" means, to me, that somehow we regard the prospective deployment of Safeguard, especially because it is to be deployed in phases, as some sort of a bargaining card in arms control talks with the Soviets.

I quote again from Dr. Shulman's statement to the subcommittee:

It would not be wise to deploy an ABM system in the belief that it would improve our bargaining position in relation to the missile talks. To do so would be more likely, in my opinion, to strengthen the position of those on the Soviet side who are only too ready to argue that the United States is too committed by its system or its pressure groups to an arms race to be seriously interested in its abatement.

I also quote the statement to the subcommittee of Dr. Carl Kaysen:

The future capacity to deploy, and perhaps to deploy a better conceived and designed system, is all the bargaining card we need. Actual deployment, by revealing what we are doing, diminishes rather than increases the effectiveness of our bargaining position.

Finally, I quote Secretary of State Rogers before the Committee on Foreign Relations on March 27:

In none of my talks with the Soviets has any Soviet representative suggested that the decision [on an ABM system] would affect the initiation of talks or their outcome. (emphasis added)

Can the Safeguard decision not affect the outcome of arms control talks but yet be a bargaining weapon?

Secretary Laird's fifth objective is really a summation of the other four. It is that the Safeguard system "provides the protection needed for the safety and security of our country—but only the protection that is needed." He explains that the Safeguard plan "permits us to respond to the Soviet threat, not as we project it, but as it develops in the months and years ahead. We neither add to our weapons inventory nor do we incur the costs for a threat that possibly will not materialize."

I would disagree with the Secretary, and so would most of the witnesses who appeared before the subcommittee, on his fundamental premises which are that deployment of the Safeguard system at this time would provide us with protection and thus enhance our security. I have already stated the relevant arguments: that our nuclear weapons arsenal is so vast that it could not be destroyed by any Soviet force that can be foreseen at this time; that the Safeguard system is of doubtful effectiveness and requires more research and development before it is deployed; that its deployment seems bound to cause a new cycle of action and reaction which will escalate the arms race at tremendous cost without provid-

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ing greater security; that an irrational Chinese attack seems no more likely than an irrational Soviet attack; and that Safeguard not only will not protect against an accidental launch but, in attempting to do so, may actually increase the risk of accidental nuclear explosion. In brief, the dangers inherent in the Safeguard system seem to me—to many of my colleagues, to many distinguished physical and social scientists and to many, many Americans—to outweigh by far the benefits of Safeguard, if indeed there are any benefits at all.

The Safeguard decision is not just another political or military decision. It is a decision which affects all Americans in fundamental and important ways. It will use large amounts of their tax monies directly and even larger amounts indirectly because of the weapons developments it will spawn—monies that could be used for problems pressing in on us at home. Thus, it will affect what we have come to call the quality of life in our country. It will, in my opinion, and in the opinion of many others, also affect the quality of international life for it will set off a new round in the armaments race, with all the dangers and tensions that it involves, as the Soviet strive for at least parity with us in nuclear weapons systems and as we strive to maintain "sufficiency."

In fact that next step in the race is almost upon us—the deployment of MIRV's, the weapon response to ABM. We are ready to deploy these weapons "not in the too distant future," according to the Secretary of Defense. The submarine version of MIRV's, the Poseidon, will be deployed "unless we conclude some agreements that would dictate otherwise," according to Mr. Packard.

The important issue involved in MIRV deployment is, simply, that while we can detect Soviet MIRV tests, and they can detect ours, there is no way of detecting deployment. After MIRV's have been tested to the point where they can be deployed, and we have almost reached that point, there is no way of knowing whether the number of warheads has been multiplied by two or three or five or more. The Soviets will not know how many warheads we will have—although it has been reported that we can multiply our submarine-launched missiles by about 10 and our land-launched missiles by three—and we will not know how many they have. Not knowing how many warheads are deployed by another state, each country will assume the worst. New systems of defense and offense, and thousands of new nuclear warheads, will be produced. Land-based missiles in fixed sites, like Minuteman, may well become obsolete, making Safeguard or any ABM system defending ICBM's unnecessary, and be replaced by other less vulnerable but even more lethal nuclear weapons systems. Control agreements will be beyond reach because verification will be impossible.

Hence, we are suddenly close to meeting, we and the Soviets, on the same plateau, barren and rocky though it is. It is the plateau of nuclear equality. It is not equality in weapons, for we have

far greater numbers of weapons, but equality in other ways. We are equal, in a sense, because we can destroy one another and a large part of the world as well. We are equal, too, because we will both soon be able to deploy a weapon—MIRV's—which will make verifiable agreements impossible. We are equal because we are both spending more on weapons than we should. We are equal because we do not trust one another, and see little reason to trust one another.

This plateau of nuclear equality, on which we and the Soviets stand momentarily poised, could prove to be the highest point reached in the nuclear arms race. Or it could be the point of departure for the next stage in that race which will lead us both to be better armed but less secure. The question before the Senate is clear: Who will take the first step—and in what direction?

URGENT NEED FOR ESTABLISHMENT OF A NATIONAL MINERALS POLICY

Mr. ALLOTT, Mr. President, on July 9, the Mineral Materials and Fuels Subcommittee of the Interior and Insular Affairs Committee conducted hearings on S. 7119, a bill to establish a national minerals policy. This is a bill which I have introduced in previous sessions of Congress and believe should have been enacted into law before now.

At the hearing, a most impressive group of the key executives of the industries which are closest to the necessity in such a policy, testified on behalf of this legislation. Most of these witnesses who were assembled, took time out of their busy schedules to be there. The members of the American Mining Congress, of which Mr. Cris Dobbins is the president, testified in full. Mr. Dobbins' excellent introductory and closing statements, I know, were founded upon his vast, keen personal acquaintance with the broad spectrum of our national minerals, from extraction to actual employment, past, present, and future. By reading it, all of the Members of Congress will be better acquainted with the need for a law establishing a national minerals policy.

I, therefore, ask unanimous consent that the statements of Mr. Dobbins be printed in the RECORD.

There being no objection, the statement was ordered to be printed in the RECORD, as follows:

STATEMENT OF CRIS DOBBINS

Mr. Chairman and Members of the Committee: I am Cris Dobbins, Chairman and President of Ideal Basic Industries, Inc.

I am President also of the American Mining Congress, a trade association of U.S. companies that produce most of the nation's metals, coal, and industrial and agricultural minerals. Its membership also includes more than 200 corporations that manufacture mining and mineral processing equipment and supplies, as well as financial institutions with a business interest in the mining industry.

My colleagues and I appreciate this opportunity to appear before you to support the development of a national mining and minerals policy.

Through our several witnesses we hope to demonstrate the need for such a policy.

First, however, let me indicate how we interpret the concept, "Policy," and how we believe it might function to produce the desired result.

In a sense, almost every enactment by the Congress of a law relating to minerals is an expression of national minerals "policy." In this sense, the considerable number of existing laws pertaining directly to mining and minerals—the organic acts of the Geological Survey, the public land laws the stockpiling legislation, all define the national "policy." In addition, the vast accumulation of existing laws having an impact on mining and minerals—laws on internal revenue, environmental quality, aid to education, and so on, interact importantly with the minerals "policy."

But each of these legislative enactments is passed to meet a particular problem or purpose; seldom are they viewed altogether as an integrated expression of overall policy. As a result, they are not coordinated, there are contradictions one against another, and their relative priority is not determinable.

The executive branch of the government, charged with the responsibility of implementing all the laws, consequently lacks the clear direction which it needs effectively to achieve the intention of the Congress.

The articulation of a broad "Policy," such as the proposed mining and minerals policy, will, we believe, be of great value to the executive branch and to the nation, both in the implementation of existing legislation and in the development of future legislation.

It will serve as a statement of fundamental principles or objectives, an indication of Congressional priority, a "bench mark," if you will, against which the executive branch can measure proposed action and the Congress can measure proposed new legislation.

Moreover, by charging the Secretary of the Interior with overall responsibility for effectuation of the policy, the Congress assures itself of a fully responsible source of advice and counsel as to whether the Congress' objectives are being achieved and of recommendations as to further Congressional action which might from time to time be necessary.

The testimony you will hear from my colleagues is based upon this understanding of the concept of the term "Policy" as it is used in S. 719.

Our first witness is Mr. Andrew Fletcher, Honorary Chairman of St. Joseph Lead Company, who will provide you an over-view of the problems and opportunities facing the United States in regard to mining and minerals. He will be followed by Mr. James Boyd, President of Copper Range Company, who will discuss implications of the proposed policy on development and manpower in mining and minerals; Mr. David Swan, Vice President—Technology of Kennecott Copper Corporation, who will discuss environmental quality; Mr. Charles F. Barber, President of American Smelting and Refining Company, who will discuss the use of public lands; Mr. Lindsay F. Johnson, President of the New Jersey Zinc Company, who will discuss stockpiling; Mr. Fred W. Peel, of Miller and Chevalier, who will discuss tax policy and mine finance; and Mr. Donald J. Donahue, President of American Metal Climax, Inc., who will discuss foreign trade.

Following Mr. Donahue's statement we will all be pleased to respond to any questions you may have for us.

(Remarks of other American Mining Congress witnesses were made at this point in proceedings.)

Mr. Chairman and Members of the Committee: I hope that in these several presentations we have been able to demonstrate the broad scope and nature of the problems and opportunities facing our nation in regard to mining and minerals, and the importance of a Congressional declaration of National Policy on this vital subject.

It is clear, we believe, that such a Policy has implications to research, development and manpower, to environmental quality, to the use of public lands, to the subject of stockpiling, to tax policy and mine finance, and to foreign trade. Overall it has the most profound implications to the economic future of the United States which is based so heavily on a continuing supply of raw materials—both domestic and foreign.

The mining industry of the United States, which we represent here today, is dedicated to meeting the raw material requirements of our nation. The support and encouragement of a National Mining and Minerals Policy will help greatly in continuing to achieve that objective.

We thank you for this opportunity to present our views and we would be pleased to respond to any question you may have for us.

PRESIDENT NIXON'S MESSAGE ON THE POPULATION EXPLOSION

Mr. ALLOTT. Mr. President, I want to speak for a few moments this evening with respect to the growth of hunger and population in the world.

I am reminded of the biblical passage from Isaiah 8: 21 which reads as follows:

And it shall come to pass that when they shall be hungry, they shall . . . curse their King and their God.

The word "crisis" hangs in the air over discussions of food and population as the realities of life, ordered by a harsh and stern Nature, catch up with mankind in the last third of the 20th century.

Today many of us cling to an optimistic faith in the inevitability of progress, to the assumption that the fate of man on earth is destined to improve as time goes on.

Yet in his message to Congress last Thursday, President Nixon notes that if present rates of population growth continue, it is likely that the earth will contain 7 billion human beings by the end of this century.

It is in the developing nations of the world—

Said the President—

that population is growing more rapidly today. In these areas we often find rates of natural increase higher than any which have been experienced in all of human history. With their birth rates remaining high and with death rates dropping sharply, many countries of Latin America, Asia and Africa now grow ten times as fast as they did a century ago. At present rates, many will double and some may even triple their present populations before the year 2000.

And what of the quality of life? As the President said last week:

Despite considerable improvements in agricultural technology and some dramatic increases in grain production, it is still difficult to feed these added people at adequate levels of nutrition.

Protein malnutrition is widespread. It is estimated that every day some 10,000 people—most of them children—are dying from diseases of which malnutrition has been at least a partial cause.

The question, then, can be simply stated: Has the less-developed world lost the capacity to feed itself?

Today, there exists no shortage of experts willing to provide an answer.

The world will face the greatest famine in history by about 1980, says Rene Du-

mont, the French agronomist now director of research at the National Agricultural Institute in Paris. World population, he notes, is year by year outstripping food production.

Dumont wrote in late 1967:

Throughout the Third World, since 1959, population increase has been 26 per 1,000 per year and food production has increased for only 15 to 20 people per 1,000 per year. There are others—

Dumont adds—

who go farther than I do and say that it's already too late to avoid the terrible catastrophe and that it could come as soon as 1975.

Terrible catastrophe? The greatest famine in history? It does sound a bit extreme, until one does some arithmetic.

Tonight in the world, 170,000 deaths; twice as many births. It has been that way for years.

The result? Prior to World War II today's hungry nations were exporters of grain. By the 1960's they had become importers. In the 1930's Latin America exported more grain than the United States and Canada combined but by 1950, Latin America had become a grain importer.

The Netherlands Indies was a major prewar supplier of copra on the world market before World War II. Today's Indonesia, in contrast, exported in 1964 only one-half of the amount of 1938, although the total amount grown was greater than the crop of 1938.⁴

Add similar examples of corn in Nicaragua, wheat in India, soybeans in China, beans in Chile and the same result within the former exporting nations becomes more graphic. Swollen populations have consumed the surplus formerly exported and they must now import increasing amounts of food each year.

Grain exports-imports are an example:

Net import (-), export (+) of grain for Asia (not including Japan), Africa (not including South Africa), and Latin America (not including Argentina):⁵

Period:	[In millions of metric tons]
1934-38	+3
1948-52	-6
1957-59	-12
1961-63	-22
1964-65	-26
1965-66	-28
1966-67	-34
1967-68	-29

It is not just the dimension of this change that has caught the world off guard, it is the speed at which it has taken place.

It is a simple but indisputable fact—

Says GEORGE AIKEN, ranking Republican on the Senate Agriculture and Forestry Committee—

that world food supplies are running second to world population. We need an agricultural production to match the population re-

¹ The (London, England) Observer, December 10, 1967.

² Kenneth D. Thomas and J. Fanglaykim, *Indonesian Exports; Performance & Prospects 1950-1970*, Universitaire Pers Rotterdam, 1967, p. 32.

³ Quentin M. West, *World Food Needs*, Foreign Regional Analyst Division, Economic Research Service, U.S. Department of Agriculture, February 10, 1966, p. 10.

quirements. Despite the great progress that has been made in production yields, we cannot take the outcome of this crucial race for granted.

Says Senator MILTON YOUNG:

Concerning food needs in this country we have the capacity to produce all of our nation's needs for at least the next half century and perhaps far beyond. The farmers of this nation continue to produce more per unit each year with no end in sight. They are now producing enough to meet our domestic food demands plus up to \$6 billion worth of farm commodities for export annually. This is done at a time when we have a government program to keep idle more than 35 million acres of American cropland!

We must be concerned, however, about the population explosion around the world. The major problem involved here is one of finding a way to make our food available to these people other than through highly subsidized or donation programs.

Dr. Raymond Ewell believes—

The world is on the threshold of the biggest famine in history. If present trends continue, it seems likely that famine will reach serious proportions in India, Pakistan and China in the early 1970's . . . Such a famine will be of massive proportions affecting hundreds of millions.⁴

Swedish economist Gunnar Myrdal sees a "world calamity" in "5 or 10 years."⁵

W. Arthur Lewis writes:

We cannot be confident that world food production will increase during the next two or three decades at the desired rates.⁶

At the December 1967 OECD Ministers' Meeting a report on the food problem of the developing countries was presented by the Secretary General of OECD Thor-kil Kristensen. Notable points:

It is a matter of concern that in the first seven years of the 1960's the following phenomena have coincided:

Food production in the developing countries has grown more slowly than demand;

The area of good new land that could easily be brought under cultivation in developing countries has been sharply reduced;

The population of developing countries has been growing at an increasing rate;

Surplus stocks of grain in North America have roughly speaking been exhausted through shipments to less-developed areas;

Development aid from the richer countries has on the whole stagnated;

The debt burden of many developing countries has been rising fast.⁷

WHAT OF NEW SCIENTIFIC DEVELOPMENTS?

In May 1969, Addeke H. Boerma, Director-General of the United Nations Food and Agriculture Organization, said:

For one thing, the varieties that have so far been produced are not suited to some climatic conditions, so that there will be a need to test the behavior of existing varieties in many countries and to promote research in others in order to create varieties there which are locally suitable. Again, the new varieties will not yield their full capacity without the assistance of many other elements. These include primarily large quantities of fertilizers, plant protection chem-

⁴ Raymond Ewell, "Famine and Fertilizer," *Chemical and Engineering News*, December 14, 1964, pp. 106-117.

⁵ *Look*, March 7, 1967, pp. 86-88.

⁶ W. Arthur Lewis, *The Theory of Economic Growth*, George Allen & Unwin Ltd., London, 1955, p. 855.

⁷ The OECD Observer, December, 1967, p. 5.

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the long-range Spartan missile that works—they have successfully demonstrated the short-range Sprint missile. Now they say, let us put them all together in a single system and we will make the whole thing work. Can we doubt them? Can we doubt this type of demonstrated performance? I think not. These men are equipped with the facts—their recommendations are based on proven capability. They have testified before us that no question has been raised by outside experts that they had not raised in their own internal debate and for which satisfactory answers had been found. With these types of assurances, how can we doubt them.

The chance of a nuclear war today, I believe, is zero due to our overwhelming strategic deterrent. As I conceive it, the primary job of our Government is to keep this chance at zero—for without security, we have nothing. Nuclear war is the one thing that we absolutely cannot afford. We have two routes available to do this job. The first is to counter any attempt by any nation to overcome our deterrent force. We do this by improving, modifying, adding to or substituting weapons systems to insure that we can respond overwhelmingly in the case of attack. The second, and in my judgment the best course, is to reach some meaningful international agreements limiting strategic arms and thus insuring through agreement, rather than through investment in arms, that we can deter nuclear aggression.

These two courses are not separate routes. They are closely interrelated and intertwined to that point in the road where the arms agreement is signed. We must approach the bargaining table with the Soviets fully convinced that we will not allow them to overcome our deterrent no matter what the cost to us—no matter what the cost to them. We must approach the arms limitation talks with a club in one hand and a pen in the other, allowing them their choice. They must be convinced of the futility of proceeding with an arms race. We must present them with a posture that leaves no doubt as to our resolve.

The initial result we are looking for in strategic arms limitation talks is a method of insuring ours and the Russians' mutual deterrent capability without the need to further engage in the arms race and without reducing our security.

A properly designed agreement to limit strategic forces can better insure the security of both the United States and the Soviet Union. Our task in negotiating such an agreement should be eased by the growing realization on both sides that a first strike capability will not be permitted to develop regardless of the effort and money expended for that purpose. The Safeguard decision would be a clear indication of intent to the Soviets of our attitude in this regard.

The needs of the world are too urgent to waste the world's wealth on useless competition in strategic weapons. But the prospect for ending this competition rests on the attitudes and actions of both the Soviet Union and ourselves—not us alone.

The opposition to the Safeguard system strongly advocates the opposite position. They say that the deployment of these defensive weapons will accelerate the arms race and will make it more difficult to negotiate with the Russians. My answer to them is this—and please listen to these words carefully—"I believe that the defensive systems, which prevent attack, are not the cause of the arms race, but constitute a factor for preventing the death of people." These words represent well the point of view of those supporting the Safeguard system, but they were not spoken by a Safeguard advocate. These are the words of Soviet Premier Kosygin. This statement by Mr. Kosygin certainly does indicate an understanding of a defensive system.

Safeguard is a defensive system. The United States' decision to deploy a defensive ABM has been matched by an intensified Soviet interest in arms control. The Safeguard system makes it very clear to all nuclear powers, large and small, that we seek only to protect our deterrent forces—so that, in case of attack, we will be assured of the ability to destroy the attacker.

As someone once said:

Our pleas for peace are measured not by the sincerity with which they are spoken, but by the strength we can array to enforce them.

We cannot read the minds of the Soviet leaders, nor can we readily determine their intentions. We must base our decisions on their known capabilities. It does appear, though, that they understand the defensive nature of our Safeguard system. If they are ready for arms control—so are we. But, if arms control should fail, then the Safeguard system will give us the edge on deterrence.

A prudent person seeking a prudent decision on the difficult question of our strategic posture can do no other than to conclude that the phased Safeguard system is the prudent answer.

Mr. President, we must remain secure as a free nation. Our days must be days of preparedness and reality. One of the realities we must not forget is that weakness invites aggression, while strength deters it.

Preparedness in this nuclear age must constitute more than a sword; it must include a shield, as well.

Mr. President, I suggest the absence of a quorum.

The PRESIDING OFFICER. The clerk will call the roll.

The bill clerk proceeded to call the roll. Mr. MANSFIELD. Mr. President, I ask unanimous consent that the order for the quorum call be rescinded.

The PRESIDING OFFICER. Without objection, it is so ordered.

Mr. MANSFIELD. I do so only to express my deep personal thanks to the distinguished Senator from Wyoming for his graciousness in allowing so many of us to infringe on the time which he had asked for yesterday. I want him to know that I am deeply grateful and thankful for his graciousness, his courtesy, and the kindness he has shown us; but these are attributes of the Senator from Wyoming.

Mr. HANSEN. Mr. President, I am in-

deed grateful and appreciative of the very kind remarks of my beloved friend, the distinguished majority leader. The things he says about me have been said about him so many times that I shall not repeat them now; but I do appreciate his kind remarks.

Mr. STENNIS. Mr. President, will the Senator yield?

Mr. HANSEN. I yield.

Mr. STENNIS. I want to thank the Senator as well as commend him for taking time to put together in such concise and definite form his thoughts on this important question. As always, we know where he stands; he has expressed himself well, and has made a great contribution to the debate on this subject.

Mr. HANSEN. I thank the distinguished Senator from Mississippi very much.

Mr. President, I yield the floor.

The PRESIDING OFFICER. Pursuant to previous order, the Senator from Colorado (Mr. ALLOTT) is recognized for 30 minutes.

THE MANAGEMENT OF THE NATIONAL PARK SYSTEM

Mr. ALLOTT. Mr. President, George B. Hartzog, Jr., who is director of the National Park Service, was chosen to deliver the distinguished alumni address to the Federal Executive Institute in Charlottesville, Va., on July 12. Mr. Hartzog is a graduate of the Institute, which serves the development needs of career executives in the upper levels of our Government; and because his speech, "National Park Service Management," evidenced insight which I know will be of interest in the Senate, I ask unanimous consent that the text of Mr. Hartzog's remarks be printed in the RECORD at this point.

There being no objection, the address was ordered to be printed in the RECORD, as follows:

NATIONAL PARK SERVICE MANAGEMENT

(By George B. Hartzog, Jr.)

It is a great privilege and pleasure to participate in this reunion of the graduates of the first and second sessions of the Federal Executive Institute. For the high honor you have bestowed on me to present this first Distinguished Alumni address, I am deeply grateful.

I remember my attendance here as one of the highlights of my career. I shared many hours of good fellowship; made new friends among my colleagues in the Federal service; and gained new insights into our mutual problems and aspirations.

It is my firm belief that this Institute has the highest potential existing today for significant improvement in the quality of management within the Federal career service. I congratulate the Civil Service Commission, Dr. Sherwood, the faculty and the staff of the Institute for creative leadership in Executive Education. This pioneering effort has been difficult. You have accepted the challenge with vigor and imagination. You have achieved results and I predict even greater success in the years ahead.

Dr. Sherwood, in extending the invitation on behalf of the Alumni, suggested that I discuss with you the management of the National Park Service, with particular emphasis on policy leadership, the relationship of management to the political processes, and the special management needs of the National Park Service. Since you are all "old

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able to count on an orderly source of income.

But, in the meanwhile, the first priority is not to engage in a fight between the Democratic policy committee and certain members of their party, or certain members of our party.

We are not concerned here about personalities, or whether some group in the Senate wants to get the jump on another group in the Senate. In the course of it, I will tell the people who will get jumped. It will be them—the people of the United States. They will get jumped on. They will be jumped on every day if they do not get some kind of tax relief. Inflation will cool itself a little more and a little more and get tighter and tighter around them as it spreads its burden more seriously and harder upon the people of this country.

Mr. President, the weather yesterday registered its highest discomfort index for the year in Washington. I hope that today I may have raised the level of the discomfort index of those people who would dare to say to the people of the United States, "Stay on the tax roll. Face inflation. We have got a little family argument going on our side and we have not been able to decide it."

Mr. MANSFIELD. Mr. President, will the Senator from Wyoming yield me 2 minutes to reply to the Senator from Pennsylvania?

Mr. HANSEN. I am happy to yield to the Senator from Montana, provided I do not lose my right to the floor.

Mr. MANSFIELD. Mr. President, may I say, first, that I am not interested in dispensing "merces" to the low-income groups in this country.

What I am interested in is, if possible, to dispense justice to all our citizens.

So far as holding up this legislation is concerned, I would say to my distinguished friend, the assistant minority leader, that we on our side would be willing—very willing—to extend the withholding levels added by the original surcharge for 60 days, 90 days, or to the end of the year.

We would like to see at the same time something in the way of justice done for all our people. So far as I am concerned, let me say that I am willing to take my case to Montana's 56 counties.

So far as my index is concerned, it is quite comfortable. I feel that I am doing what I think is right. I do not believe there is a Member of this body who has ever accused me, even though I am a politician, of playing politics with any issue.

I think that the welfare of the country—and that means the people of this Nation—must always come first.

What I have tried to do is not place the blame, as my distinguished friend from Pennsylvania has, and who, in his philippic, without mentioning the Democratic Party, has in effect threatened us on the basis of the present issue.

If that is the case, so be it.

The gauntlet has been thrown down.

We accept it.

We will not allow anyone to blame us for the increase in the interest rate by 2½ percent since the beginning of this year, for the increase in the cost of liv-

ing, and for all the other inflationary spirals that have come into existence during the past 6 or 7 months while the surtax has been in full effect.

We both have a case. We should rest that case. I will not decide it. The Senator from Pennsylvania will not decide it. The Members of this body will decide it—both Democrats and Republicans.

I thank the distinguished Senator from Wyoming for being so gracious in yielding me this time.

ORDER FOR RECOGNITION OF SENATOR JAVITS

Mr. JAVITS. Mr. President, I ask unanimous consent that when the Senator from Nebraska (Mr. CURTIS) has concluded his remarks, and there are quite a succession of unanimous-consent requests to speak, that I may be recognized for 20 minutes.

The VICE PRESIDENT. Without objection, it is so ordered.

CLOSED SESSION ON ABM

Mr. SYMINGTON. Mr. President, will the Senator from Wyoming yield to me briefly without losing his right to the floor?

Mr. HANSEN. Mr. President, I am happy to yield to the Senator from Missouri, provided I do not lose my right to the floor.

Mr. SYMINGTON. Mr. President, I thank my good friend from Wyoming.

Mr. President, after noting remarks made to the press just prior to the closed session yesterday, and also reports this morning in the press about that session, and also statements made on the television media last night, I now see no reason for another closed session on the ABM.

Later, during further discussion of this matter in open session, I shall present to the Senate in greater detail my reasons for this course.

Mr. President, I thank the Senator from Wyoming for yielding to me at this time.

Mr. THURMOND. Mr. President, will the Senator yield?

Mr. HANSEN. Mr. President, I yield to the Senator from South Carolina for 1 minute, without losing my right to the floor.

The PRESIDING OFFICER. Without objection, it is so ordered.

PERSONAL STATEMENT

Mr. THURMOND. Mr. President, this morning an article in the Washington Post reported that I stated in a speech to Prince Georges County Young Republicans last night that opponents of the Safeguard antiballistic missile are "people who don't believe in America, in free enterprise, people who are against our way of life." While the words actually quoted were a portion of my remarks, they were given in a context referring to radicals and violent-prone leaders who are disrupting the processes of law and order in our cities. My remarks on the ABM and violence in America were both contained in this speech, but it is incom-

prehensible how the reporter confused my remarks on these two completely different subjects. I hasten to set the record straight.

I certainly did not question the sincerity of those who are not supporting the President's Safeguard program. The people in America who are fighting the ABM are fully within their rights and are doing what they consider best for this country. In supporting the ABM, I am doing likewise.

A SWORD AND A SHIELD

Mr. HANSEN. Mr. President, the decision to deploy Safeguard stands on a solid foundation of reasoned judgment. It was developed on demonstrated fact—not conjecture. It was conceived from a proven capability—not wishful thinking. It took into account all factors—not just isolated incidents.

The structure of the decision has withstood the test of dissent.

Objections have been raised against it, but each has been satisfied—each rejected—to leave the basic decision even stronger for its examination.

I think it would be worthwhile at this time to review two basic reasons for supporting the President's phased Safeguard program—the first is its ability to do the task for which it is designed—the second, to examine its role in the arena of arms control.

Last Wednesday, this Nation launched a mission to place a man on the moon. It seems inconceivable to me that anyone could doubt the technical competence of a nation that could achieve such a feat. The United States of America has the scientific, technological, and industrial base to put an American on the moon. The United States of America has the scientific, technological, and industrial base to develop an anti-ballistic-missile defense that will work.

Mr. President, the Safeguard program is the culmination of more than 13 years of research and development effort and the expenditure of about \$5 billion, including all the various projects related to ballistic missile defense. An ABM program was first presented to the Congress in 1955. It moved into full-scale development in 1958. In 1963, the initial program—the Nike-Zeus system—was abandoned because, with the mechanically steered radars which it employed, it could not cope with the kind of attack the Soviets could mount in the late 1960's. For this reason, a new improved system, known as the Nike-X, was placed in development. This system was to use new phased-array radars and a new high acceleration terminal defense missile, the Sprint. In 1964, a program was initiated to develop a new, long-range interceptor with a high-yield warhead. This was the Spartan missile.

This review was just to give you some indication of the time our scientists have spent on the system and the confidence the Congress has shown in these scientists by our continued allocation of funds for this development.

For our investment, those scientists have provided us with a missile site radar that works—they have developed

as the Democratic Policy Committee by promptly reporting to the Senate a bill which would improve upon the House-passed measure and add some meaningful tax reform in addition to that which is already in the House bill.

I might say that I have often been advised by a President or a Secretary of the Treasury or even by my Majority Leader that a bill was important or that it had something in it that should not be there or that it lacked a feature which should be in it. That is nothing new to me. If I had not received the guidance of the Democratic Policy Committee I would have known what to do with this bill. Major revenue measures are no novelty to the Committee on Finance.

I do not presume to speak for the Democrats on this Committee nor do I presume to speak for the Republicans except as they authorize me to speak for them. But in proceeding with the consideration of the surtax bill I am not unmindful of the major tax reform measure being readied for House action by the Committee on Ways and Means. That Committee has dedicated itself to tax reform and the President and the Secretary of the Treasury has committed the Administration to tax reform. The Senate itself is gripped with tax reform fever.

But the pressing business now is to maintain the fiscal integrity of the Federal government and give the President the tools he says are needed to contain inflation.

As Chairman of the Committee on Finance it is my purpose to try and bring men of good will together so that the dual goals of fiscal policy and tax reform can be achieved in the best interest of the nation. I thought that was also the purpose of the resolution of the Democratic Policy Committee.

Mr. WILLIAMS of Delaware. Mr. President, I appreciate the statement the Senator from Louisiana has made. I appreciate his willingness to call the committee into executive session on Thursday in order that we can consider the possibility of taking action on reporting the surtax bill from the committee.

I think it is very important that we do consider in our committee major tax reform proposals, and I agree completely with the chairman that to do so properly will take rather extended hearings.

I do not think it is good for the country or for the economy of the country to postpone action on the surtax or the question of repeal of investment credit until after the hearings have been completed on major tax reforms and the committee can act. That could take until October.

I was hoping that we could proceed in an orderly manner. I was hoping that we could act on the surtax bill, which came from the House, and then, as the chairman has already announced, proceed next week to the hearing of any reform proposal of any Senator. By holding these hearings now we would be ready to mark up the bill soon after it is received from the House. Perhaps the House would have included their amendments as a part of the House bill; if not we could consider their suggestions.

I think we need major tax reform. The country is desirous of it. I have a strong interest in it; however, if we try to combine the two the delay will do a great disservice to the country.

I appreciate the fact that the chairman is willing to call the committee into executive session later this week and give us a chance to decide on reporting the surtax bill.

I would welcome the presence of the Democratic policy committee if they want to appear before the Finance Committee and express their views.

However, in all due respect to the Democratic policy committee, as I have pointed out, this is a measure that affects the country as a whole. It is a measure on which the Senate as a whole, both Republican and Democratic Senators, have a vital decision to make. I do not think the decision as to what we should not do is one that we can delegate to either the Republican policy committee or the Democratic policy committee. I think that this is something we should sit down together and work out.

I most respectfully point out to my colleagues on the other side of the aisle that when the tax bill was passed last year it was enacted in a bipartisan manner. It was cosponsored by Senator Smathers of Florida and me, and while President Johnson was in the White House.

I think the question of an extension of this topic now merits that same bipartisan approach at this time. And I hope that we can get it.

Again I want to express my appreciation to the chairman of our committee for his courtesy in extending to the minority members an opportunity to express their views by calling this executive session for later this week.

Mr. CURTIS. Mr. President, I commend the distinguished chairman of the Finance Committee, who is always fair and always considerate to members of his committee and Members of the Senate.

The Senator keeps in mind the interest of our total economy. We are faced with very definite problems. We need more revenue. The financial situation is acute.

It is easy to have a lot of talk about tax reform, and there should be tax reform.

Many of the provisions about which there is discussion of having reform have been in the Internal Revenue Code for 30, 40, or 50 years. We cannot strike them out either in the committee or on the floor without giving people a hearing.

I will give an illustration. One of the proposals relates to gifts that have an appreciated value to churches, hospitals, and colleges.

It would be unthinkable to change the status of that until we had heard from all parties involved. And to insist on combining the proposals for reform in the revenue bill may result in having neither reform nor a revenue bill.

Mr. President, I thank the Senator.

ABM

AUTHORIZATION OF APPROPRIATIONS FOR FISCAL YEAR 1970 FOR MILITARY PROCUREMENT, RESEARCH AND DEVELOPMENT, AND FOR THE CONSTRUCTION OF MISSILE TEST FACILITIES AT KWAJALEIN MISSILE RANGE, AND RESERVE COMPONENT STRENGTH

The PRESIDING OFFICER. The Chair lays before the Senate the unfinished business, which will be stated.

The LEGISLATIVE CLERK. A bill (S. 2546)

to authorize appropriations during the fiscal year 1970 for procurement of aircraft, missiles, naval vessels, and tracked combat vehicles, and research, development, test, and evaluation for the Armed Forces, and to authorize the construction of test facilities at Kwajalein Missile Range, and to prescribe the authorized personnel strength of the Selected Reserve of each reserve component of the Armed Forces, and for other purposes.

The Senate resumed the consideration of the bill.

The PRESIDING OFFICER. Under the previous order, the Senator from Nebraska (Mr. CURTIS) is recognized for 30 minutes.

Mr. CURTIS. Mr. President, one of the major responsibilities of our Government is to maintain the peace and avoid the involvement in war. It is when the United States is strong—spiritually, economically, and militarily—that we will have the greatest success in preventing both large wars and small wars. Strength and firmness on the part of the United States are instruments of peace. Vacillation and appeasement are invitations to war. Such is the verdict of history.

I shall support the anti-ballistic-missile proposal because I am convinced that to do so enhances the cause of peace. I am convinced that to fail to provide for this defensive weapon will lessen our chances for peace. At a time like this, we should give to the President of the United States our unified support and every instrument that strengthens his position in dealing with the Communist world.

An awesome responsibility rests on the President of the United States. He is committed to the task of carrying on discussions with the Soviet leaders. I appeal to my colleagues to do all that is within their power to strengthen the position of the United States in these momentous times.

We should all realize the gravity of the situation. This is one issue where the outcome may rest upon one Senator. Theoretically, at least, it is possible for one Senator to bring into being an anti-ballistic-missile system to add to the strength of our Nation, or for that same Senator, by his vote, to tip the scales so that the measure is defeated. We should approach this not as a popularity contest. Fifty-one votes will authorize the ABM, which will bring protection to our country, add to its strength, and give us something that will deter aggression. A mere 49 votes for the ABM, assuming all Members of the Senate are present and voting, will deny this protection, not to the President personally but rather to our country.

Today there is a movement afoot to downgrade those who are charged with the defense of our country. There are those who preach disarmament and stress rapprochement with a potential enemy that understands only strength. There are some who view our relations with the Communist world by a double standard. When the Communists develop a new nuclear weapon system it is not destabilizing. When the United States proposes a defensive nuclear system it is an escalation.

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would otherwise be the case. There was a lot of reluctance to cutting individual income taxes—and revenues—in the face of the budget deficits we were experiencing.

The second fact is that the Senate invariably acts more swiftly on major tax legislation than the House of Representatives.

Applying this history to the present situation we observe that the House Ways and Means Committee has already devoted four months to tax reform.

The most optimistic predictions are that they will send us a bill in August—three months away. Assuming they meet that schedule and that we begin hearings in the Finance Committee right after Labor Day (Congress will be in recess from August 13 until after Labor Day) it would probably be December before the Senate passes the bill. Even so it would be a tremendous accomplishment to pass a major tax bill in less than one year.

Now, as I have mentioned, the Committee on Finance and the Senate are becoming more innovative and effective in the tax legislative processes. For instance, when other approaches had failed, a tax amendment assured the legality of the merger of the two major professional football leagues and fostered the single player draft, thereby reducing a tremendous financial strain on that industry. The tax check-off amendment, by which a taxpayer could direct the use of \$1 of his tax payment for presidential campaign purposes, is another illustration of Senate innovation in the tax area. Although the tax check-off was suspended a few months after it was enacted—and the suspension itself was Senate motivated—it has focused the attention of the nation on a problem we are going to have to deal with, probably before the next presidential election in 1972.

Indeed the 10 percent tax surcharge and the restraint on Federal spending in this fiscal year—which has made possible the first budget surplus in a good many years—was enacted as a Senate amendment. I would have preferred a change in the tax rates to the surcharge and my own amendment to provide an increase in the tax rates was at the desk when the surcharge amendment was agreed to. The many, many complaints we have had about the surcharge suggest to me that we would have done better from the standpoint of the public relations if we had taken the rate increase route.

In the Revenue Act of 1962 a Senate amendment (which I offered) assured enactment of the investment tax credit. It required that the depreciable basis for the property involved be decreased by the amount of the investment credit so that there would be no pyramiding of tax benefits. A Senate amendment calling for reporting to the tax collector of interest and dividend payments made to depositors and shareholders closed off a massive "leakage" in the tax system. This amendment was offered after it became clear that withholding of tax on this sort of income would not be passed.

The tie-breaking vote I cast in the Committee on the question of taxing foreign income of United States corporations and their subsidiaries probably saved those provisions. I cast that vote by telephone from Louisiana after the case for and against the amendment had been explained to me by Senators calling from the executive session of the Committee.

In the Revenue Act of 1964 a move in the Finance Committee to substitute an increase in the personal exemption for the rate reductions provided by the House bill was successfully resisted, guaranteeing that American taxpayers would realize their first tax rate reduction since the Korean War.

In another area, one of the important Senate amendments to the 1964 Act deleted a series of House provisions which would have

substantially liberalized the capital gains treatment for property held longer than three years. This liberalization had been linked to a proposal to tax unrealized appreciation in value of property held at death, but in a last-minute maneuver the House Ways and Means Committee decided not to change the law with respect to property held at death. However, it left the provision lowering the capital gains tax in the bill.

We deleted those provisions in the Finance Committee and during the debates on the bill we demonstrated for the Senate how capital gains have permitted many high income individuals to pay inordinately low taxes. I have observed that in terms of sheer size capital gains is the "granddaddy" of all the tax preferences, and we just could not justify making capital gains still more rewarding and we made this attitude stick in conference.

More currently, the present move for tax reform really got its start as a Senate amendment which we prevailed upon the House to accept, calling on the President to submit recommendations for tax reform to Congress by December 31, 1968. Those recommendations, actually submitted by Treasury technicians in February of this year are now the backbone of the tax reform effort underway in the House Ways and Means Committee.

So in a large measure the present tax reform move owes its momentum to two significant developments, both of which occurred in the Senate. First, the enactment of the surtax, which has created a great unrest among taxpayers across the land, causing a public demand for tax reform. Secondly, was the advance work on tax reform done by the Treasury Department in response to the Senate amendment calling for tax reform suggestions. When the call came much of the work was already done.

CONSIDERATION OF THE SURTAX BY THE SENATE (Press release of Committee on Finance, U.S. Senate)

Before ending this phase of hearings on the surtax bill, the Chairman would like to make his position on this bill clear, if that is possible. To begin with, I am thoroughly confused about whatever it is that the Democratic Policy Committee wants this Committee to do. I have been a member of the Senate for more than 20 years and a member of the Committee on Finance for more than 16. During those years I have managed major revenue bills recommended by former President, John F. Kennedy and Lyndon B. Johnson.

But unfortunately, I had no such experience with the present policy of the Democratic Policy Committee, because at that time the Democratic Policy Committee did not seek to provide guidance to Committees and Committee Chairman about House revenue bills much less provide such guidance even before the bills reached the Senate. The procedure is completely new to me and therefore, I find myself groping for an answer just as the Policy Committee itself is groping for an answer to its own policy.

Before this bill came to the Senate, the Democratic Policy Committee requested me to meet with that Committee and discuss tax reform suggestions. The Democratic Policy Committee had one expert with them, a fair, distinguished and able man who is a former high government official. I was invited back again two weeks later without any prior knowledge of the subject to be discussed. At that meeting the Democratic Policy Committee agreed to a resolution as follows:

"Whereas, the Senate Majority Policy Committee, having met and considered the matter of the extension of the income tax surcharge, hereby resolves:

"That meaningful tax reforms should be adopted as a means of achieving an equitable

national income tax policy, and further resolves,

"That any proposal to extend the income tax surcharge be considered simultaneously with recommendations on meaningful tax reform and further resolves,

"That the present income tax withholding rates be continued after June 30, 1969 for a period of one quarter to permit full consideration and disposition of the reform and extension of the surtax."

The original text of this resolution used the words "full and comprehensive tax reform" instead of "meaningful" as was in the published resolution. It is because I pointed out to the Policy Committee that it could take many months or even years to draft a full and comprehensive tax reform measure that the word "meaningful" was substituted for "full and comprehensive" in its resolution.

I explained to the Policy Committee that tax reform meant different things to different people. It was my suggestion that the Committee on Finance should report whatever bill the Committee could agree upon, and Senators could offer any amendment they chose when the bill reached the floor.

It was my thought that the Senate would approve those amendments that a majority of the Senators favored and vote down those amendments which a majority of the Senate did not favor. We have proceeded that way with revenue bills for the twenty years that I have served here.

This important measure has been of major concern to the President of the United States and to the Secretary of the Treasury. Both of them have expressed fear of the utter chaos that could descend upon this nation, if this bill—which is the only Administration measure at this point seeking to maintain a stable economic and fiscal condition in our land—should fail to be enacted.

Their concern has been shared by public expression of every living ex-Secretary of the Treasury, including such men as Joe Barr, Henry Fowler, Douglas Dillon, Bob Anderson, George Humphrey and John Snyder. All of these financial leaders have deplored the present situation which jeopardizes the ability of the Federal government to pay its debts currently. They deplore the plight of the President and they deplore the plight of the nation if this bill should fail. It would be of the utmost concern to all of them and to the President if the present surtax should not be expeditiously extended. Therefore, as Chairman of this Committee, I undertook to set up a schedule which would bring this bill before the Senate prior to the expiration date set by law—July 31. That is the basis upon which this Committee is proceeding.

Now, it has been suggested that two bills should be reported by the Committee on Finance before the first bill is considered. That came as a surprise to me when it was first suggested, just as it surprised Senator Muskie who was a member of the Policy Committee. His remarks on the Floor yesterday suggested that he felt the two bills approach was contrary to the resolution of the Democratic Policy Committee.

Fortunately for us, the task today is simple—we will now conclude the hearings of the public witnesses testifying on the suspension of the investment tax credit. I would hope that we can hear Senators next week who desire to testify on the tax reform proposals they plan to offer to this bill. Then I will seek to obtain for the Committee the benefit of further guidance, after which the Committee can then decide if it wishes to hear further testimony or commence voting.

As Chairman of this Committee I regret that there has been a misunderstanding of how I intend to proceed with this bill. It was my intention to satisfy the views of the President, Secretary of the Treasury as well

July 15, 1969

The international graveyards of history are full of the corpses of those who believed that appeasement and weakness would not be challenged by an aggressor.

Today, America stands at a crossroads. While we debate whether or not a defensive system is needed to protect our retaliatory capability, the Soviet Union is expanding its offensive on all fronts.

Ad hoc committees against the ABM are being formed. Anti-ABM books are being written and leaflets are being distributed. The propaganda mills of the unilateral disarmers are going full tilt.

It is interesting to note that those groups who stress that the Safeguard ABM system will not work because it has not been tested in the environment in which it must be used are some of the same groups who pleaded so eloquently for the limited test ban treaty. This treaty prevents the United States from testing in the atmosphere or outer space. I voted against the limited test ban treaty, and I well remember during the debate that we were all assured that we could accomplish whatever nuclear tests were needed for our defense underground. Would those opponents of the ABM now suggest that we abrogate the limited test ban treaty in order to test the ABM? I think not.

I believe those who told us then and tell us now that the ABM can be successfully tested without the resumption of atmospheric testing. I am concerned when I hear those who do not have the awesome responsibility of decision criticize and carp. I wonder about those who, when they were in government, raised no objection to ABM concepts, but now without the responsibility of command speak so eloquently in opposition from their ivory towers.

I believe Dr. John Foster, Director of Research and Engineering for the Defense Department, when he stated before the Armed Services Committee that the ABM will perform the task assigned to it.

Let me point out some of the reasons the United States needs an ABM system.

The Soviet Union has one and possibly two ABM systems—the first around Moscow, and the second, the so-called Tallinn system, spread throughout the Soviet Union. These systems are already deployed. We, on the other hand, have none.

The Soviets have greatly increased their offensive capability. Former Secretary of Defense Clark Clifford in his prepared statement of January 16, 1969, said:

We estimate that as of September 1, 1968, the Soviets had approximately 900 ICBM launchers operational, compared with 570 in mid-1967, and 250 in mid-1966, an increase of well over threefold in a period of little more than two years.

According to Adm. H. G. Rickover, the Soviet Union has greatly increased its offensive ballistic missile submarines. In a letter to the Senator from Rhode Island (Mr. PASTORE), vice chairman of the joint committee, Admiral Rickover said:

In the single year 1968, the Soviets put to sea a new type ballistic missile submarine

as well as several new types of nuclear attack submarines—a feat far exceeding anything we have ever done. . . .

In November 1967, former Secretary of Defense McNamara revealed that the Soviet Union had developed a fractional orbital bombardment system—FOBS. This FOBS target cannot be determined until 3 minutes and 500 miles from the target.

Secretary of Defense Laird revealed in testimony before the Senate Armed Services Committee that the Soviet arsenal contains over 200 SS-9 missiles, each one capable of delivering up to 25 megatons on our Minuteman missiles.

Despite overwhelming evidence of a recent increase in the Soviet offensive as well as defensive capability, we still hesitate to defend ourselves.

The anti-ballistic-missile system proposed by President Nixon on March 14, 1969, is a defensive system to protect U.S. retaliatory capability. It has been suggested by some that this defensive move on our part constitutes an escalation of the East-West arms race. Nothing could be farther from the truth. Rather than escalation, a defensive ABM system is a stabilizing factor. Even opponents of the ABM system concede that it is not another round in the arms race.

In an exchange with the Senator from Missouri (Mr. SYMINGTON) during hearings before the Foreign Relations Committee, Dr. Wolfgang Panofsky discussed this point:

Senator SYMINGTON. Dr. Panofsky, I would ask this question: If we are successful in defending Minuteman bases in this way, and if they desire to maintain parity, would they not increase their ICBMs?

Dr. PANOFSKY. Only if they were genuinely interested in a first strike posture. If they were satisfied by a second strike posture, then, if we increased the defense of our Minuteman bases by ABMs, they would not have to increase their ICBM force. (Page 341, March 28, 1969)

Dr. Hans Bethe, professor of physics, Cornell University, then opposing the Sentinel ABM system, stated:

A completely different concept of ABM is to deploy it around Minuteman silos and command and control centers. This application has gone in and out of Defense Department planning. I am in favor of such a scheme at the appropriate time. My main reason for being in favor is that such a deployment would stabilize the strategic situation rather than the opposite. (Page 39)

Dr. Bethe's statement was made on March 6, 8 days before President Nixon announced the Safeguard system which would accomplish precisely what Dr. Bethe advocated.

I have been discussing Soviet strength and capability to wage war. Let me review Soviet past behavior.

Less than a year ago, in August 1968, the Soviet Union ruthlessly invaded the territory of an ally—Czechoslovakia. If the Soviet Union would do this to an ally, what would it do to a potential foe?

In 1962 the Soviet Union placed offensive nuclear missiles in Cuba, 90 miles from our shores.

In 1956 the Soviets brutally stamped out the freedom fighters of Hungary.

And for those who prefer long-range

history, who can forget that in 1940 the Soviet Union joined with Nazi Germany in a nonaggression pact?

In America today, our problem is to alert the people to the threat of the international Communist conspiracy. We have to reach the heartland of America. We have to avoid the siren calls of the disgruntled intellectuals. We must alert the people to the problems around us as President Eisenhower did in his farewell speech given on January 17, 1961. It is interesting that one sentence—no, really three words, "military-industrial complex"—is almost solely quoted from that speech. How many have read the speech in its entirety? President Eisenhower referred to the Communists in that speech when he said:

We face a hostile ideology—global in scope, atheistic in character, ruthless in purpose, and insidious in method. Unhappily the danger it poses promises to be of indefinite duration.

In another part of his excellent address, President Eisenhower said:

In holding scientific research and discovery in respect, as we should, we must also be alert to the equal and opposite danger that public policy could itself become the captive of a scientific-technological elite.

I have rarely seen these portions quoted in our news media and, therefore, I ask unanimous consent to have printed in the Record the entire speech by President Eisenhower to follow my statement.

The PRESIDING OFFICER. Without objection, it is so ordered.

(See exhibit 1.)

Mr. CURTIS. Mr. President, the choice today is ours. Communist nations are on the march. Our leaders, both Democrats and Republicans, urge us to defend ourselves. The last three Secretaries of Defense urged the development of an anti-ballistic-missile system. There is no partisanship in this cry for defense. I regret that some members of my own party may not see the dangers of taking first one step, then another, and still another toward peace at any price.

What is past is prologue. I only hope we will remember it was the Soviet Union that broke the informal atmospheric testing moratorium in 1961. During that test series, the Soviets detonated a 60-megaton terror weapon. They broke that informal moratorium while their representatives sat with ours in peaceful discussions in Geneva. If we do not learn from the past, we are doomed in the future.

I strongly urge that every Member of the Senate vote for the defensive Safeguard system. To do otherwise is an invitation to disaster.

EXHIBIT 1

FAREWELL RADIO AND TELEVISION ADDRESS TO THE AMERICAN PEOPLE, JANUARY 17, 1961

[Delivered from the President's Office at 8:30 p.m.]

My fellow Americans:

Three days from now, after half a century in the service of our country, I shall lay down the responsibilities of office as, in traditional and solemn ceremony, the authority of the Presidency is vested in my successor.

This evening I come to you with a message of leave-taking and farewell, and to share a few final thoughts with you, my countrymen.

July 15, 1969

Like every other citizen, I wish the new President, and all who will labor with him, Godspeed. I pray that the coming years will be blessed with peace and prosperity for all.

Our people expect their President and the Congress to find essential agreement on issues of great moment, the wise resolution of which will better shape the future of the Nation.

My own relations with the Congress, which began on a remote and tenuous basis when, long ago, a member of the Senate appointed me to West Point, have since ranged to the intimate during the war and immediate post-war period, and, finally, to the mutually interdependent during these past eight years.

In this final relationship, the Congress and the Administration have, on most vital issues, cooperated well, to serve the national good rather than mere partisanship, and so have assured that the business of the Nation should go forward. So, my official relationship with the Congress ends in a feeling, on my part, of gratitude that we have been able to do so much together.

II

We now stand ten years past the midpoint of a century that has witnessed four major wars among great nations. Three of these involved our own country. Despite these holocausts America is today the strongest, the most influential and most productive nation in the world. Understandably proud of this pre-eminence, we yet realize that America's leadership and prestige depend, not merely upon our unmatched material progress, riches and military strength, but on how we use our power in the interests of world peace and human betterment.

III

Throughout America's adventure in free government, our basic purposes have been to keep the peace; to foster progress in human achievement, and to enhance liberty, dignity and integrity among people and among nations. To strive for less would be unworthy of a free and religious people. Any failure traceable to arrogance, or our lack of comprehension or readiness to sacrifice would inflict upon us grievous hurt both at home and abroad.

Progress toward these noble goals is persistently threatened by the conflict now engulfing the world. It commands our whole attention, absorbs our very beings. We face a hostile ideology—global in scope, atheistic in character, ruthless in purpose, and insidious in method. Unhappily the danger it poses promises to be of indefinite duration. To meet it successfully, there is called for, not so much the emotional and transitory sacrifices of crisis, but rather those which enable us to carry forward steadily, surely, and without complaint the burdens of a prolonged and complex struggle—with liberty the stake. Only thus shall we remain, despite every provocation, on our charted course toward permanent peace and human betterment.

Crises there will continue to be. In meeting them, whether foreign or domestic, great or small, there is a recurring temptation to feel that some spectacular and costly action could become the miraculous solution to all current difficulties. A huge increase in newer elements of our defense; development of unrealistic programs to cure every ill in agriculture; a dramatic expansion in basic and applied research—these and many other possibilities, each possibly promising in itself, may be suggested as the only way to the road we wish to travel.

But each proposal must be weighed in the light of a broader consideration: the need to maintain balance in and among national programs—balance between the private and the public economy, balance between cost and hoped for advantage—balance between the clearly necessary and the comfortably desirable; balance between our essential re-

quirements as a nation and the duties imposed by the nation upon the individual; balance between actions of the moment and the national welfare of the future. Good judgment seeks balance and progress; lack of it eventually finds imbalance and frustration.

The record of many decades stands as proof that our people and their government have, in the main, understood these truths and have responded to them well, in the face of stress and threat. But threats, new in kind or degree, constantly arise. I mention two only.

IV

A vital element in keeping the peace is our military establishment. Our arms must be mighty, ready for instant action, so that no potential aggressor may be tempted to risk his own destruction.

Our military organization today bears little relation to that known by any of my predecessors in peacetime, or indeed by the fighting men of World War II or Korea.

Until the latest of our world conflicts, the United States had no armaments industry. American makers of plowshares could, with time and as required, make swords as well. But now we can no longer risk emergency improvisation of national defense; we have been compelled to create a permanent armaments industry of vast proportions. Added to this, three and a half million men and women are directly engaged in the defense establishment. We annually spend on military security more than the net income of all United States corporations.

This conjunction of an immense military establishment and a large arms industry is new in the American experience. The total influence—economic, political, even spiritual—is felt in every city, every State house, every office of the Federal government. We recognize the imperative need for this development. Yet we must not fail to comprehend its grave implications. Our toil, resources and livelihood are all involved; so is the very structure of our society.

In the councils of government, we must guard against the acquisition of unwarranted influence, whether sought or unsought, by the military-industrial complex. The potential for the disastrous rise of misplaced power exists and will persist.

We must never let the weight of this combination endanger our liberties or democratic processes. We should take nothing for granted. Only an alert and knowledgeable citizenry can compel the proper meshing of the huge industrial and military machinery of defense with our peaceful methods and goals, so that security and liberty may prosper together.

Akin to, and largely responsible for the sweeping changes in our industrial-military posture, has been the technological revolution during recent decades.

In this revolution, research has become central; it also becomes more formalized, complex, and costly. A steadily increasing share is conducted for, by, or at the direction of, the Federal government.

Today, the solitary inventor, tinkering in his shop, has been overshadowed by task forces of scientists in laboratories and testing fields. In the same fashion, the free university, historically the fountainhead of free ideas and scientific discovery, has experienced a revolution in the conduct of research. Partly because of the huge cost involved, a government contract becomes virtually a substitute for intellectual curiosity. For every old blackboard there are now hundreds of new electronic computers.

The prospect of domination of the nation's scholars by Federal employment, project allocations, and the power of money is ever present—and is gravely to be regarded.

Yet, in holding scientific research and discovery in respect, as we should, we must also be alert to the equal and opposite dan-

ger that public policy could itself become the captive of a scientific-technological elite.

It is the task of statesmanship to mold, to balance, and to integrate these and other forces, new and old, within the principles of our democratic system—ever aiming toward the supreme goals of our free society.

V

Another factor in maintaining balance involves the element of time. As we peer into society's future, we—you and I, and our government—must avoid the impulse to live only for today, plundering, for our own ease and convenience, the precious resources of tomorrow. We cannot mortgage the material assets of our grandchildren without risking the loss also of their political and spiritual heritage. We want democracy to survive for all generations to come, not to become the insolvent phantom of tomorrow.

VI

Down the long lane of the history yet to be written America knows that this world of ours, ever growing smaller, must avoid becoming a community of dreadful fear and hate, and be, instead, a proud confederation of mutual trust and respect.

Such a confederation must be one of equals. The weakest must come to the conference table with the same confidence as do we, protected as we are by our moral, economic, and military strength. That table, though scarred by many past frustrations, cannot be abandoned for the certain agony of the battlefield.

Disarmament, with mutual honor and confidence, is a continuing imperative. Together we must learn how to compose differences, not with arms, but with intellect and decent purpose. Because this need is so sharp and apparent I confess that I lay down my official responsibilities in this field with a definite sense of disappointment. As one who has witnessed the horror and the lingering sadness of war—as one who knows that another war could utterly destroy this civilization which has been so slowly and painfully built over thousands of years—I wish I could say tonight that a lasting peace is in sight.

Happily, I can say that war has been avoided. Steady progress toward our ultimate goal has been made. But, so much remains to be done. As a private citizen, I shall never cease to do what little I can to help the world advance along that road.

VII

So—in this my last good night to you as your President—I thank you for the many opportunities you have given me for public service in war and peace. I trust that in that service you find some things worthy; as for the rest of it, I know you will find ways to improve performance in the future.

You and I—my fellow citizens—need to be strong in our faith that all nations, under God, will reach the goal of peace with justice. May we be ever unswerving in devotion to principle, confident but humble with power, diligent in pursuit of the Nation's great goals.

To all the peoples of the world, I once more give expression to America's prayerful and continuing aspiration:

We pray that peoples of all faiths, all races, all nations, may have their great human needs satisfied; that those now denied opportunity shall come to enjoy it to the full; that all who yearn for freedom may experience its spiritual blessings; that those who have freedom will understand, also, its heavy responsibilities; that all who are insensitive to the needs of others will learn charity; that the scourges of poverty, disease and ignorance will be made to disappear from the earth, and that, in the goodness of time, all peoples will come to live together in a peace guaranteed by the binding force of mutual respect and love.

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Mr. CURTIS. Mr. President, I yield the floor, and I suggest the absence of a quorum.

The PRESIDING OFFICER. The clerk will call the roll.

The bill clerk proceeded to call the roll.

Mr. MANSFIELD. Mr. President, I ask unanimous consent that the order for the quorum call be rescinded.

The PRESIDING OFFICER. Without objection, it is so ordered.

Mr. DOMINICK obtained the floor.

Mr. MANSFIELD. Mr. President, will the Senator yield, without losing his right to the floor?

Mr. DOMINICK. I yield.

Mr. MANSFIELD. Mr. President, I suggest the absence of a quorum.

The PRESIDING OFFICER. The clerk will call the roll.

The bill clerk proceeded to call the roll.

Mr. MANSFIELD. Mr. President, I ask unanimous consent that the order for the quorum call be rescinded.

The PRESIDING OFFICER. Without objection, it is so ordered.

Mr. MANSFIELD. Mr. President, will the Senator yield to me, briefly?

Mr. DOMINICK. I am happy to yield.

**ORDER FOR ADJOURNMENT FROM
WEDNESDAY, JULY 16, UNTIL
THURSDAY, JULY 17, 1969**

Mr. MANSFIELD. Mr. President, for the information of the Senate, I ask unanimous consent that when the Senate completes its business tomorrow, it stand in adjournment until 12 o'clock noon on Thursday next.

The PRESIDING OFFICER. Without objection, it is so ordered.

PROGRAM

Mr. MANSFIELD. Mr. President, for the information of the Senate, after the prayer and possibly the reading of the Journal on Thursday next, it is the intention of the distinguished Senator from Missouri (Mr. SYMINGTON) to move that the Senate go into closed session. There will be no morning hour that day. There will be a live quorum call as soon as the request is made and granted, which is automatic; and all Senators should be on notice that this will take place on that day, and they should be prepared accordingly.

One more thing: It is my understanding that no attachés of the Senate will be permitted in the Chamber except those designated under rule XXXVI and those who the Presiding Officer thinks are necessary. In other words, it is my understanding that there will be no officials or staff members attached to Senators or to the committee itself.

Mr. STENNIS. Mr. President, will the Senator yield for one comment on the situation?

Mr. DOMINICK. I yield.

Mr. STENNIS. At a conference with the Senator from Kentucky, who is in opposition to the ABM, we were in agreement that we should try—and we thought we could—to finish that session in 1 day, and that we should go into it in that spirit.

Mr. MANSFIELD. Yes, indeed.

Mr. STENNIS. I expect to be fairly brief, and I think others will, and I hope we can conclude within that time.

Mr. MANSFIELD. I am wholeheartedly in accord with the statement just made by the Senator from Mississippi, the manager of the bill under consideration. Frankly, I see no reason why the closed session should not be completed in 1 day, and I devoutly hope it would be so that we could go on with the business and perhaps begin voting on amendments.

Mr. STENNIS. May I commend and also thank the majority leader for agreeing to cooperate to have this all done in 1 day, if possible, and to have no other business on that day, so that the session can move along.

Mr. MANSFIELD. That is correct.

I hope that Senators who are not present in the Chamber at this time will read the Record and will be aware of the fact that there will be no morning business on Thursday next; that the Senator from Missouri (Mr. SYMINGTON) will move for a closed session; that the motion will be seconded—its acceptance is automatic—and that there will be no staff members in the Chamber, either for individual Senators or for the Committee on Armed Services itself.

That is all I have to say, unless there are further questions.

Mr. MURPHY. Mr. President, will the Senator yield for a question?

Mr. DOMINICK. I yield.

Mr. MURPHY. I understand that the Senator from Missouri will ask for a closed session. How long will that last, or is there a limit, or what do the rules provide?

Mr. MANSFIELD. There is no limit that I know of, but I hope we would get through within 4, 5, or 6 hours at the most, and complete the closed session that day. I would say offhand that the chances are fairly good that such could be done.

Mr. MURPHY. Does the majority leader control the limitation on that, or does the Senator from Missouri control the limitation?

Mr. MANSFIELD. Any control, I would imagine, would have to be under unanimous agreement, in closed session, and that would be a matter for the Senators most interested—the Senator from Mississippi (Mr. STENNIS), the Senator from Missouri (Mr. SYMINGTON), the Senator from Kentucky (Mr. COOPER)—and others to discuss. Whatever they would desire to do, the leadership would be glad to comply with their request.

Mr. MURPHY. I thank the Senator.

Mr. COOPER. Mr. President, will the Senator yield?

Mr. DOMINICK. I yield.

Mr. COOPER. Mr. President, as has already been said, we talked about the possibility of completing the closed session in this one meeting. I have consulted with the Senator from Missouri (Mr. SYMINGTON), who will move for a closed session, and I have spoken with other Senators who oppose the deployment of the anti-ballistic-missile system, and all have agreed to make a determined effort to conclude all the busi-

ness of the closed session on Thursday. However, of course, we cannot bind anyone who may later desire to move for a closed session from so doing. At least, it is our intention to move as quickly as we can on Thursday.

Mr. DIRKSEN. Mr. President, will the Senator yield?

Mr. DOMINICK. I yield.

Mr. DIRKSEN. Mr. President, it should be made clear that any Senator can move for a closed session, and if we get one second, it becomes automatic.

Mr. COOPER. The Senator is correct. If later on any Senator felt he needed more information or anything that was from classified information that we should have access to, it is not only his right but his duty to request a closed session.

Mr. MANSFIELD. Mr. President, will the Senator yield briefly?

Mr. DOMINICK. I yield.

Mr. MANSFIELD. Mr. President, as long as the Senator from Missouri is now present in the Chamber, I wish to say that the Senator from Missouri has informed me that it is his intention, after reading of the Journal on Thursday next, to move that the Senate go into executive session. I have informed the Senate that there will be no attachés on the floor of the Senate, either for individual Senators or for the Committee on Armed Services; and the Senator from Kentucky and the Senator from Mississippi, and a number of other Senators, along with the joint leadership, have expressed the hope that it may be possible to complete that closed session that day so that it will not go over to the next day, but we cannot guarantee it.

Mr. SYMINGTON. Mr. President, will the Senator yield?

Mr. DOMINICK. I yield to the Senator from Missouri.

Mr. SYMINGTON. It would not be my intention to take extended time when presenting matters in closed session on this particular issue. However, from what I understand, there may be other closed sessions on other weapons systems later. I do not know what the distinguished chairman, the Senator from Mississippi has in mind, but I do not intend to take much time.

Mr. MANSFIELD. Mr. President, I wish to thank the distinguished Senator from Colorado for his graciousness and courtesy in allowing us to proceed.

**MESSAGES FROM THE PRESIDENT—
APPROVAL OF BILLS**

Messages in writing from the President of the United States were communicated to the Senate by Mr. Geisler, one of his secretaries, and he announced that on July 11, 1969, the President had approved and signed the following acts:

S. 1010. An act for the relief of Mrs. Aill Kallio; and

S. 1011. An act to authorize appropriations for the saline water conversion program for fiscal year 1970, and for other purposes.

EXECUTIVE MESSAGES REFERRED

As in executive session the Presiding Officer laid before the Senate messages

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from the President of the United States submitting sundry nominations, which were referred to the Committee on Armed Services.

(For nominations this day received, see the end of Senate proceedings.)

MESSAGE FROM THE HOUSE

A message from the House of Representatives by Mr. Bartlett, one of its reading clerks, announced that the House had passed, without amendment, the bill (S. 648) for the relief of Ernesto Alunday.

ENROLLED BILLS SIGNED

The message also announced that the Speaker had affixed his signature to the following enrolled bills:

H.R. 3168. An act for the relief of Aleksandar Zambelj;

H.R. 3172. An act for the relief of Yolanda Puigencio Hunter; and

H.R. 3376. An act for the relief of Maria da Conceicao Evaristo.

SAFEGUARD IN PERSPECTIVE

Mr. DOMINICK, Mr. President, on March 14, 1969, President Nixon announced that he had decided to proceed with the development, construction, and positioning of the Safeguard ballistic missile defense system in a carefully phased program. He stated his belief that we must act now to buy options to help counter the growing capability of potential adversaries of this country. A delay would mean a significant lag before such a defense could become operational. This delay could in turn expose the country to dangerous risks in the mid-1970's.

In the debate which has ensued over this system, four key questions appear to have been raised.

First. Why do we need such a system?

Second. What exactly is the system?

Third. What does it do to prospects for arms control?

Fourth. Will Safeguard work?

I would like to explore these four principal points in some depth.

WHY DO WE NEED SUCH A SYSTEM?

The President stated that the objectives of this program are:

First, protection of our land-based retaliatory forces against a direct attack by the Soviet Union.

Second, defense of the American people against any kind of primitive nuclear attack or nuclear blackmail which countries such as Communist China may threaten in the 1970's.

Third, protection against accidental ballistic launches from any source in the mid- to late-1970's.

The following facts underscore the committee's decision to proceed with a program to meet these objectives.

First, the Soviet Union is engaged in a buildup of its strategic forces significantly larger than was envisaged in 1967 when the previous administration decided to go ahead with the Sentinel. For example:

The Soviet Union is continuing the deployment of very large missiles. Whether these missiles are armed with 25-mega-

ton nuclear warheads or with multiple, independently targetable warheads, continued production and deployment of these missiles will give the Soviets the capability to destroy our own land-based missile force.

The Soviet Union has been substantially increasing the size of its submarine force. As noted on page 7 of the committee report, the Soviets now have a new submarine force of about 375, whereas we have 143—of which 61 are diesel submarines of World War II vintage. Thus the Soviets have a numerical advantage of about 230 submarines. Parenthetically, I might say this is extremely interesting when one considers that in World War II, when the Nazis almost cut off all commerce with European countries, they started that fight with 97 submarines. The Soviet Union now has about 230 submarines over our forces.

At least 65 of the Soviet subs are nuclear powered, and many are equipped with ballistic launched missiles. They are continuing to produce these and have the capability of striking with virtually no warning against our bomber bases or elsewhere.

The Soviets have been developing a semiorbital nuclear weapon system, known as FOBS, which poses a new and different threat to our people and to our bomber bases.

The Soviet Union has already deployed an ABM system designed to afford protection to its western industrialized area and is continuing its research and development in this field.

Second, the Red Chinese capability to launch a weak nuclear attack against the U.S. population in the middle 1970's formed the announced basis for President Johnson's decision to proceed with the Sentinel system, a far more costly and controversial system than the Safeguard. Red China's capability still remains a real threat.

Third, an accidental or unauthorized launch targeted on our country would leave any President in a horrible dilemma if we had no ABM with which to intercept it. In such a case would the President—any President—assume that it was accidental and watch the death of millions of Americans without retaliating, or should he push the command button to unleash our own nuclear forces? Should we not for that reason alone commence work to give us another alternative?

By going ahead with the Safeguard system, it is believed possible to: provide for local defense of selected Minuteman missile sites, provide an area defense to protect our bomber bases and our command and control authorities, defend the continental United States against an accidental or unauthorized attack, and reduce U.S. fatalities to a minimal level in the event of a Chinese nuclear attack in the 1970's.

We do not now know who will be President of the United States in 1970's. Regardless of whom he may be or to which party he may belong, it seems apparent that the administration then in power will be responsible for the lives and security of the American people. It seems equally apparent that steps must be

taken now to start the system which may be needed for this protection.

WHAT IS THE SAFEGUARD SYSTEM?

The second issue which has arisen is, what is the Safeguard system? A great number of people in this country are still unaware or misguided about it. I think it is worthwhile to point out that the components of the system consist of first, radars for long-range detection of any kind of nuclear attack and for accurate guidance of the defense missiles to the incoming weapons; second, Spartan missiles, for high-altitude interception of attacking weapons; and third, Sprint missiles, for lower altitude interception in the atmosphere to provide local protection. It will not be necessary to place missiles and radar sites close to our major cities. Total investment costs for initial deployment will be \$2.1 billion for phase I, and between \$6 and \$7 billion through phase II exclusive of R.D.T. & E. and AEC costs. However, budgetary requests for next year involve \$400.9 million for R.D.T. & E.; \$12.7 million for test facilities at Kwajalein; and \$345.5 million for procurement. These amounts are significantly less than the amounts granted by Congress and the previous administration for the Sentinel system. The only amount in controversy in this debate under the bill appears to be the \$345.5 million, as everyone on the other side appear to support continued research and testing in the ABM field.

The initial phase, as authorized in this bill, will involve the following steps:

First. Continuation of research and development.

Second. Beginning of construction for defense of two of our Minuteman fields: Malmstrom Air Force Base, Mont., and Grand Forks Air Force Base, N. Dak. At the present time, construction of radars and deployment of missiles at these sites is scheduled to be completed in 4 years.

Third. Acquisition of the remaining sites needed for subsequent phases of Safeguard, but no construction.

The exact expenditures authorized are shown on page 25 of the committee report, and it should be noted that no funds are presently authorized for production model missiles.

Each subsequent phase of the deployment will be reviewed to insure that we are doing as much as necessary but no more than is required at that time. The President announced his intention to review the program annually from the point of view of technical developments; the potential threat; the diplomatic context, including any talks on arms limitation with the Soviet Union. I think this is a point which has not been brought out. He has also asked his Foreign Intelligence Advisory Board—a nonpartisan group of distinguished private citizens—to make a yearly assessment of the threat to supplement regular intelligence assessments. Moreover, maximum advantage will be taken of the information gathered from the initial deployment in designing the later phases of the program.

The President noted:

Since our deployment is to be closely related to the threat, it is subject to modification as the threat changes, either through

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negotiations or through unilateral actions by the Soviet Union or Communist China.

It would seem to me, therefore, that the system itself is explained, the amount we are dealing with is explained; yet the position of some opponents of this system is that it will cost hundreds of billions of dollars and go on forever. That is simply not factual in the light of debate in the Senate, in the light of the President's statement, and in the light of the purpose of the particular system.

WHAT IS THE RELATIONSHIP OF THE SAFEGUARD PROGRAM TO PROSPECTS FOR ARMS CONTROL?

The Safeguard program is the least provocative way to assist survival of a significant portion of our retaliatory forces. As an alternative, we could buy more Polaris type submarines and land-based missiles and bombers, or we could begin construction of new missile silos in hard rock. But, aside from providing only marginal improvements in our deterrent—if we should do any one of those things—such programs could be misinterpreted by the Soviets as an attempt to threaten their deterrent. This would be true because they are offensive weapons, or in the case of nuclear missile silos in hard rock, it would be an effort to show that we are going to prevent any kind of attack by them from doing us any damage at all.

Thus, they would stimulate further the costly competition in strategic armaments that we seek to restrain.

At the present time, as some opponents of the ABM have said—and I agree with them—we have enough deliverable nuclear weapons to decimate any country which attacks us. Neither I nor anyone else wants to increase this offensive capability unless absolutely necessary. We must, however, insure that the weapons which we do have can be delivered if we are to prevent a nuclear holocaust in the first place.

That is the purpose and design of the Safeguard system.

If the Soviet force buildup is designed to strengthen further their own deterrent, our Safeguard program is clearly not a threat to them. If, on the other hand, the Soviets have more aggressive purposes, the Safeguard program demonstrates our determination to maintain our powerful deterrent to nuclear attacks on the United States or its allies.

The careful phasing of the Safeguard deployment insures maximum flexibility to adjust the program if arms limitation talks or unilateral actions by the Soviet Union or China result in a reduced threat to our deterrent. If the Soviet Union slows down or stops its deployment of the large payload SS-9 missile, or if the likelihood that these missiles will be armed with accurate MIRV warheads is materially reduced, we can readily limit that part of the Safeguard program which is designed to defend our land-based missiles. Even more favorable reductions in the Soviet offensive and defensive threat could be matched by further restraints in our ABM deployment. However, those parts of the Safeguard program designed for defense against Communist China, small countries with a strategic delivery capability, or accidental or unauthorized attacks from any source, would not be

affected by arms control agreements with the Soviet Union, nor do we expect the Soviet Union to forgo deployment of offensive or defensive weapons designed for similar purposes.

WILL THE SAFEGUARD SYSTEM WORK?

The last question which has arisen is, Will the Safeguard system work? Reputable scientists are in disagreement on this, as they were on the A-bomb, the H-bomb, the Polaris submarine, the moon shot and many other phases of our scientific breakthroughs. However, almost all components of the Safeguard System have been tested individually, and the computer, which is the only non-tested component, is within current technological knowledge. Moreover, because of the measured pace of the deployment, later phases of the program can benefit from technical progress during the early phases.

Furthermore, as Senator Tower aptly pointed out, the deployment will complicate greatly any plan for an aggressive nuclear attack on this country.

It will do that because the opponents must assume that it will work, at least in part. Therefore, if they are going to plan an attack, they would have to concentrate on that area to try to get a knockout blow if they are really going to cripple our deterrent forces.

The President has summarized his position as follows:

The question of ABM involves a complex combination of many factors: numerous, highly technical, often conflicting judgments; the costs; the relationship to prospects for reaching an agreement on limiting nuclear arms; the moral implications which the deployment of a ballistic missile defense system has for many Americans; the impact of the decision on the security of the United States in this perilous age of nuclear arms.

I have weighed all these factors. I am deeply sympathetic to the concerns of private citizens and Members of Congress that we do only that which is necessary for national security. This is why I am recommending a minimum program essential for our security. It is my duty as President to make certain that we do no less.

I just want to ask the membership: Can we in Congress afford to do less? Can we in Congress afford to take the chance of putting the President—any President—in a position where he has to make a horrendous decision of letting an unauthorized or accidental launch, or even a deliberate one, hit our country without retaliation, murdering millions of American people, or push the button which would almost guarantee a worldwide nuclear holocaust? I do not think we in Congress should make a decision which would put any President under that kind of handicap.

Mr. ALLOTT. Mr. President, will the Senator yield?

Mr. DOMINICK. I am happy to yield.

Mr. ALLOTT. The Senator has just referred, very adequately, to the words of the President. Is it not a fact that the duty of individual Members of the Senate with respect to our security is no less than that of the President himself?

Mr. DOMINICK. I would certainly agree with my distinguished colleague.

Mr. ALLOTT. I wish to compliment my colleague on his very plain and simple evaluation of the facts. They are put

forward in such a way that I think any reasonable person reading them can comprehend them and understand the very excellent reasons by which the Senator has arrived at his decision, reasons with which I must say I agree 100 percent.

I do not have a copy of the Senator's statement, but as I came on the floor he was speaking, in the forefront of it, about the development of Soviet capability. He mentioned, for example, the increase in submarines and naval capability. The report talks also in relation to our F-14 and Russia's great increases and advancements in fighters and bombers. I want to ask the distinguished Senator if, in his studies, as a distinguished member and a very understanding and knowledgeable member of the Armed Services Committee, he has seen any signs of diminishment of Soviet land-based ordinary forces in Western Europe and western Russia during this period.

Mr. DOMINICK. No; I would say to my distinguished colleague from Colorado that it is quite to the contrary. Although we have limited further production of our land-based missiles, the Soviets, quite to the contrary, have not followed our example. They have continued to produce, at a much higher level, both their intermediate range missiles and their SS-9 missiles.

If that production continues, it poses a threat not only to our country but also a very major one to our allies in the European theater. Of course, for their air force, the Russians have developed 13 new fighter aircraft in the last 8 years. We have not developed any. We are well behind.

Mr. ALLOTT. As a matter of fact, our most modern fighter really is 15 years old in its concept, is it not? I refer to the F-4.

Mr. DOMINICK. That is approximately correct. I think our first design of the F-4 was in 1956. I think it was first put into semiproduction in about 1959.

Mr. ALLOTT. Since we are talking about the Soviet Union going ahead with her ICBM's, ABM's, fighters, and submarines, I want to speak to the subject of conventional land forces. Within the realm of security, can the Senator tell me—and I know he can, because the newspapers are full of it—whether he has seen any diminishment in the conventional ground forces of the Russians and/or the satellite countries of Europe in the last year or 2 years?

Mr. DOMINICK. There has been no diminution to any considerable extent, but there has been, in part, some redeployment of her forces from the western portion of Russia to the eastern portion, because of the Chinese problem. But in terms of overall manpower, in terms of her conventional potential in Western Europe, she is just as strong in fighters, bombers, and medium-range missiles, and probably even more threatening in her capability than she was before because of her increased production in those categories.

Mr. ALLOTT. I thank the Senator.

One other question. There seems to be an assumption on the part of those who

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are opposed to the Safeguard system that we can wait another year or 2 or 3 years. It has been repeatedly stated on the floor of that there is a possibility of a Chinese delivery capability in the middle 1970's. No one, of course, can tell exactly what date that will be, which would be about the time the Safeguard system would be implemented. My question to my distinguished colleague is this: We do not have much knowledge of the inscrutable Chinese mind, nor of China's intention under the present situation.

What else could protect this country against an accidental—let us be kind and call it accidental—pushing of the button in Red China in the mid-1970's except to let loose a significant portion of our ICBM system to destroy that portion of China which we thought to be of significance? What other choice would we have than the ABM in such a situation?

Mr. DOMINICK. I totally agree with the question the Senator poses. It is a problem. As a matter of fact, in order to give us any protection, we would have to strike first, because we would have to wipe out their potential of sending a missile in, unless we had an ABM. I do not think any President would ever do that. I would hope that he would not. Our country is not built that way. Our people do not want to do that. I know I do not want to see us do it.

That is another graphic example of the danger, it seems to me, of not deploying our system now. As the Senator so well points out, if we do not start now, we will not have a first phase deployed system in from 18 months to 3 years after the time for which it has been scheduled, which would be about 1974 for the first phase.

So in 1975—let us just pick a year at random—if the Chinese launched a missile against us, and if we did not have an ABM, the President would have to decide whether to let that missile, assuming it was accidentally launched, kill millions of people in this country, and do nothing, or he would have to retaliate, which still would not alter the fact that that missile would hit and kill us.

Mr. ALLOTT. If the President retaliated, it would result in the wholesale destruction of at least hundreds of thousands of lives. That would be inconsistent with our own philosophy of government and our humanitarian motives.

Mr. DOMINICK. The Senator is absolutely correct.

I said yesterday, and I think it is worthwhile repeating, that those who read the book "On the Beach," written by Nevil Shute, will recall that the plot of the novel was based on a Middle Eastern country having one nuclear weapon which was launched against the United States under false colors. The United States, in turn, attacked the country we thought had created the problem. That country, in turn, thought some other country had attacked. Before we knew it, the world was in a total holocaust.

An ABM system, if it had been in effect and had worked properly, would have been able to intercept that missile and knock it down. Then the whole plot

of the story would have fallen apart. We did not have an ABM technology then—at least in any kind of perfected form—and it is not perfected now. But it is certainly far better than it was in the days when that book was written. If that technology had been available in those days, I doubt very much whether Mr. Shute would have written a book based on that premise.

Mr. ALLOTT. I thank my distinguished colleague again. He has performed an outstanding service. His statement is a model of clarity, and I know it will have a great deal of influence and be listened to by a great many people.

Mr. DOMINICK. I thank my distinguished friend.

Mr. GOLDWATER. Mr. President, will the Senator yield?

Mr. DOMINICK. I am happy to yield to the Senator from Arizona.

Mr. GOLDWATER. I ask the Senator from Colorado what, in his opinion, is the alternative open to Congress and the American people, through Congress and the President, if the ABM is denied the Commander in Chief? Would I be right in assuming that the only alternative we would have would be the immediate building of many more ICBM's than we now have?

Mr. DOMINICK. The only alternative that has been proposed by the opponents of the Senator's position and mine is continuation with research and testing, but no deployment.

As I say, this would substantially delay eventual deployment. If we decided against and voted against any continuation of this system at all, which I do not think is the type of question that we will be presented with, but we might, then we would have no alternative except to start increasing our own offensive capacity, in the event the Russians continued theirs, and we would have an ever-escalating arms race.

Mr. GOLDWATER. If the Senate, by its vote, turns down the request of the Commander in Chief, is an escalation of the arms race, for certain?

Mr. DOMINICK. Well, it would seem to me that it is, because if we once turn down deployment, are we ever going to be able to get the missile? We are going to have some votes on it, I am sure, any time the question comes up, until we are finally convinced that there is no other way to handle it. I do not see any other alternative, I am frank to admit.

I would think that a large amount of money would be put into the development of larger missiles. I think we would have to have bigger nuclear warheads. I would think we would have to start developing an enormously expensive system on movable-type missile sites, whether on trucks or rails, underwater, or whatever it might be. All this would be enormously expensive.

I think this Safeguard system is the least provocative and least expensive way to proceed.

Mr. GOLDWATER. I thank the Senator.

Mr. COOPER. Mr. President, will the Senator yield?

Mr. DOMINICK. I am happy to yield to the Senator from Kentucky.

Mr. COOPER. I was very glad that I have heard the Senator's speech. I do not intend to go over again questions we have already discussed several times on this floor. I was glad to hear the Senator say that he had no doubt about our retaliatory capacity at present.

Mr. DOMINICK. That is correct.

Mr. COOPER. And it is correct, is it not, that Secretary Laird and the administration now concede that our retaliatory capacity will be effective until the mid-1970's?

Mr. DOMINICK. I did not understand them to say that. I think what they said was that our retaliatory capability would be steadily declining in relation to that of the Soviets and our other potential adversaries.

Mr. COOPER. That is somewhat different from saying whether we would have a retaliatory capacity.

Mr. DOMINICK. Well, the retaliatory capacity, if I may say so, must be based on two things if it is to be an effective deterrent. Perhaps we are playing on words.

Mr. COOPER. I think not.

Mr. DOMINICK. "Retaliatory" means that you have weapons that you can strike them with. "Deterrent" means that they know you have the weapons, and they believe they can be fired.

Now, if they do not know this, or do not believe it, whether we have them or not, it is not a deterrent; and that is a major part of the psychological problem involved here.

If one looks at the situation from a potential enemy's point of view, let us say that potentially the Soviets are our enemies—but let us say potentially, because we have had a lot of discussion on that—let us say that they are increasing their missile production substantially; they have a very big submarine fleet; they have the FOBS system, which we do not have at all; they watch the Congress of the United States refuse to deploy an ABM system, while they have one for their industrialized area; and they are going ahead with research and deployment on new systems—when you put all this together, the question of whether or not we have a reliable deterrent is going to determine the credibility of this to the planners in the other country.

That, it seems to me, is a tremendous risk as far as our country is concerned.

Mr. COOPER. I raise the issue of retaliatory capability because of the differing positions which it seems to me the Secretary of Defense has taken during this debate; and I shall enumerate.

I was present in the committee, under the chairmanship of the Senator from Tennessee (Mr. GORE), when Secretary Laird first was a witness. While he did not say so explicitly, it was implied that the Soviets intended a first strike, and would have the capability of a first strike.

Mr. DOMINICK. Those are two different things.

Mr. COOPER. Let me proceed; I understand the difference.

Mr. DOMINICK. All right.

Mr. COOPER. They retreated from that position. He assures us that the United States has the capability of in-

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flicting a retaliatory strike, defined as the ability to inflict upon the Soviet Union assured destruction, even though the United States were first the subject of a strike.

The Senator will agree, will he not?

Mr. DOMINICK. "Unacceptable damage," I think, is the word I remember, but that is all right.

Mr. COOPER. All right; some say "assured destruction," others "unacceptable damage."

Later, if I may call it to the Senator's attention, that he believes the Secretary has said we can maintain that capability until the mid-1970's.

To suggest that we cannot maintain the capability—the deterrent—is based upon the assumption that during the critical period from today until the mid-1970's the United States would do nothing to protect itself, if the threat should develop.

During the debate it has been said that those of us who oppose the ABM system offer, as an alternative, the development of more offensive weapons now. Of course, that is not correct, as I said a few days ago in an exchange with my friend. We have only said that is what we should do if the threat does develop as the Secretary of Defense projected. Our country would not leave itself defenseless. If the projected threat develops we would take every means we could to protect this country.

Mr. DOMINICK. Let me be the first to assure my friend from Kentucky that I know he has no intentions of advocating unilateral disarmament.

Mr. COOPER. Of course not.

Mr. DOMINICK. I know he has no intentions of 'poo-hooing' any possible threat there may be to us, and the Senator will note that I very carefully said that I know that the Senator from Kentucky, at least, and others who have opposed deployment, I am sure, have indicated that they want to go ahead with research and testing on the ABM system.

Mr. COOPER. I am talking about offensive capacity.

Mr. DOMINICK. The point I want to make, if I may make this last comment, is that I do not think that any of those things are contradictions.

What the Secretary of Defense has said is that the growing potential of the Soviet Union, if they are an adversary of ours, will be a threat to our country by the 1970's.

Mr. COOPER. That is correct.

Mr. DOMINICK. They have the potential of being a first strike force by that time and could annihilate our land-based missiles. They are at the same time developing the attack submarine which has the capability again of shadowing and following the limited number of submarines that we have, anywhere at any time.

It is not an easy task to do. But by the potential of their antisubmarine warfare, it is perfectly possible within their technology to get increasing ability to accomplish this.

So, if we are going to have a continued mixed force which will act as a credible deterrent—and I think those two words are all important—then it seems to me

we must take steps to make this more reliable within that time frame by putting in a defensive system around our ICBM.

Mr. COOPER. There is another point I want to raise. I do not think it has been brought out as yet in the debate.

Very little advice is given to the Senate in the report on the debate about the measures we are now taking to increase our offensive strength.

I would like to point to the report and the hearings for the facts.

There is an impression in some quarters that nothing is being done or should be done, in the field of offensive weapons to meet the projected threat.

Very little emphasis, if any, has been given to the measure, now being taken by the administration to meet the projected threat by the development of offensive weapons.

A few moments ago, my good friend from Arizona, Senator GOLDWATER, measured the ICBM in terms of numbers alone.

Mr. DOMINICK. Mr. President, is the Senator referring to me? I did not try to number the ICBM's.

Mr. COOPER. In the exchange between the Senator from Colorado and the Senator from Arizona, the number of ICBM's was argued upon the question of relative strength.

Mr. DOMINICK. That is correct.

Mr. COOPER. It cannot be measured only upon numbers—1,054 as against 1,000 or 1,100. We have to measure also ICBM's in terms of warheads.

It is correct, is it not, that the Department of Defense is now proceeding with its Minuteman III program which would be armed with several warheads—probably three MIRV warheads?

Mr. GOLDWATER. That is correct.

Mr. DOMINICK. We are proceeding with the research and development on it.

Mr. COOPER. On page 1783 of the hearings, Mr. Foster stated when, reporting on the program:

August 16, 1968, was a doubly significant day in the development of strategic missiles. The first flight tests of both the Poseidon and Minuteman III were held on that day, and both tests [deleted] were successful. Since then we have had [deleted] additional successful flight tests of each of these missiles. [Deleted.]

Our overall evaluation is that both Minuteman III and Poseidon have demonstrated feasibility adequately and we expect to meet our development goals. We have [deleted] more Minuteman III tests this fiscal year and [deleted] in fiscal year 1970. Poseidon has [deleted] more tests this fiscal year and [deleted] in fiscal year 1970. Both programs will deploy on schedule: [deleted] for Minuteman III and [deleted], for Poseidon.

The first submarine equipped with the modified Polaris A3T missile was deployed on schedule [deleted]. Approximately [deleted] percent of the Atlantic Fleet will have been modified by the end of this calendar year.

Is it not correct that the Defense Department and our administration is proceeding to improve offensive weapons—the Poseidon for the Polaris as well as the Minuteman III?

Mr. DOMINICK. Yes. It is correct to the point the Senator takes it. However, I think where the Senator and I agree in

disagreement can be put this plainly. We still have a limited number of ICBM's.

Mr. COOPER. My question is about the Polaris.

Mr. DOMINICK. Second, we have a limited number of Polaris and Poseidon, because the Poseidon goes on the same ship as the Polaris. It is not a new ship. So, if we have that limited number of positions and a first-strike capability of an adversary which will threaten any number, it does not make any difference what they are armed with. If they are knocked out, they are no longer credible.

Mr. COOPER. It is a gloomy picture presented of the Soviet threat. It surprises me that the Secretary will predict such great capabilities for the Soviet Union and derogate our own.

Is it not correct that a program has been authorized to refit 31 of our 41 Polaris submarines with the Poseidon?

Mr. DOMINICK. That is correct.

Mr. COOPER. Is it not correct that money is contained in the bill to proceed with the refitting?

Mr. DOMINICK. The Senator is correct.

Mr. COOPER. We are on the program and have begun to deploy.

Mr. DOMINICK. The Senator is correct. However, we still have a limited number of submarines.

Mr. COOPER. How many warheads will the 31 bear when the refitting is completed?

Mr. DOMINICK. I do not know whether that information is classified. However, it is a fairly large number.

Mr. COOPER. Much larger than the 656 they now carry.

Mr. DOMINICK. That is correct. However, they only have a limited number of those on station at any one time.

Mr. COOPER. That is correct. Would it not be safe to say without declassifying that when the Polaris is refitted and becomes armed with the Poseidon missiles, the warheads, which are now 656 on the Polaris, would be at least tripled and could be increased by a factor of 5 to 10?

Mr. DOMINICK. I would not think that the strength of the Polaris fleet would be tripled in terms of warheads. However, it would be just under that, I would think.

Let me say, if I may once again, that these arguments are all fine. We are trying to improve the capability of what we have. That is correct. However, if we have a finite number of submarines and those submarines get sunk, we do not have anything to shoot off. And in the same way, if we have a finite number of missiles and they can be hit with a pattern, they will be knocked out. It does not then make any difference what we have on them.

In the third place, even assuming that we have all of the offensive power—and I do not want to increase it much more than we have now—it does not do us a bit of good against an accidental or an unauthorized launch—not a bit.

Mr. COOPER. The Senator has affirmed my position that our country has now embarked upon programs which will increase greatly our offensive strength and the number of warheads that we could deliver upon the Soviet

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Union, by means of our Polaris fleet and our land-based ICBM fleet. I know that it has been argued that the Polaris fleet could be rendered useless because the attack submarines of the Soviet Union might be able to hunt them down.

Mr. DOMINICK. I hope this will not be true.

Mr. COOPER. Is it not correct that in this bill the Senator's committee has authorized the construction of attack submarines?

Mr. DOMINICK. That is totally correct. Those are attack submarines. Those are not Polaris submarines.

Mr. COOPER. I am simply making the point that while the supporters of ABM give the grim picture, that in the next 4 or 5 years we will become increasingly subject to a first strike, we are in fact increasing our offensive capabilities through these programs to meet such a threat.

Mr. DOMINICK. I think this is a matter of the glasses one looks through to see what the picture is. One can look through pink glasses and everything seems rosy, but, if he does not look through pink glasses, it does not look so rosy.

Let me say once again what I was trying to point out before: We are trying to stay abreast of new technology so that our weaponry will not deteriorate. If you once lock on to a position and do not move from it at all, sooner or later you find yourself behind, both in terms of scientists and ability, to be able to defend the country with modern, up-to-date equipment. I do not think any of us wants that, including the Senator from Kentucky. So we are continuing these things.

But in terms of finite numbers, we are now spending on offensive and defensive strategic weapons, on a constant dollar basis, 50 percent of what we spent in 1952. This seems to me to be an example of the degree to which we have tried to cut back on strategic and offensive systems for this country. This particular one is one in which two Presidents, three Secretaries of Defense, and the Joint Chiefs of Staff have said we wanted an ABM system of one sort or another. The one they have is, to me, as recommended by President Nixon, far sounder than the Sentinel system. To me, it makes a lot more sense, because it preserves the credibility of our deterrent so that there will not be a nuclear attack, to begin with.

Mr. COOPER. One more point. The first strike, of course, implies a capability to strike and destroy all our retaliatory forces—synchronized and simultaneously to strike our ICBM's, to strike our bombers, to destroy our Polaris. This is an assumption, that from most of the expert testimony I have read, seems impossible to do.

Mr. DOMINICK. Let me just reply, and I will be brief in replying to that. This, again, is the question of how one looks at it. If they knock out our ICBM's, we have a limited number of Polaris or Poseidon around with refitted equipment. They are subject to attack by the attack submarines. About all we have left is our bomber attack, and Sec-

retary McNamara pretty well ruined that. We do not have much left of our bomber capability, or will not have by the 1970's, anyhow.

Mr. COOPER. I have found the following deficiencies in the presentation in support of the ABM. First the implication that we are in grave danger now, and that the danger could develop by the mid-1970's. There has been a failure to make clear to the country and to Congress that we are now making great efforts to meet such a threat with increased offensive capability. I have noted to the Senator from Colorado, and he has agreed, they include the arming of Minuteman III and Polaris with Poseidon, and attack submarines. If these programs go forward, in the next 3 or 4 years, instead of 4,200 warheads in our arsenal at present, we will have double that amount, and perhaps triple that number.

We are proceeding with the deployment of MIRV. I do not think anyone believes that we are behind the Soviets with MIRV.

Mr. DOMINICK. I do not want to interrupt the Senator, but I do want to comment on this.

Let us suppose that everything the Senator has said is correct, which I do not agree with, as he knows. Let us just suppose it. There is not a single thing in this country's hardware, now or proposed, which would defend this country against a ballistic missile coming in—not a single thing. Until we get something that can do it, we are wide open for any kind of attack, and the only alternative we have is to push a button and send some of our ICBM's, which neither the Senator from Kentucky nor I want to do.

Mr. COOPER. May I say, in response, this argument, made again and again in the last few days, illustrates the changes in position, supporting ABM.

Last year we were considering the Sentinel system, designed to protect the population as an area defense. The very arguments are being made today for the Safeguard system which were made last year for the Sentinel system.

Mr. DOMINICK. And the same argument is still valid.

Mr. COOPER. I do not agree.

Since that time, the Joint Chiefs of Staff, who last year were saying categorically we should build the Sentinel system, now support the Safeguard system.

Mr. DOMINICK. Let me correct that. The Joint Chiefs of Staff, for 3 years, and the heads of all the services have been recommending an ABM system. The method of deployment of it has been determined by either the Secretary of Defense or the President, depending upon who it might be at the particular time. Even some of the funds that Congress authorized in the earlier days—I am talking about 3 or 4 years ago—the then Secretary of Defense would not use.

Mr. COOPER. I do not think the Senator can say there is no distinction between the two systems. The Sentinel area system, is a population protector. The Safeguard, as the Senator has said, is for protection of the Minuteman missiles.

Then we have heard the argument that the decision to deploy the Safeguard is to strengthen the President's hand in negotiations. That has been a constant theme in the debate.

Then, I note in the last 2 days a chief argument has been made that we must have this system to protect against an accidental launch or a deliberate small attack. If this is correct—if this is the position—then I believe that the administration should come out strongly for an area defense, one which would cover the country and blanket it against an accidental launch.

Because Safeguard is not an effective enough system, the cities could not be protected by the area defense provided by Safeguard. But if this is the purpose, or one of the chief purposes, then the administration should ask for an adequate area defense, one that would give greater protection against accidental launching.

Mr. DOMINICK. Let me comment on that. I brought up the subject of an accidental launch or an unauthorized launch as long as 3 years ago. I made speeches last year on the floor about it, so it is not anything new, and it is not necessarily an administration argument. It is one that I think has deep validity, which is why I have been repeating it over and over again.

I certainly would not want the Senator from Kentucky or the Senator from Arizona or myself to be President of the United States and be faced with that kind of alternative in the middle 1970's. I think it is a totally untenable position to put any President in, regardless of who he may be.

Second, I think we have to say that if we go forward with the Safeguard system, in its 12-site selection, that system, when we have the long-range Spartans and Sprints installed, will give us pretty good protection on over-the-pole threats.

Mr. GOLDWATER. Mr. President, will the Senator yield?

Mr. DOMINICK. I yield.

Mr. GOLDWATER. Mr. President, I think in the colloquy that has just transpired we have seen some doubts raised, or some reasons raised to have doubts, particularly if we get into the numbers game.

Five years ago I said that the missile force was not reliable. I am not sure today how reliable it is. The manned bomber is much more reliable and it is a much more dependable system than a missile system. We have never tested one of our missiles with a warhead on it. The potential enemy of whom we are speaking has done this.

Therefore, when my good friend from Kentucky talks about the fact that this administration is increasing the number of warheads, is increasing the capability of the Minuteman, through Minuteman III, and talks about numbers, I do not think any one of us can say these numbers are adequate because we do not know with any degree of certainty the percentage of these missiles that will fly when the button has to be pushed or that can live through a nuclear environment. But the Russians, I must say, back in 1961 thoroughly tested all their weapons through. We are not sure, even

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with navigation and guidance systems if these missiles can survive a nuclear environment. So I do not think anybody can say with any degree of certainty that 1,000 warheads are enough, that 2,000 warheads are enough or that 500 warheads are enough. This weapon is not a lot different in that respect than any other weapon we have used throughout history. Until we have actual combat experience we cannot say it will require x number of weapons, x number of tons, or x number of pounds to diminish a target.

I wanted to make that statement because as we consider the basic fact that this request for an ABM or Safeguard system has come from the one man in this country charged with the responsibility of making recommendations, I think we must also recognize—and I find no quarrel up to now with the opposition to the ABM—that the President was not wrong in going along with the improvement of Minuteman, in going along with MIRV, in going along with new advanced manned aircraft, or any of the other weapons in the bill. I think we must get back to the fact that while those who oppose the ABM will probably approve other parts of this bill, that this entire package is from the Commander in Chief, backed up by his military advisers.

I cannot conceive of any country, and particularly the United States, saying that we are not going to provide a defense against any weapon.

With respect to retaliatory capability, yes, there is truth to that and we have been able to maintain—not stability, but we have not had a World War III since we had the worldwide retaliatory concept of Foster Dulles, a theory which proved right. But what is going to happen if potential enemies see that the United States has no protection except a retaliatory strike? I shudder to think of the blackmail that will be heaped upon the United States if that day ever comes.

I am happy that the Senator from Kentucky, in his brilliant way, has gotten into this matter, because out of it we will have a better understanding.

I will say that there have been changes, but not from the standpoint of the administration. I observed the other day when this matter first came up that the opposition was totally against the ABM. Then, sensing that there might not be success in that area, they changed to opposition to MIRV.

Let us say the ABM section of the bill passes, and let us say that MIRV is denied, the very thing the Senator from Kentucky sees as hopeful, the growth of warheads, will be denied this country so we will be saying we have an ABM but we have no way to equal the strength of the other, or say we have no ABM and no MIRV, there is no possible way in the world of showing strength to a potential enemy.

Now, we see the struggle of the opposition in several amendments. One would do what this bill proposes to do, namely, not deploy. We could not deploy any of these until 1974, even if the Lord were down here running the show.

The change has been made in the opposition to the ABM. We see it fluctuating day after day as it totals the vote which now seems to favor those who are for the ABM. Frankly, I watch this debate with great interest to see what the next development on the part of the opponents will be because I think so far they are running around loosely—I will not say like sheep because they are not sheep—but there has been no pattern established that the proponents of this measure have not been able to stamp out.

Mr. DOMINICK. I thank the Senator from Arizona.

Mr. COOPER. Mr. President, will the Senator yield to me?

Mr. DOMINICK. I yield.

Mr. COOPER. I thank the Senator for his counseling. I want to make it clear to the Senator that there has been no change in our position. It was in April a year ago that I introduced an amendment to delay the deployment for two purposes: one purpose was to first determine whether it would be effective. A year has passed and we still do not know if it is effective. Integrated testing will not be done until 1973 or later.

But that was not the only reason. We have urged again and again and there is no change—that we use this year in an effort to stop the arms race or at least control it.

We know that additional nuclear weapons systems have not brought us security, and they may eventually lessen our security. We are trying to see, while there is an opportunity through talks, to determine if the arms race can be brought under control rather than to continue it, by new weapons systems.

Mr. DOMINICK. I hope we can control the arms race by putting in the ABM and not with more offensive weapons.

I yield to the Senator from Mississippi.

Mr. STENNIS. Mr. President, I asked the Senator to yield to me only briefly. I know there are other Senators who wish to speak. The Senator from Virginia asked for time yesterday afternoon.

I wish to commend the Senator highly for what I think is a solid and constructive analysis of this problem. I know personally how much dedication, time, and work he has given to this matter, particularly since January 1.

One point the Senator makes on the last page of the copy of his address which I have deals with the reputable scientists in disagreement. We found that all the way through, as the Senator pointed out. One thing they are not in disagreement about, as I understand it, is that this is the most advanced and best anti-ballistic-missile system by far that we have. When we assembled here in January there was talk about other systems that were involved and the rumor was that the Air Force had something to propose. But when we come right down to the testimony, the ABM was the one. As to the four scientists we had before the committee, as the Senator will recall, in open session, two opposed it and two were in favor of it. All four said that it

was the most advanced and the best system.

Mr. DOMINICK. That is absolutely correct.

Mr. STENNIS. Does the Senator remember that clearly?

Mr. DOMINICK. Very well.

Mr. STENNIS. So the question now is, if we are going to have an ABM, this is the one within present knowledge. The Senator thinks, too, does he not, that of all the research and development we have had, bringing this along slowly over the years, that we have now reached the point, as a practical matter, that if we are going to go on to the next stage, now is the time to do it?

Mr. DOMINICK. I certainly do. I completely agree. As a matter of fact, as the Senator may recall, I think it was in 1963 when the distinguished Senator from South Carolina called a closed session to discuss this question.

Mr. STENNIS. Yes.

Mr. DOMINICK. After that session, most of us, I might say, gained some knowledge. Many Senators had it already, but many did not. Thus, it was a constructive session. I voted against deployment at that time. I think the Senator from Mississippi did also.

Mr. STENNIS. I did, too. The Senator is correct.

Mr. DOMINICK. That was because it was not ready, so far as we could see. Now I think it is, and I think we should go ahead with it.

Mr. STENNIS. I thank the Senator from Colorado very much for his fine contribution.

Mr. DOMINICK. Mr. President, I yield the floor.

ORDER OF BUSINESS

Mr. KENNEDY obtained the floor.

Mr. STENNIS. Mr. President, will the Senator from Massachusetts yield for a unanimous-consent request?

Mr. KENNEDY. I am happy to yield to the Senator from Mississippi, provided that I do not lose my right to the floor.

Mr. STENNIS. Mr. President, yesterday afternoon, the Senator from Virginia (Mr. BYRD) saw me about, if possible, getting some time this afternoon to speak.

Today, the Senate was not in session when I had in mind asking for this request. Now we are back in session, and I therefore ask unanimous consent that after the Senator from Massachusetts has completed his remarks, the special order of business be that the Senator from Virginia—

Mr. THURMOND. Mr. President—

Mr. KENNEDY. Mr. President, I have the floor. I yielded to the Senator from Mississippi with the understanding that I would not lose my right to the floor. I think the Senator from Mississippi has propounded a unanimous-consent request.

Mr. THURMOND. Mr. President, reserving the right to object, I understood that I was scheduled to follow the Senator from Massachusetts. In fact, there

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was some question as to who would come first.

The PRESIDING OFFICER. The Senator from South Carolina is correct.

Mr. THURMOND. I do not wish to relinquish any more of my time because I have another commitment to meet and I have already been waiting a long time to gain the floor.

Mr. STENNIS. Mr. President, I knew nothing about the time that the Senator from South Carolina would have to speak. I did not know that. I know the Senator mentioned yesterday afternoon that he might wish to speak today or the next day. However, I hope that something can be done to meet the situation so that the Senator from Virginia (Mr. BYRD) may speak, especially in view of the fact that I promised to see that he would be placed on the schedule. When I got in today, the Senate had recessed and I did not get back to it.

Mr. President, I withdraw my unanimous-consent request, since the Senator from South Carolina objects.

The PRESIDING OFFICER. The Senator from Massachusetts has the floor.

THE SURCHARGE AND THE NEED FOR TAX REFORM

Mr. KENNEDY. Mr. President, the extraordinary discussions that took place yesterday on the Senate floor, particularly the discussion between the distinguished majority leader and the distinguished chairman of the Senate Finance Committee, have set the stage for what will almost certainly become one of the most significant debates of the current session of the 91st Congress—the debate over the income tax surcharge and tax reform.

In part, of course, the debate will be important because the surcharge is a major tool of Federal fiscal policy for combating the strong inflationary pressures now gripping the economy. In addition, however, the debate will be important for another reason, a reason that has vast significance for all taxpayers in the Nation. For the first time in many years, Congress now has the opportunity to enact comprehensive tax reform. These two areas—the tax surcharge and tax reform—are closely tied to one another, and it is entirely appropriate that Congress should consider them together, as the resolution of the Senate majority policy committee has so clearly stated.

There can be no question that our first duty is to carry out a responsible fiscal policy that brings maximum feasible pressure to bear in our increasingly difficult battle against inflation. At the same time, however, I believe we must keep the strongest possible pressure on the administration and Congress to take the responsibility for seeking comprehensive tax reform.

At the present time, there is strong and rising pressure for tax reform in all parts of the country. Each of our Senate offices is being deluged with communications from outraged citizens demanding reform. One of the most important aspects of the national sentiment for

tax reform is the realization by millions of taxpayers that the income tax surcharge itself is unfair. It aggravates the serious inequities in our existing tax laws. It applies only to those who already pay taxes on their income, and it requires no contribution whatever from those who escape their fair share of taxes. At a time, therefore, when the administration is asking that the surcharge be extended, it is fair—indeed essential—to insist that the administration also demonstrate its commitment to prompt and meaningful tax reform.

At the present stage of the legislative debate on the surcharge and tax reform, I believe that the resolution of the policy committee fully achieves our twin goals of controlling inflation and accelerating the enactment of comprehensive tax reform. By extending the current withholding tax rates, we have taken the only step we need take at the present time to maintain a completely responsible fiscal policy in the fight against inflation. It is not necessary to extend the surcharge provisions themselves. All that is essential at this time is to continue the surcharge withholding rates, which by themselves are sufficient to preserve Government receipts for the summer months at the same level that would have existed had the surcharge itself been extended.

The length of the period of extension of the withholding rates will depend on our progress toward meaningful tax reform. Congress has already acted to extend the rates through July 31 of this year. I agree with the resolution of the policy committee that the rates should be extended through the end of the present quarter—that is until September 30. In light of the announcement last week by Chairman WILBUR MILLS of the House Ways and Means Committee, it is becoming increasingly likely that a significant tax reform bill may be passed by the House before Congress adjourns for the August recess. In light of the announcement last week by Chairman RUSSELL LONG, of the Finance Committee, it now seems likely that the Finance Committee will have completed a major portion of its own hearings on tax reform before the recess. As a result, the September 30 date for extension of the withholding rates would seem to offer both the Senate and the House a reasonable opportunity to enact a comprehensive tax reform bill in this session of the Congress. Of course, if action on tax reform is not completed by that time, the withholding rates could be extended for another appropriate period.

Thus, I believe that any action on the surcharge itself and the other provisions of the House-passed bill, as opposed to the mere extension of the withholding rates, should await the action by Congress on tax reform. If, as seems possible in light of recent developments, a downturn in the economy has begun, or major revenue-raising tax reforms are adopted, it would be wise to reconsider both the amount and the duration of the surcharge. Any excess amount withheld from taxpayers under the higher withholding rates during the extension period

could be returned to the taxpayers through the usual year-end refund procedure.

In sum, the policy committee resolution offers us the very real opportunity to carry out a thoroughly adequate fiscal policy. I do not accept the proposition that extension of the withholding rates contributes in some vague psychological way to the pressures of inflation. It is widely accepted among economists that take-home pay is the major determinant of consumer expenditures, and take-home pay is the same today as it would be if the surcharge had been extended. Those who argue otherwise are themselves contributing to the inflationary psychology.

The vital link between the surcharge and tax reform was recognized by Congress more than a year ago. On the floor of the Senate in June 1968, the surcharge legislation was amended to require President Johnson to submit proposals for comprehensive tax reform to Congress. The floor amendment was adopted in clear recognition of the feeling abroad in the Nation that when taxes increase, strong efforts should be made to eliminate the existing inequities and discriminations in our tax laws.

The case for tax reform has a dual basis. First, the genius and guiding principle of our Federal income tax system is that the tax a person bears is determined by his ability to pay. As Justice Oliver Wendell Holmes once said:

Taxes are the price we pay for civilization.

Those with the greatest ability to pay should contribute the most to meet the costs of Government. Those who are situated in similar economic circumstances should bear similar tax burdens. For the tax system to function properly, each citizen must have confidence that he is paying a fair portion of the price of our society.

Second, and equally important, the fair and effective operation of our tax system is vital to our entire competitive free enterprise system, and therefore to our democratic society itself. Under the proper working of the system, resources must be guided to their most efficient use by the free working of the marketplace. What the market rewards with high returns will and should attract an optimum level of financial and real resources. This is the hallmark of our competitive market system. If we permit unreasonable tax privileges to divert resources away from their best uses, away from the point of greatest natural profit to the point of greatest tax advantage, we distort our profit system and lose many of the benefits of the free market. As President Kennedy stated, the full benefits of the market system can only be felt when all of our people and all of our resources are used as wisely and effectively as possible.

Our present tax laws fall far short of these goals. Unfairness and discrimination abound. Privileges designed for another era linger on to distort the economy, long after the logic for their use has disappeared.

The most glaring defect of our tax laws is their inequity. Although our proce-

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AUTHORIZATION OF APPROPRIATIONS FOR FISCAL YEAR 1970 FOR MILITARY PROCUREMENT, RESEARCH AND DEVELOPMENT, AND FOR THE CONSTRUCTION OF MISSILE TEST FACILITIES AT KWAJALEIN MISSILE RANGE, AND RESERVE COMPONENT STRENGTH

The Senate resumed the consideration of the bill (S. 2546) to authorize appropriations during the fiscal year 1970 for procurement of aircraft, missiles, naval vessels, and tracked combat vehicles, and research, development, test, and evaluation for the Armed Forces, and to authorize the construction of test facilities at Kwajalein Missile Range, and to prescribe the authorized personnel strength of the Selected Reserve of each reserve component of the Armed Forces, and for other purposes.

Mr. WILLIAMS of Delaware. Mr. President, for the past 2 weeks the Senate has been debating the issue of ABM.

Today I want to discuss the question of polls and how important a part they have either in influencing legislation or in molding public opinion and to point out why I think this practice if carried too far can be dangerous.

According to one poll conducted by the press the final vote on the Safeguard ABM system will be 50 Senators for and 49 against, with only 1 Senator—myself—listed as uncommitted. If it were true that 99 Senators have already taken a position then why do we not proceed to an immediate vote?

First let me point out that I respect and admire the press for trying to anticipate the results even before the votes are cast. This makes an interesting numbers game, but frankly ever since the 1948 election I have been somewhat dubious about the reliability of polls, and in this instance they may again be in error.

However, if these polls are to be accepted as accurate the question may well be asked why I have not taken a position.

Surely 99 Senators are not making speeches and conducting this debate just to influence the vote of one lone Senator. If that is the case I am ready to vote today.

On the other hand, why do I not answer the poll and then let the guessing game start all over as to who has changed his mind?

For 23 years I have made it a practice not to answer polls—public or private—because in my opinion while polls are interesting they are oftentimes dangerous.

For example, I am a member of the Senate Finance Committee which handles tax legislation. Advance knowledge obtained by a poll of the members of that committee as to a rate of tax or its effective date can be worth millions to someone who is in a position to make use of such information.

For this reason when the Finance Committee is ready to mark up a bill we try to act fast on the major decisions and then release to the press immediately the results of our vote. For instance, the day after the House voted on the surtax bill, June 30, our committee went into execu-

tive session and took a tentative vote on the effective date for the repeal of the 7-percent investment credit. Millions were involved on this question of the effective date, and an immediate announcement was made to the press as to the results of that vote.

Here today we have before us a bill, a decision on which is of major importance to our country, and while the money factor alone is not the determining point, nevertheless, Senators are aware that this question involves expenditures of several billion.

How many defense contractors and how many speculators are trying to outguess this vote and make plans as to how it will affect their interests?

This question is not asked to cast any reflection on industry, nor is it intended as a reflection on any Senator who has taken a position on the bill or who is taking part in this debate.

It is not only proper but it is a necessary part of our legislative process that Senators who have made a study of any important bill before the Senate should take part in the debate, and certainly their positions are made known.

For weeks I have been urging prompt action on the surtax bill, and as far back as last January I advocated the repeal of the 7-percent investment credit. My position is established on these points, and I have spoken out trying to sell my viewpoint to other Members of Congress. But I did not recommend, nor do I now recommend, a private poll of all other Senators as to how they will vote on that bill.

Besides, how can Senators make a decision on a bill before disposition has been made of various amendments either on a tax bill or on the bill now before us?

Who knows what effect the acceptance or rejection of some of the pending amendments will have on the final vote on the bill before us?

If the Senate ever approves a procedure wherein the press will be able to announce an accurate count of the vote weeks before the actual rollcall on a major bill, we will have ceased to function as a legislative body.

Certainly Senators have an idea as to how they intend to vote, but national or world developments at the last moment must be taken into consideration. For example, the Russian invasion of Czechoslovakia last year prompted a last-minute change in the plans of the Senate for consideration of the Nonproliferation Treaty.

How will I vote on this most important question now pending before the Senate? If at any time I think I can contribute anything toward the debate on any pending amendment or on the bill itself I shall speak out; otherwise I shall just wait until the debate ends, and then on each amendment and on the final passage of the bill I will cast my votes in what I consider to be in the best interests of our country.

Meanwhile, for the remainder of my term in office I will continue the practice of the past 23 years of not answering polls and of not trying to be an authority in every important bill that comes before the Senate.

Mr. BYRD of West Virginia. Mr. President, will the Senator yield?

Mr. WILLIAMS of Delaware. I yield.

Mr. BYRD of West Virginia. Mr. President, I congratulate the Senator. I noted with considerable interest the account in the newspapers of a poll that had been taken of 100 Senators. To my knowledge, no question has been asked of my office, and no poll has been taken concerning my vote, and I certainly have not responded to any poll. I can not recall any contact by any newspaper of my office as to how I would vote on this issue.

I think the Senator has rendered a service today in making the statement he has made.

I was just a little nonplussed when I read the account of 100 Senators having been polled. I asked my staff if I had been polled, and I was told that I had not. I am sure that I have not made any statement to any newspaper during the past several months as to where I stand on this issue. I assumed that the press media—those who were doing the polling—probably went back to some previous vote and perhaps took a chance on my voting this way or that way based on some vote in the past, and they may be right or they may not be. I do not know whether they counted me as a supporter of the ABM or whether they counted me as being opposed to the ABM.

But I am going to follow the same procedure that the Senator states he has been following for 23 years. I am not going to answer any polls as to how I shall vote on such a controversial issue as the ABM. I think the time to cast one's vote is when the roll is called; and if I wish to indicate prior to that time what my position is by way of a speech on the floor of the Senate, by way of some announcement on the radio, or via television, or by issuance of a news release that is for me to determine. But I do not intend to answer any polls. Perhaps at some time in past years I may have responded to some polls on other issues, I do not recall; but, if so, I do not intend to do it again; and it has been my policy for quite some time not to do so.

Mr. WILLIAMS of Delaware. I thank the Senator.

I think this can be a dangerous practice. Again, I do not question the good intentions or the propriety of the members of the press in conducting these polls. If I were a reporter, I suppose I would do the same as they are doing, but it is our fault if we answer them. If we answer one poll, then why do we not answer this poll or the next poll? In the Finance Committee we act on proposed legislation which involves major changes in tax rates that can affect financial markets. I think it would be very dangerous to adopt a practice in which the members of that committee could be polled in advance of the votes.

I have served on this committee with the Senator from Virginia, Mr. Harry F. Byrd, Sr., and before that I served with the Senator from Georgia, Mr. George, and with the Senator from Colorado, Mr. Millikin, as chairmen. They emphasized to all the new members of that committee the importance of not letting the committee be used by those who would

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turn the information to their own advantage. I have tried to live up to that standard.

One person called our office this week in a private poll—not a member of the press—and told the gentleman in my office that it was very important. They were checking the poll on the votes for the ABM as it had been related in the press to see whether or not it was accurate. They were trying to get the position I would take on the ABM as well as the position of other Senators because he said their clients wanted more factual information as to what was going to happen on this bill.

This illustrates the danger we could get into if we, as Members of the Senate, adopted a procedure whereby we could be polled a week or two in advance as to how we were going to vote. If 99 or 100 percent of the Members of the Senate have actually made up their minds then let us vote.

That illustrates the ridiculousness of this polling process, and I thought I would make clear my reasons as to why I think the problem of polling should be checked.

Mr. BYRD of West Virginia. I thank the Senator.

So far as I am concerned, I think it is my responsibility to take a position on the issues that come before us for decision, but I do not think that I have a duty to respond to polls as to how I

intend to vote on any issue. I think it is demeaning to the Senate to do so. Naturally, if I take a position and make that position known in a speech, that vote can be counted as I so state. But as to answering polls per se, I am not going to do it; and I think it is wrong for the impression to be given out that 100 Senators have been polled on this issue or any other issue when, as a matter of fact, they have not been so polled. I, too, do not question the good intentions of any pollster. But 100 Senators have not been polled on the ABM. As far as I am aware, even the leadership on this side of the aisle has made no attempt to conduct a poll on this issue.

I can only speak for one Senator, but mine is one of the votes out of 100. Perhaps 99 other Senators were polled, and perhaps it was not considered necessary to poll the junior Senator from West Virginia. Nevertheless, I think it is wrong to state that all Senators have been polled when such is not the case. It might conceivably cause some Senator to change his position some day just for the heck of it, to show that the polls are not always right.

Mr. WILLIAMS of Delaware. I thank the Senator.

ADJOURNMENT

Mr. BYRD of West Virginia. Mr. President, if there be no further busi-

ness to come before the Senate, I move, in accordance with the previous order, that the Senate stand in adjournment until 12 o'clock noon tomorrow.

The motion was agreed to; and (at 6 o'clock and 7 minutes p.m.) the Senate adjourned until tomorrow, Wednesday, July 16, 1969, at 12 o'clock noon.

CONFIRMATIONS

Executive nominations confirmed by the Senate July 15, 1969:

DEPARTMENT OF JUSTICE

Bethel B. Larey, of Arkansas, to be U.S. attorney for the western district of Arkansas for the term of 4 years.

U.S. ASSAY OFFICE AT NEW YORK, N.Y.

Nicholas Costanzo, of New York, to be Superintendent of the U.S. assay office at New York, N.Y.

NOMINATIONS

Executive nominations received by the Senate July 15, 1969:

U.S. AIR FORCE ACADEMY

Col. William R. Jarrell, Jr., FR16821, for appointment as Registrar, U.S. Air Force Academy, under the provisions of section 9333(c), title 10, United States Code.

Richard H. White, cadet of the U.S. Air Force Academy, for appointment in the Regular Air Force, in the grade of second lieutenant, effective upon his graduation, under the provisions of section 8284, title 10, United States Code. Date of rank to be determined by the Secretary of the Air Force.

S 8032

CONGRESSIONAL RECORD — SENATE

July 14, 1969

FARM PRICE SUPPORT CEILING

Mr. BYRD of West Virginia. Mr. President, I voted against restricting maximum farm price support payments to \$200,000 for the following reasons:

Politically, a vote for a ceiling on farm price support payments would have been the popular vote, because it does not sound good to say that a farmer gets \$100,000 or \$200,000 or more in payments. However, it must not be forgotten that he surrendered that much acreage. It is not a one-way street.

The adoption of a limitation on farm price support payments would have triggered the snapback provision of the Agriculture Act of 1949 regarding cotton, which would require the Government to purchase all surplus cotton at not less than 65 percent, and up to 90 percent, of parity. Therefore, instead of saving the taxpayers money, as implied by your editorial, the price support payments limitation, according to the Secretary of Agriculture, Mr. Hardin, would cost the Government \$160 million more than the existing program and would rebuild the large surpluses in Government warehouses which, in recent years, have been diminishing. Moreover, there would be additional costs to the Government for transportation, handling, and storage of these large surplus inventories of cotton.

Furthermore, the imposition of a limitation without basic legislative changes would not only cost the Government more, but it would also wreck the existing farm program in that it would throw the production from the larger farms onto the open market and further depress the very farm prices we are attempting to stabilize. In short, I voted against the limitation in order to save the taxpayers of West Virginia and the other States a minimum of \$160 million and to protect the investment the U.S. Government already has made in its attempt to stabilize the prices which farmers receive for their products.

Even though I personally favor limiting these large payments, to vote for an amendment which would not accomplish the desired results and which would be vastly more expensive than the existing programs would be a serious mistake. I do not believe that the agriculture appropriations bill was the proper place for an amendment such as the payments limitation. This provision would have substantive ramifications and should properly be considered in connection with basic farm legislation which has received the thorough consideration of the Senate and House Committees on Agriculture. The proper time to accomplish this objective of limiting price support payments will be when the farm price support bill comes up for renewal in the next session of Congress. At that time, legislative changes can be written into the basic law to limit the large payments without destroying the remaining markets the farmer has for his products.

Secretary Hardin has assured Congress that he "believes it is possible to design a sound farm program that limits the number of dollars that can be paid to any one farmer for programs following the 1970 crop year." Incidentally, former Secretary of Agriculture Orville

Freeman was also opposed to the price support limitation.

Finally, Mr. President, the proposed \$20,000 ceiling on price support payments would not affect a single West Virginia farmer. I am advised that no farmer in my State receives even half this amount by way of support payments. But I am advised that such a ceiling would eventually in higher prices to the consumers. In this sense, the ceiling would hurt West Virginians, farmers included.

For all of these reasons, I voted against the effort to place a restriction on farm price support payments. Again I say, however, I do personally favor the execution of feasible and workable steps to place a limitation on these large payments, and I hope that such a limitation will be included by the administration and by the Senate and House Agriculture Committees for enactment next year when the farm price support program comes up for renewal.

AUTHORIZATION OF APPROPRIATIONS FOR FISCAL YEAR 1970 FOR MILITARY PROCUREMENT, RESEARCH AND DEVELOPMENT, AND FOR THE CONSTRUCTION OF MISSILE TEST FACILITIES AT KWAJALEIN MISSILE RANGE, AND RESERVE COMPONENT STRENGTH

The PRESIDING OFFICER. The hour of 2 o'clock having arrived, the Chair lays before the Senate the unfinished business, which will be stated by title.

The LEGISLATIVE CLERK. A bill (S. 2546) to authorize appropriations during the fiscal year 1970 for procurement of aircraft, missiles, naval vessels, and tracked combat vehicles, and research, development, test, and evaluation for the Armed Forces, and to authorize the construction of test facilities at Kwajalein Missile Range, and to prescribe the authorized personnel strength of the Selected Reserve of each reserve component of the Armed Forces, and for other purposes.

The PRESIDING OFFICER. Under the order previously entered, the Chair recognizes the Senator from Vermont.

Mr. STENNIS. Mr. President, may we have order before the Senator commences? If those who are visiting in the Chamber would be seated and remain seated, it would be quite helpful.

The PRESIDING OFFICER. The Senate will be in order.

Mr. DIRKSEN. Mr. President, will the Senator from Vermont yield?

Mr. PROUTY. I yield.

Mr. DIRKSEN. Mr. President, I suggest the absence of a quorum. It will be a short quorum call.

The PRESIDING OFFICER. Does the Senator from Vermont yield for that purpose?

Mr. PROUTY. Yes; I yield.

The PRESIDING OFFICER. The clerk will call the roll.

The bill clerk proceeded to call the roll.

Mr. DIRKSEN. Mr. President, I ask unanimous consent that the order for the quorum call be rescinded.

The PRESIDING OFFICER (Mr. CRANSTON in the chair). Without objection, it is so ordered.

Mr. PROUTY. Mr. President, since

March 14, when President Nixon recommended the development and phased deployment of the Safeguard anti-ballistic-missile system, I have followed a course of quiet consultations and silent deliberations. Until recently, I remained undecided on this question. In avoiding an earlier commitment, my course, in the words of Vermont's immortal poet, Robert Frost, was "the one less traveled by." And it "has made all the difference" to me.

As this debate drew closer, various polls showed the ranks of my "undecided" colleagues to be ever diminishing and the prospects for a close vote to be increasing.

Consequently, the burden of my decision grew heavier. As I weighed evidence in support of and in opposition to Safeguard, I recalled an admonition—I believe President Eisenhower's—that "we can make of this world a barren desert or a flowering paradise."

President Eisenhower's alternatives became increasingly vivid as I deliberated in the macabre vocabulary of nuclear weaponry. Such terms as "assured destruction, acceptable losses, and megadeaths" conjure up the late President's vision of a barren desert, yet neither the vocabulary nor the realities can be wished away. Instead my decision must be made in the gruesome context of a "mutual deterrent."

Several weeks ago in Vermont, I remarked to some friends that if on that day I were to vote on the Safeguard authorization, I would vote against any funds for deploying the system. I reminded these friends of three votes last year in which I joined with a minority of Senators to defer deployment of the Sentinel system.

As this debate approached, I continued to avoid commitment and reviewed my position in the absence of any pressure other than that of my conscience. I conferred with Senators holding different opinions on Safeguard. I learned as much as I could of the views of scientists and defense experts and weighed the immense volumes of evidence gathered in extensive committee hearings.

POINTS CONSIDERED

In my deliberations and consultations, there were six major considerations.

First, in view of my votes on Sentinel, how does Safeguard differ from this earlier anti-ballistic-missile proposal?

Second, what range of options should be available to the President in the event of a nuclear ultimatum or an irrational or accidental missile attack?

Third, and perhaps most important, what effect would proceeding with Safeguard have on the prospects for strategic arms talks?

A fourth point I considered is: Would proceeding with Safeguard be interpreted as an escalation of the arms race?

As I am not a scientist, I found the fifth point of my deliberation extremely difficult. The point is: Will Safeguard work?

A corollary to point five is the sixth point: What are the estimated and potential costs of developing a workable Safeguard system?

July 14, 1969

CONGRESSIONAL RECORD — SENATE

S 8631

FEDERAL TAXES OF LARGEST REFINERS—Continued

	Net income before tax	Federal tax	Per cent	Foreign, some States' tax	Per cent	Profit after tax		Net income before tax	Federal tax	Per cent	Foreign, some States' tax	Per cent	Profit after tax
SHELL							STANDARD (OHIO)						
1962	\$173,555,000	\$7,200,000	4.1	\$8,680,000	5	\$157,675,000	1962	\$87,235,000	\$9,275,000	25.0	\$3,738,000	10	\$24,222,000
1963	211,575,000	19,100,000	9.0	12,623,000	5	179,852,000	1963	54,098,000	15,225,000	28.1	4,896,000	9	33,887,000
1964	213,575,000	2,800,000	1.3	12,585,000	5	198,190,000	1964	70,232,000	21,150,000	30.2	5,334,000	7	43,768,000
1965	274,507,000	26,600,000	9.6	13,876,000	5	234,031,000	1965	82,848,000	26,500,000	31.7	6,386,000	8.3	49,712,000
1966	313,085,000	46,100,000	14.7	12,335,000	4.7	254,016,000	1966	84,481,000	21,200,000	25.0	6,345,000	7.5	56,936,000
1967	342,022,000	44,940,000	13.1	12,233,000	3.6	284,849,000	1967	101,496,000	29,200,000	28.8	8,412,000	8.3	63,884,000
1968	387,767,000	63,378,000	16.3	12,298,000	3.2	312,091,000	1968	113,571,000	38,100,000	33.5	5,394,000	4.7	70,077,000
CONOCO 1							GETTY 2						
1962	\$73,477,000	\$1,065,000	1.4	\$3,335,000	5	\$69,077,000	1967	\$132,762,000	\$3,687,000	2.8	\$10,909,000	8.2	\$118,166,000
1963	99,665,000	9,143,000	9.3	9,157,000	3	87,365,000	1968	112,798,000	6,712,000	6.0	7,836,000	6.9	98,250,000
1964	204,184,000	235,000	0	103,840,000	50.9	100,109,000	SINCLAIR						
1965	201,914,000	4,670,000	2.3	101,095,000	50.1	96,151,000	1962	\$57,936,000			\$10,586,000	18	\$47,350,000
1966	290,924,000	11,669,000	4.0	122,338,000	42.1	156,016,000	1963	85,731,000	\$1,200,000	0	10,201,000	12	75,230,000
1967	280,584,000	7,648,000	2.7	123,973,000	44.2	148,962,000	1964	66,444,000	\$3,119,000	0	10,827,000	15	58,736,000
1968	290,357,000	9,721,000	3.3	130,594,000	45.0	150,042,000	1965	96,072,000	4,100,000	4.4	15,299,000	15.9	76,673,000
ATLANTIC							TIDEWATER						
1962	\$61,110,000	0	0	\$14,844,000	24	\$46,266,000	1962	\$35,191,000	\$228,000	0.6	\$2,387,000	6	\$32,576,000
1963	56,747,000	0	0	12,734,000	22	44,013,000	1963	42,795,000	63,000	0	3,384,000	8	39,474,000
1964	61,081,000	0	0	14,005,000	22	47,076,000	1964	40,508,000	377,000	13.7	4,426,000	11	35,705,000
1965	105,299,000	0	0	15,188,000	14	90,111,000	1965	60,397,000	58,000	.9	3,783,000	6	56,556,000
1966	127,384,000			13,900,000	12.7	113,484,000	1966	80,542,000	3,350,000	4.1	5,301,000	6.5	71,891,000
1967	145,269,000			15,254,000	10.5	130,005,000	ASHLAND						
1968	240,272,000	\$2,999,000	1.2	37,713,000	15.7	198,560,000	1962	\$24,324,000	\$6,201,000	25.8	\$2,799,000	11	\$15,324,000
SUN							SKELLY						
1962	\$66,395,000	\$200,000	0	\$13,400,000	20	\$53,195,000	1962	\$22,674,000	\$1,260,000	5.7	\$250,000	1	\$21,164,000
1963	79,976,000	1,300,000	1.9	17,460,000	22	61,216,000	1963	27,479,000	3,025,000	7.7	275,000	4	24,179,000
1964	88,577,000	2,400,000	2.7	17,670,000	20	68,507,000	1964	26,601,000	785,000	1.2	275,000	2	25,551,000
1965	113,405,000	10,300,000	9.0	18,220,000	16	84,885,000	1965	39,995,000	5,625,000	14.0	375,000	.9	33,995,000
1966	131,544,000	16,600,000	12.6	14,370,000	10.9	100,574,000	1966	42,762,000	5,300,000	12.3	500,000	1.1	36,962,000
1967	146,946,000	24,700,000	16.8	13,670,000	9.3	108,576,000	SUNRAY DX						
1968	227,790,000	44,290,000	19.4	19,070,000	8.4	164,430,000	1962	\$41,203,000	\$3,850,000	9.3	\$1,152,000	3	\$36,201,000
PHILLIPS							PURE						
1962	\$158,320,000	\$48,000,000	30.3	\$3,365,000	2	\$106,955,000	1962	\$27,680,000	\$2,546,000	0	\$1,276,000	.4	\$28,950,000
1963	160,954,000	52,000,000	26.2	3,491,000	2	105,463,000	1963	28,582,000	\$1,212,000	0	27,000	.01	29,767,000
1964	152,197,000	32,229,000	22.2	4,950,000	3	115,018,000	1964	32,282,000	\$600,000	0	164,000	.5	31,518,000
1965	165,876,000	31,745,000	19.1	6,415,000	4	127,716,000	RICHFIELD						
1966	218,382,000	59,163,000	27.0	7,595,000	3.4	157,624,000	1962	\$36,615,000	\$6,000,000	16.6	0	0	\$30,615,000
1967	227,766,000	52,235,000	22.9	11,496,000	5.0	164,015,000	1963	29,767,000	1,300,000	4.4	\$773,000	3	27,894,000
1968	184,560,000	32,584,000	17.7	15,174,000	8.2	136,802,000	1964	26,255,000	\$269,000	0	5,249,000	21	21,455,000
UNION							TOTAL						
1962	\$59,421,000	\$8,000,000	13.5	\$5,500,000	9	\$45,921,000	1962	\$4,198,331,000	\$169,492,000	4.0	\$838,954,000	19.9	\$3,194,770,000
1963	73,028,000	13,100,000	17.7	6,000,000	8	53,928,000	1963	4,921,577,000	304,985,000	6.2	\$51,255,000	19.3	3,663,037,000
1964	87,564,000	13,300,000	15.2	7,200,000	8	67,064,000	1964	5,322,329,000	233,241,000	4.4	1,251,442,000	23.5	3,837,646,000
1965	119,214,000	15,604,000	13.2	8,840,000	7	94,770,000	1965	5,926,105,000	404,992,000	6.8	1,349,458,000	22.8	4,171,655,000
1966	170,782,000	18,398,000	10.7	10,144,000	5.9	142,240,000	1966	6,945,674,000	569,799,000	8.2	1,598,086,000	23.0	4,777,789,000
1967	163,820,000	10,400,000	6.3	8,457,000	5.2	144,963,000	1967	7,543,997,000	622,393,000	8.3	1,926,907,000	25.5	5,617,090,000
1968	164,232,000	9,955,000	3.6	7,045,000	4.3	151,232,000	1968	8,144,747,000	623,458,000	7.7	1,981,126,000	24.3	5,540,163,000
MARATHON							CITIES SERVICE						
1962	\$36,064,000	\$2,200,000	0	\$205,000	.5	\$37,889,000	1962	\$84,143,000	\$20,773,000	24.7	\$3,185,000	3	\$60,185,000
1963	50,058,000	(?)	0	933,000	2	49,125,000	1963	101,976,000	20,188,000	21.4	4,283,000	4	77,505,000
1964	63,220,000	(?)	0	2,844,000	4	60,376,000	1964	105,299,000	19,819,000	18.9	967,000	.9	84,513,000
1965	97,416,000	(?)	0	37,945,000	38	69,071,000	1965	137,068,000	31,975,000	23.3	977,000	.7	104,118,000
1966	130,927,000	2,400,000	1.8	59,700,000	45.9	63,826,000	1966	154,456,000	51,760,000	26.7	902,000	.4	141,784,000
1967	138,520,000	3,700,000	2.7	60,962,000	44.0	73,858,000	1967	165,289,000	32,347,000	19.6	5,105,000	3.1	127,837,000
1968	155,335,000	4,350,000	2.8	67,659,000	43.6	83,326,000	1968	138,613,000	12,683,000	9.1	4,594,000	3.3	121,336,000

1 Conoco's Federal income tax figure includes a reduction due to benefits arising from consolidation. Foreign and State taxes include Federal and State gasoline and oil excise taxes because the firm's financial statement gave no clear-cut breakdown.

2 Credit.

3 Marathon Oil's 10K filing with the SEC doesn't reveal how much Federal income tax Marathon paid in years prior to 1966.

4 Getty income for 1967 includes companies previously listed as Tidewater and Skelly.

5 State income tax.

S 8034

deterrent, while it could be misinterpreted by the Soviets as an attempt to threaten their deterrent. It would therefore stimulate an arms race.

Equally subject to miscalculation would be our failure to proceed with Safeguard. A potential enemy might interpret such a move as an unwillingness on our part to provide for an adequate defense. Such a misinterpretation of our motives might be highly provocative and lead to disaster.

WILL SAFEGUARD WORK?

Opponents of Safeguard have cast much doubt on the eventual effectiveness of this antimissile system. Of all the testimony offered by the scientific community in regard to Safeguard, I was most impressed by the candor of Dr. Edward Teller in his testimony before the Senate Subcommittee on International Organization and Disarmament Affairs.

As to a reliable estimate of Safeguard's effectiveness, Dr. Teller said this:

There is a group of people which probably has reliable estimates. They are the Russian experts, who have practiced the deployment of defense for many years. Our own experts have widely different opinions as to the effectiveness of the Russian ABM system, and as to whether it will be extended beyond Moscow.

Dr. Teller went on to say:

The important question is whether defense or offense is cheaper and more effective. At this present stage we must give the answer that we do not know. This state of ignorance must be ended. Some important answers will be forthcoming in the near future if we begin deployment as recommended by President Nixon.

In his testimony Dr. Teller contended that in the absence of U.S. expertise on defensive missile weaponry, our Nation might be at a disadvantage in arms limitation talks with the Soviets, who have gained much experience in ABM systems.

Dr. Teller's testimony reminded me of his essential role in the development of the hydrogen bomb and the division of scientific opinion preceding the bomb's development. Some scientists believed that the hydrogen atom could be split and that a hydrogen weapon could be produced. Other scientists insisted this was impossible.

In November 1952, we tested a thermonuclear device. Less than a year later the Russians announced—then tested—a fully developed hydrogen bomb. It was not until March 1954 that we produced a hydrogen bomb.

I remember there was a similar division of scientific opinion concerning the development of the Polaris missile delivery system. Fortunately in neither instance was the division of scientific opinion allowed to thwart our initiative.

In a way, I see history repeating itself as regards Safeguard, but with an added factor—the widespread disillusionment with our Defense Establishment.

There are those who wish to follow a course limited to research and development of Safeguard. These opponents of deployment rest their case on the legitimate differences of opinion which have

been raised about the system's ultimate effectiveness.

At this point, I am convinced that under the phased-deployment plan recommended by the President, phase I of this deployment is essentially a pilot or experimental step.

This phase is limited to the location of Safeguard components at two Minutemen wings. It should provide an opportunity to "shake down" the system to expose technical and operational flaws that might not appear in a research and development program without limited deployment.

My study of Safeguard convinces me that the system's ultimate effectiveness is based not on a single technological development but rather on the coordination of Safeguard's intricate components. This coordination is at present an unknown, which can be tested only in a deployed system. Consequently, I consider phase I of this deployment essentially an extension of our research and development efforts.

In the twisted logic of strategic warfare, there is also the ironic case to be made that if deployed, the Soviets must assume that Safeguard works and therefore the ABM system would act as a deterrent to a first strike.

WHAT WILL SAFEGUARD COST?

Senators are aware of my sense of priorities. I joined with a majority of Senators to continue the exemption of education programs from the budget ceiling. Subsequent to that successful vote, I joined a minority who favored extending this exemption to health programs. I have continually pressed for adequate funding in these and other fields responsive to our pressing domestic demands.

The cost overruns, waste, and miscalculations which have marred our Defense Establishment in recent years disturb me greatly. I have often thought aloud, what benefits could have been obtained if the funds spent in the C5-A cost overrun alone had been applied to education, health, housing, or economic development programs.

An intensification of congressional oversight has been a positive byproduct of these defense miscalculations. Congress has been further reminded of its budgetary and investigatory powers. To me this reassertion of congressional powers is long overdue.

I am well aware that Safeguard now contains many unknowns, which will be discovered as research, development, and initial deployment proceed. I cannot at this point discount the possibility that subsequent developments may lead to a markup of Safeguard's price tag. We may discover at some point in the future that offense is cheaper and more effective than defense.

But what is important to me is this: as we vote on this initial authorization we are only making a first step. The appropriations process follows and in each year of Safeguard's development, Congress will have the opportunity to review the program and the responsibility to authorize and appropriate or not to authorize and appropriate funds for the continuation of Safeguard. I believe that

whatever the outcome of this pending vote it will not signify an end to the ABM debate. The debate will continue. On March 14 the President said:

Each phase of the deployment will be reviewed to insure that we are doing as much as necessary but no more than that required by the threat existing at that time.

Similarly, Congress will follow Safeguard each step of the way utilizing our budgetary and investigatory powers to insure that we proceed in the best interests of the Nation and peace.

CONCLUSION

Mr. President, I have shared with other Senators the major considerations in my lengthy deliberations. By this time my conclusion should be apparent. I shall vote in favor of the fiscal year 1970 authorization for Safeguard.

However, I do not consider my support for Safeguard to be open ended. At some time in the future I may have sufficient doubts as to the effectiveness or potential costs of the system to oppose further expenditures for deployment of the system. But most important, there may come a time when I conclude that curtailment of Safeguard deployment might be in the best interest of pursuing meaningful arms limitations talks. I consider the reverse to be true at this point and time, but that may not remain so. If circumstances change and I consider a cessation of Safeguard deployment a requisite to meaningful arms talks, I would strongly urge the President to cease deployment of the ABM system.

As I do not consider my pending vote in favor of this authorization to "lock me in to Safeguard," neither do I consider my vote an endorsement of our military policy past or present. However, I consider this vote too important to use as a vehicle for displaying my wrath against certain inept defense policies and procedures.

It is in the interest of peace that I shall cast my vote in favor of this authorization for Safeguard. I believe that proceeding with this measured system will stimulate—not retard—moves toward strategic arms talks.

I hope and pray that these talks will soon begin and prove productive. If by some chance they drag on unproductively, are temporarily suspended, or ultimately fail, I want the President to have a sufficient flexibility in his response to a nuclear ultimatum, an irrational or accidental missile attack. I want the President to have a second button next to the one that might properly be labelled "holocaust."

Mr. President, in essence, I have reached this decision because I have concluded that this would not accelerate the arms race because it is a strictly defense oriented program. Certainly, it is much more likely to bring about meaningful arms control talks than exclusive concentration on the production of offensive weapons.

For if potential enemies know that we are capable of defending ourselves against attack and at the same time insure the survival of our own retaliatory forces, they may well reach the conclusion that little purpose would be served

July 14, 1969

CONGRESSIONAL RECORD — SENATE

S 8033

SAFEGUARD VERSUS SENTINEL

In comparing Safeguard with Sentinel, I found that President Nixon's proposal overcomes several of my objections to Sentinel. Unlike Sentinel, the Safeguard system in defending our deterrent can be considered only as a defensive system whereas Sentinel in defending cities could be seen as a U.S. bid for a first-strike capability. Safeguard makes it clear that the United States wishes to deter a general war, not start one or provoke one.

The doubts I had about the effectiveness of Sentinel remains to some extent with the Safeguard; however, in the defense of cities, anything less than a complete "intercept capability" appears nearly worthless, while in defending missile sites, less than a complete "intercept capability" is tolerable.

President Nixon clearly stated on March 14 what Safeguard cannot do. One of my principal objections to Sentinel was the possibility our Nation might somehow delude itself into thinking the system provided our cities an invulnerability against attack.

Comparing the two anti-ballistic-missile systems, I concluded that Safeguard, unlike Sentinel, is in keeping with our nuclear strategy, which was expressed by President Kennedy in his March 28, 1961, message to Congress:

Our strategic arms and defenses must be adequate to deter any deliberate nuclear attack on the United States or our allies. . . . Moreover we will not strike first in any conflict. But what we have and must continue to have is the ability to survive the first blow and respond with devastating power. This deterrent power depends not only on the number of our missiles and bombers, but on their state of readiness, their ability to survive attack and the flexibility and sureness with which we can control them to achieve our national purpose and strategic objectives.

OPTIONS AVAILABLE TO THE PRESIDENT

President Kennedy's use of the term "flexibility" reminds me of his phrase "the grim choice between humiliation and holocaust." In the instance of a nuclear ultimatum, an irrational or accidental missile attack, should the President have only one response—massive retaliation? Or are the interests of peace and survival better served if the Chief Executive has two buttons instead of one to push?

I pondered this question at great length. I envisioned a President faced with the knowledge that enemy missiles were heading toward the United States. I inquired as to what options are now available to him in response to such attack. I discovered there are now two grim alternatives—do nothing or push the button that unleashes our devastating nuclear fury.

If it were determined that the incoming missiles were part of an all-out nuclear attack on our Nation, the Chief Executive would probably be forced to push that one button.

However, these enemy missiles might be limited in number and their launching the result of an accident or the irrational design of a madman. What could the President do then? He is still caught with only two choices.

But if there was another button available, a button to trigger our missiles designed to intercept and destroy these incoming weapons, the President could push it and halt the attack without immense loss of lives at home or the catastrophic consequences of full retaliation.

I have concluded that it is in the interest of all mankind to increase the options available to the President. Safeguard provides an additional alternative, an extra button.

EFFECT OF SAFEGUARD ON ARMS TALKS

In March of this year prior to voting to ratify the Treaty on the Nonproliferation of Nuclear Weapons, I urged prompt adherence to the course set by article VI of the treaty, to negotiate in good faith to end the nuclear arms race and to effectuate nuclear and general disarmament. I renew these urgings today and stress that I could not with a clear conscience advocate any course that would be counterproductive to strategic arms talks.

On June 24, 1968, I, together with 33 other Senators, voted in favor of an amendment to defer funds for the deployment of Sentinel until July 1, 1969. This amendment, offered by the distinguished Senators from Kentucky (Mr. COOPER) and Michigan (Mr. HART), was rejected by a vote of 52 to 34.

Three days later, Soviet Foreign Minister Andrei Gromyko announced that the U.S.S.R. was "ready for an exchange of opinion" on "mutual restrictions and subsequent restriction of strategic vehicles for the delivery of nuclear weapons—offensive and defensive including antimissiles."

On February 9 of this year, Premier Kosygin was asked about ABM defenses at a press conference in London; he replied in part:

I believe that defensive systems, which prevent attack are not the cause of the arms race, but constitute a factor preventing the death of people. Some argue this: What is cheaper, to have offensive weapons which can destroy towns and whole states or to have defensive weapons which can prevent this destruction? At present the theory is current somewhere that the system which is cheaper should be developed. Such so-called theoreticians argue as to the cost of killing a man \$500,000 or \$100,000. Maybe an anti-missile system is more expensive than an offensive system, but it is designed not to kill people but to preserve human lives.

In view of the Soviet response to last June's authorization vote and the fact they insist their already deployed ABM system is purely defensive and not inimical to arms control negotiations, I contend that proceeding with the measured deployment of Safeguard should be considered as an incentive to meaningful arms limitation talks.

First, as I have previously stated, Safeguard clearly indicates that we want to deter general nuclear warfare, that we only want to protect our deterrent forces; and we do not seek to destroy the Soviet deterrent capability.

Second, it tells any potential enemy that we do not intend to have our deterrent forces downgraded through their continued production of offensive weapons.

In effect we are saying we will thwart enough even of a Soviet sneak attack to make their plans futile. The Soviet's only logical conclusion, then, will be not to waste time and money escalating their offensive missile arsenal, but rather to pursue serious arms limitation negotiations.

Last, the Safeguard system is a better incentive to meaningful arms limitation talks because it is a phased reactive-type system. The plans call for starting with two ABM sites—one in Montana and one in North Dakota—to protect enough of our deterrent force against attack. If the talks progress and guarantees are reached, the sites can be closed down. If the talks bog down or drag out and our best intelligence evaluation shows a Soviet first-strike threat, the sites can be maintained fully operational. An increased threat could lead to an expansion of Safeguard sites. What is important to me is that we will be taking our lead from the Soviets. If they seriously want arms limitations, Safeguard can be abandoned; if they want to keep the pressure on or increase the pressure, Safeguard can be maintained or expanded.

IS THE SAFEGUARD AN ESCALATION OF THE ARMS RACE

In discussing the implications of Safeguard on arms talks I made it clear that the measured deployment of Safeguard would allow us to take our lead from the Soviets. I think it is important to remember that it is not the United States which has in recent years been escalating the arms race. The Soviets acted first to test fire an ABM against an incoming nuclear-armed missile and they are the only nation to have done so; they are also the only nation to test and develop a bomb of the magnitude of 60 megatons. The Soviets have also acted first to develop and deploy a fractional orbital bombardment system—FOBS—and have already developed, deployed, and refined a partial ABM system. While they have taken the escalatory lead, the charge of escalation is raised against the United States when we seek to follow the Soviets in a measured-deployment of an ABM system. But who raises these charges? The Soviet Union cannot credibly attack our ABM system as provocative after insisting that their ABM system is non-provocative. The charges of escalation come from domestic opponents of the ABM. I do not question their motives or their sincerity, but considering the record of escalation, I do challenge their contention.

In the historical context of the arms race, I contend that Safeguard cannot be considered an escalation on our part, but rather a cautious, measured response to the Soviet deployment of an ABM system. I would consider the suggested alternatives to Safeguard to be more escalatory.

Many opponents of the ABM contend that our funds would be better spent by increasing the number of our sea- and land-based missiles and bombers. In this regard I concur with the President who said after weighing this alternative:

I have ruled out this course because it provides only marginal improvement of our

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President Nixon's statement to the country when he said:

I have weighed all these factors. I am deeply sympathetic to the concerns of private citizens and Members of Congress that we do only that which is necessary for national security. This is why I am recommending a minimum program essentially for security. It is my duty as President to make certain we do not less.

The statement of the distinguished Senator from Vermont is thoroughly in keeping with those words, and it is only one more evidence of the fact that he is and always has been, in my opinion, a real statesman.

Mr. PROUTY. I am deeply grateful to the distinguished Senator from New Hampshire.

I yield to the Senator from Texas.

Mr. TOWER. Mr. President, I wish to express my profound thanks to the Senator from Vermont. I have always been proud of the fact that my great grandfather was born in Vermont, but never more proud than I am today. I think the distinguished Senator has reflected great credit upon himself and upon his State. I think this is absolutely the most closely reasoned and most rational argument that I have heard throughout the course of the debate of the doctrine for the authorization of the ABM. I think it is a tremendous contribution to the debate. As a matter of fact, I kept saying to myself during this course of the Senator's remarks, "Why didn't I think of that?"

This was really a splendid argument. So many good arguments were advanced by the Senator from Vermont that it is difficult to single out any single one to comment upon, but one important contribution which I think the Senator added to the debate of last Friday on deployment was when he said:

My study of Safeguard convinces me that the system's ultimate effectiveness is based not on a single technological development but rather on the coordination of Safeguard's intricate components. This coordination is at present an unknown, which can only be tested in a deployable system. Consequently, I consider Phase I of this deployment essentially an extension of our research and development efforts.

This is a point extremely well made. Again I thank the Senator for his monumental contribution.

Mr. PROUTY. I thank the Senator very much.

Mr. CURTIS. Mr. President, will the Senator yield?

Mr. PROUTY. I yield to the Senator from Nebraska.

Mr. CURTIS. I compliment the Senator on his very convincing and courageous statement.

I rise as one who claims no expertise, scientifically or from a military standpoint. However, I do feel that on these very important questions, we have to trust someone. Upon the President of the United States falls the awesome responsibility of guiding our foreign policy and acting as Commander in Chief of our Armed Forces. Any human being placed in that responsibility is going to get the best guidance he can. It will be conflicting. But once he has made his decision, I believe we can more safely rely upon the position of such a man, who carries

such a heavy responsibility, than on any other source; and I commend the distinguished Senator for the position he has taken and the clarity with which he has made it known.

Mr. PROUTY. I thank the Senator from Nebraska.

I yield to the Senator from Arizona. Mr. GOLDWATER. Mr. President, I merely wish to commend and comment briefly on my colleague's stand. I have served with him in the Senate for a number of years.

I was asked outside the Chamber a moment ago by two reporters if I was surprised by his remarks. I replied, "No, not surprised in the way that you think of surprise, because I have always known Senator PROUTY to be a man who made up his own mind after meticulous thinking."

I frankly am envious of patience in coming to the decisions that he reaches. On this one, of course, we are in agreement. I think the Senator from Vermont rightly recognized the point that I think too many of the Members of this body overlook, that this has been the recommendation of our Commander-in-Chief, not as the President of the United States, but as the man charged with the responsibility of protecting the freedom of America, the dignity of America, and the body of America.

I do not believe that you can bargain with the safety of 200 million Americans. I think the President's decision as Commander-in-Chief was one that he came by in a hard way; but we have to remember also that the last three Presidents believed in this, the last three Secretaries of Defense have believed in and advocated it, all the Joint Chiefs of Staff in the same period of time have believed in it—in other words, the people responsible for the defense of the United States have all been for the deployment of something like the Safeguard.

I thank my good friend from Vermont for his typical courage. It did not surprise me a bit. In fact, the only day I shall ever be surprised and shocked by anything my friend from Vermont says is the day when a statement by him might seem to have been pressured on him, or not to have come as a result of his thinking.

I am very proud to serve in a body that has Members like Senator PROUTY.

Mr. PROUTY. I am very grateful to my friend from Arizona. I yield to the Senator from California.

Mr. MURPHY. Mr. President, I, too, join with my colleagues in congratulating the Senator from Vermont for a most forthright, careful dissertation on a matter that has taken up most of the time of this body for the past week, and will take further time—a matter of such great complexity and importance that it once again proves the necessity for what seems to be, at times, the slow action of this body. Sometimes there are so many ramifications that need careful study and careful thought that decisions cannot be arrived at quickly or easily, or off the top of one's head.

I join in the remarks that have been made here in admiration of the careful analysis that the Senator has made of

this problem. I believe that he pointed out all the values that must be considered, and that he has made it clear that in this matter of decision in this body, if there are any doubts in the minds of any Senators, those doubts must be resolved in favor of the future security and welfare of the United States of America.

I think that the point that the Senator made that at the present time, without question, we need a system, everybody agrees we need a system, the testimony has shown that this is the only system at the present time; was well taken. Then he pointed out clearly the matter of constant review. It may be that 6 months from now, if the arms talks are successful, it can be canceled, or a year from now, if they are successful, it can be canceled. If they are not, there may be new systems, and the review will provide for an updating, so that there will be no unnecessary waste, but the protection and the well-being of this country will be the uppermost consideration at all times.

Another point of great importance, which has been touched on by my distinguished colleague from Arizona, is that the President of the United States has the obligation, by a vote of the people, to make these decisions. He, as the distinguished Senator from Arizona has pointed out, is the Commander in Chief. He is the man who must, in the final analysis, listen to all the discussion and react to all of the ideas and thoughts; that he, finally, is the one who must take the responsibility for the decision.

He has done that, and he has said to us most thoughtfully and sincerely that he needs his. Who is better to judge what condition he should be in when he goes to meet with the Russians, in the hope of finding some solution to the matter of final and lasting disarmament, who better than the President out of his experience from the long availability of information that has come day by day and is coming currently?

I am so pleased that I have had the privilege of serving with the distinguished junior Senator from Vermont for the 5 years that I have been a Member of the Senate. There is no other Senator for whom I have more respect. His judgment and determination and courage determines his votes, and his wisdom in matters of concern for the welfare of the country have been outstanding.

I feel sorry for only one thing—that the Chamber was not filled with all Members of the Senate to hear the fine analysis and careful dissertation and clear thinking of the final sound conclusion arrived at by the distinguished Senator from Vermont.

I congratulate him and consider it a great honor to serve in the Senate and on Senate committees with him.

Mr. President, I ask unanimous consent to have printed in the Record an editorial entitled "Senate Should Vote 'Yes' On ABM," which was published in the Los Angeles Times on July 10, 1969. The editorial deals with the matter of the ABM, and it asks two very important questions and makes two very important points with regard to the decision.

by increasing their stockpile of offensive weapons.

Though I believe at this point that proceeding with Safeguard enhances the prospects for peace, it does so only in the twisted logic of a "mutual deterrent." For truly neither Safeguard nor any weapons system will insure peace. The answer lies elsewhere and Adlai Stevenson pointed in the right direction toward the end of his first presidential campaign. He said:

If the pursuit of peace is both old and new it is also both complicated and simple. It is complicated, for it has to do with people and nothing in this universe baffles man as much as man himself.

In other words, the answer lies in understanding our fellow man; the final safeguard lies within each of us.

Mr. DIRKSEN. Mr. President, this statement by the distinguished junior Senator from Vermont is in the greatest tradition of the Senate. It is in the greatest tradition of a great original State.

The Senator from Vermont has done what absolutely all of us have done. We have wrestled with what we thought was something of a crisis in our history.

John Ruskin, great author, commentator, and philosopher that he was, experienced crises like that. Some of the finest things that were committed to paper were those that came from those moments of crisis.

The Senator from Vermont has somehow confessed his sense of crisis as he sought to go forward and seek the truth. Little by little he has worn away the friable stones of error and has finally come to the hard truth which has committed him, at this point in time, to a support of the Safeguard system.

I think one of the greatest statements in his whole text is the very last sentence, because he says:

In other words, the answer lies in understanding our fellow man; the final safeguard lies within each of us.

WIN PROUTY, that is a great speech. I congratulate you.

Mr. PROUTY. I thank the Senator.

Mr. STENNIS. Mr. President, will the Senator yield?

Mr. PROUTY. I yield.

Mr. STENNIS. Mr. President, to one who has been working on this subject and is familiar with many aspects of it, it is stimulating to have a fine, clean, clearcut, analytical discussion here, as the Senator has given us.

I want to point out three matters that I think are so helpful in the debate. One is that the entire Safeguard program is under continuous review by the President of the United States. Two, it is also, of necessity, under yearly review by the Congress of the United States, which is the only power, under our system, that can vote the money. This is not merely a casual survey, but an actual review, on which there will be a minimum of four rollcall votes on this subject each year, one on authorizations and one on appropriations in the Senate, and the like situation in the other body. That is the minimum expression from the legislative branch. There can be more.

Another factor pointed out, which is so clear to me, is that it is purely a defense

weapon, and clearly not an offensive weapon in anyways. It is unthinkable that any logical person who might be an adversary would look upon Safeguard as anything except a defensive weapon which is designed to protect our arsenal.

Last, Safeguard does stimulate a genuine approach to arms limitation. Arms limitation is what we are all hopeful for and what we all want to bring about. That is what the President of the United States has in mind as his special mission during the forthcoming months. The speech of the Senator has taken into consideration the conditions the President is faced with and the safety of the Nation.

I thank the Senator for his speech which was both worthy and eloquent, as well as sound from a practical viewpoint.

Mr. PROUTY. I thank the Senator from Illinois. I appreciate his comments.

Mr. SCOTT. Mr. President, will the Senator yield?

Mr. PROUTY. I yield.

Mr. SCOTT. I congratulate the distinguished Senator from Vermont for an excellent declaration of conscience and of conviction; for a statement which reasons a way to a conclusion which seems to him, and I may add to me, to be inescapable.

I am glad the Senator made reference to scientific judgments. I think all of us are aware that in every decision reached with regard to the defense of the United States, the scientists have been divided, and often down the middle.

The Senator will recall that at the time of the decision to "march" to the moon, the then scientific adviser to the President of the United States advised against it, on the ground that it could not possibly be done, and it would cost too much money, anyway.

Mr. PROUTY. I thank the Senator.

Mr. JACKSON. Mr. President, will the Senator yield?

Mr. PROUTY. I yield.

Mr. JACKSON. Mr. President, I congratulate and compliment the able Senator from Vermont for a well reasoned speech. I was particularly impressed with his delineation of the alternatives open to the President of the United States. We live on the knife edge of history. A false move can lead to total catastrophe. If there ever was a need for the President to have additional options, it is in connection with the management of our nuclear strategic forces.

The Senator from Vermont has forcefully pointed out the need for this third option, to make it possible for the President to take whatever action is appropriate to stop an incoming missile, if the situation were such that that was the right course. Certainly, we ought to give the President the tools to have the kind of flexibility which, in the event of an irrational, accidental or very limited missile attack, could avoid a total nuclear exchange.

Mr. President, I think another point is of immediate significance. It relates to negotiations. I do not think one needs to be an expert in the field of diplomacy or of strategic weapons to appreciate the problems that a country must face sitting down at a negotiating table with the

Soviets to work out a limitation or reduction of strategic offense and defense weapons. I can only put it this way: Does it make any sense that the Soviets would want to agree to dismantle or eliminate their ABM's already deployed when we do not have an ABM and have voted not to go ahead with one?

Mr. PROUTY. I could not agree more with the Senator.

Mr. JACKSON. I want to further point out, carrying out the thoughtful remarks of the able Senator from Vermont, that I think it is a definite possibility—as definite as anything can be—that the Soviets are going to be very reluctant at this point in history to dismantle their ABM's as long as they are confronted with the problem that they now face from Red China. I do think, however, Mr. President, as the reasoning of the able Senator from Vermont suggests, that we perhaps can get a mutual limitation on the number of ABM's on each side; if we, for our part, do not now unilaterally abandon deployment of our ABM system. I think such an agreement on a mutual limitation on ABM's would be in the mutual interests of the United States and the Soviet Union, in light of the situation which exists today.

I merely wanted to pay my highest compliments for the well thought out, well reasoned remarks of the Senator from Vermont in the presentation he has made today with reference to a decision on the ABM.

Mr. PROUTY. I thank the Senator.

Mr. COTTON. Mr. President, will the Senator yield?

Mr. PROUTY. I yield.

Mr. COTTON. Mr. President, I thank the Senator for yielding to me because as his friend and neighbor, I want to express my admiration for the stand he has taken and the speech he has delivered this day. I have lived all my life in sight of the State which he so ably represents. I knew WINSTON PROUTY before he ever came to Congress. I was a Member of the House of Representatives when he became a Member of that body and have had the privilege of serving with him there and for many years here in the Senate.

I have known Senator PROUTY over the years as one who is utterly fearless, utterly sincere, and as one who makes up his own mind and makes it up only after the most careful consideration and analysis. The speech he has just delivered is one of the most thoughtful and analytical speeches I have heard in many years in the Senate.

Last year when I voted for the Sentinel System—to which the Senator referred in his speech—I did so after wrestling with my conscience and with some doubts. I was reluctant to commit the Nation to such an extensive system—untested and untried. I have had no doubt about casting my vote for the carefully limited and revocable Safeguard System. And that is not because the President of one party advocated the Sentinel System and the President of another advocated the Safeguard.

As I listened to the words of the distinguished Senator from Vermont, I had constantly in mind the closing words of

problem."⁶ If this were true, the Soviet Union might have been approaching the point about which Dr. Long later was to warn, the point at which a first strike against the United States might be ordered because the Soviet BMD was judged strong enough to ward off the American counterblow.

Two days later, however, the Soviet Union's civil defense chief, Marshal Vasily I. Chulikov, indicated that no guarantee for Soviet cities' protection against nuclear missile attack was available. The Soviet armed forces had "first class military equipment and perfect rocket nuclear weapons able to destroy any aggressor," he said in a television address on the eve of the 49th anniversary of the Soviet Army and Navy. "But unfortunately there are no means yet which would guarantee the complete security of our cities and most important objects from the blows of enemy weapons of mass destruction."

"In practice it is impossible to intercept completely all modern planes and, even more so, rockets launched through space. A certain number of them may reach the target."⁸

On the same evening *Izvestia* carried an article by the then First Deputy Minister of Defense, Andrei A. Grechko, saying that "the modern means of anti-aircraft defense may be relied upon to hit any plane and many types of rockets."¹⁰ This carried the strong hint that Moscow defenses could not destroy all types of rockets.

An official Soviet commentary on the nature and effectiveness of Soviet civil defense measures appeared in the January, 1969, issue of *Science and Life*. Written by the same Marshal Chulikov, head of the Soviet civil defense establishment, the article said:

"In our country, everything possible is being done to build reliable means enabling us to protect lives in a possible war. It is well known that the task of defense of the population can be accomplished by two methods—by evacuation and dispersal of the population out of the regions which would probably be struck by the enemy, or by sheltering them in special defense installations. There are no other possibilities, but even these two give us a huge advantage over other countries, especially those of Western Europe. Our country has lots of space and a developed transportation network, our cities are surrounded by ample green belts. All this enables us, on short notice, to take people out of the cities and regions which are probable targets for the enemy into rural locations and thus sharply reduce possible losses.

"Take for example city 'A'. If today the average density of population in this city is 7,000 people per square kilometer, after the execution of dispersal and evacuation it would be lowered, on the average, to 700 to 800 people per square kilometer. In other words, the average would be lowered by eight to ten times. This means that after dispersal and evacuation, a nuclear explosion of the same magnitude would cause losses eight to ten times lower than before the implementation of these measures."

In his testimony before the Gore Subcommittee on May 21, 1969, Dr. Eugene Wigner, nuclear physicist at Princeton University, stressed the potential of city evacuation for nuclear blackmail in crisis situations. Here are some excerpts from his statement.

"The tactic I am most afraid of is not an actual attack. It is, rather, the threat of an attack, preceded by the evacuation of cities. If the USSR and U.S. armaments developed in the way the present trends indicate, I greatly fear that we would have to accede to whatever demands accompany the threat.

"If the civil defense plans of the USSR, in particular its evacuation program, are carried out—and I cannot see what might prevent this—our deterrent power will be gravely degraded and may become insufficient.

"The particular form of civil defense which plays a prime role in the USSR planning, the

evacuation of the cities, was found objectionable to those participating in a civil defense study. I am referring to the Little Harbor Study, the participants in which, including myself, expressed opposition to evacuation plans because they felt such plans are 'provocative.' The time needed for the actual evacuation is long, of the order of a day at least. Hence, evacuation can be carried out in time only if the time of the confrontation is known well ahead of time. Since this is the case only for the party which initiates the confrontation, evacuation is most useful as a measure supporting aggression.

"The evacuation of the cities could decrease the fatalities which an opponent can inflict by a very considerable factor. I calculated that, assuming evacuation of the cities of the USSR into circles with 50-mile radii, our present missile power, including that on submarines, could cause a fatality level of about 9½ million if (a) all our missiles were used against the population, none against the military targets, (b) if the ballistic missile defense of the USSR were completely ineffective, (c) if we suffer no losses whatever from a first strike and (d) if all our submarines are on station. Naturally, though only a fraction of the numbers often quoted, 9½ million is an extremely high level of fatalities. It is based, however, on extreme assumptions and, of course, we do not know the lives of how many people a possible bellicose leadership of an opponent may be willing to sacrifice in order to assure permanent freedom from 'imperialist war plotters'."

FOOTNOTES

- ¹ Meet the Press, March 23, 1969.
- ² Senator Henry M. Jackson, *op. cit.*
- ³ Adelphi Papers, Institute for Strategic Studies, 1968.
- ⁴ *Congressional Record*, April 25, 1969, pp. S4114-15.
- ⁵ *Congressional Record*, April 29, 1969, p. S4250.
- ⁶ George W. Rathjens, "An ABM Doesn't Turn Off Easily," *The Washington Post*, March 30, 1969.
- ⁷ Dr. Franklin A. Long, Cornell University, "Strategic Balance and the ABM," *Bulletin of the Atomic Scientists*, December, 1968.
- ⁸ Associated Press dispatch from Moscow, February 20, 1967.
- ⁹ Stephen E. Nordlinger, *Baltimore Sun* correspondent, February 23, 1967.
- ¹⁰ *Ibid.*

ORDER FOR RECOGNITION OF SENATOR PROXMIRE TOMORROW

Mr. MANSFIELD. Mr. President, I ask unanimous consent that at the conclusion of the speech by the distinguished senior Senator from California (Mr. MURPHY) tomorrow, the distinguished senior Senator from Wisconsin (Mr. PROXMIRE) be recognized for not to exceed 1 hour.

The PRESIDING OFFICER. Without objection, it is so ordered.

ORDER FOR RECOGNITION OF SENATOR CURTIS TOMORROW

Mr. MANSFIELD. Mr. President, I ask unanimous consent that tomorrow, following the speech of the distinguished Senator from Wisconsin (Mr. PROXMIRE), the Senator from Nebraska (Mr. CURTIS) be recognized for not to exceed 30 minutes.

The PRESIDING OFFICER. Without objection, it is so ordered.

ORDER FOR RECOGNITION OF SENATOR DOMINICK TOMORROW

Mr. MANSFIELD. Mr. President, I ask unanimous consent that, as close to the hour of 2 o'clock tomorrow as possible, the distinguished Senator from Colorado (Mr. DOMINICK) be recognized for not to exceed 20 minutes.

The PRESIDING OFFICER. Without objection, it is so ordered.

GREAT LAKES-ST. LAWRENCE SEAWAY MILITARY CARGO TEST PROGRAM IS PROVING SUCCESSFUL

Mr. PROXMIRE. Mr. President, on July 8, 1969, a number of eastern Senators wrote to the Secretary of Defense protesting the continuance of a test program of shipping military cargo via the Great Lakes and the St. Lawrence Seaway.

The letter suggests that the test program is diverting cargo from more efficient routes and that the result is higher shipping costs. Nothing, Mr. President, could be further from the truth. The traditional method of routing military cargo, whereby products manufactured in the Midwest are carted to the east coast for shipment, has diverted cargo; the present program is designed to redress this situation.

Officials at the Defense Department estimate that \$100,000 in shipping costs will be saved this year. This estimate is based on the experimental quantity of 80,000 to 90,000 tons of cargo; as the program moves into normal operational status, with Midwest-manufactured military cargo carried via the St. Lawrence Seaway on a regular basis, this should result in savings of hundreds of thousands of dollars annually.

Before turning to the specifics of the letter written by my east coast colleagues, it will be useful to briefly review the history of our efforts to get this program underway. The Great Lakes have consistently received short shrift when it has come to military cargo. For years, cargo that was manufactured in the Midwest, and which could have been placed on ships in immediately adjacent Great Lakes ports for carriage out the seaway, has been transported across more than 1,000 miles of land by truck or rail to be placed on ocean-going vessels in east coast ports.

It does not take a Ph. D. in economics to see that using the rail-plus-ship routing instead of a single mode of transportation is bad business. But it has been done this way because the lines servicing the Great Lakes have been mostly foreign-flag carriers, and the Pentagon has not been able to place military cargo on foreign-flag vessels because of the Cargo Preference Act.

Why have not the American-flag carriers sought out military cargo business in the Great Lakes? Simply because it is easier and more convenient for them to pick up cargo at east coast ports. As long as the Pentagon has been willing to transport cargo cross country to the east coast, there has not been any incentive for American-flag lines to send ships into the Great Lakes to get the business.

tal—"Well, there is always Polaris." This seems to me a hazardous position. The whole point of the mix of strategic weapons systems—Minuteman, Polaris, Poseidon, B52 Bombers—is to have such diversification that our deterrent could never be totally negated. I am sure that if we are willing to write off Minuteman as a component of our deterrent forces, we would not have any difficulty inducing the Soviets then to focus their full counter-force genius against our submarine and bomber forces. In fact, I fully expect there has already been long established a Soviet group charged with developing specific means of countering such elements of our deterrent. To them, Polaris may not look like 600 missiles, or 6,000 warheads if given a ten-fold MIRV multiplication, but rather as only 41 boats to be neutralized. Certainly we know the Soviets are engaged in large-scale ASW developments. And our 600 B-52 bombers may be viewed as a much smaller number of airfields to be attacked—for which they may think their Fractional Orbital Bombardment System (FOBS) is well suited." 5

What first-strike force would be necessary to neutralize the United States' deterrent? The Chayes-Wiesner report released by Senator Kennedy in May claimed it would have to be substantially larger than the force the Pentagon estimated. The Chayes-Wiesner book said:

"With our Minutemen in hardened silos, it would take at least two attacking ICBM's to be reasonably sure of destroying one Minuteman."

Defense Department Research Chief John S. Foster, Jr., however, called on recent United States experience to reach the judgment that Moscow would need many fewer attacking missiles to succeed in a first strike:

"An ICBM with three independently aimed warheads can attack three silos. The U.S. has designed, but not deployed, a system which allows a missile to signal the launch-control point if it has launched its re-entry vehicle properly. With this system, the control point could reprogram another missile to make up for failures. For example, a missile system having a 20% failure rate and carrying 3 re-entry vehicles per missile, would require only 420 missiles to attack 1000 silos. If the yield of each re-entry vehicle was a reasonable 5 MT and the accuracy a reasonable 1/4 of a mile, about 95% of the silos could be destroyed. This would mean 50 of the 1000 Minutemen survive. It would be foolish to attack half of the silos twice as the book advised, rather than all of them at once."

Those who hold that the possibility of a planned Soviet first strike must not be lightly dismissed make the following arguments in support of their position:

1. The importance of surprise in nuclear warfare—that is, a first strike—figures repeatedly in Soviet doctrinal writings. One example frequently quoted is an article by Marshal A. A. Grechko, now the defense minister, published in *Red Star*, February 23, 1961. This article emphasized the following points:

"(a) Suddenness (or surprise) is crucial to success in modern war.

"(b) Technological surprise may be equally crucial.

"(c) The initial phase of the war will be of decisive importance.

"(d) Soviet forces will employ nuclear weapons as their main armament."

Several other quotations from Soviet military writings relating to the question of the first strike appear in the section on doctrine.

2. The SS-9 and fractional orbital missiles simply make no sense as retaliatory weapons. The suborbital missile is clearly structured for surprise attack. The SS-9 combines a much more powerful missile and more powerful warhead than is required for destroy-

ing even the largest cities. For purposes of simple retaliation, the SS-9 would be irrationally expensive. As counterforce weapons, however, directed against United States strategic air bases and ICBM complexes, they do make sense.

3. The Soviet Union places heavy emphasis on civil defense, including the evacuation of Soviet cities, which could be taken as a signal of expectation of a retaliatory nuclear blow.

Joanne Levey, a specialist in Soviet civil defense, wrote in the March-April, 1969, issue of *Survive*, an American journal of civil defense:

"Unclassified Soviet military literature abounds in articles on all areas of civil defense; thus, to read a fair amount of this material is one way of getting at least a layman's sense of the Soviet civil defense program—it's scope, its quality, and its emphasis. Such a reading, admittedly, does not reveal the exact number of Soviet shelters or their effectiveness. Yet even in areas such as these, certain clear-cut inferences may be drawn. For example, the abundance and extent of shelters is inferred when numerous articles instruct people to go to the nearest shelter on receipt of the "Air Alert" signal and indicate further that such shelters exist everywhere that people live and work so that when they hear the signal, they may take cover quickly.

"Civil defense training in the Soviet Union is compulsory and universal. Everyone is exposed to it—school children in grades five through nine, both in classrooms and in summer camps, pre-draft-age men in military-sport camps and in educational institutions, industrial workers at their places of employment, and members of collective farms. There is multiple exposure in that civil defense is publicized at movies, on radio and television, and in magazines, newspapers, and factory publications. Civil defense courses are tailored to the needs and ability of the trainees. Farm children, for instance, are taught how to protect cattle, forage, food and water supplies as well as themselves. Factory employees learn rescue and reclamation operations and ways of reducing the vulnerability of their shops. All Russians are trained to identify and make the appropriate response to the seven warning signals (Air Alert, All Clear from Air Alert, Threat of Radioactive Contamination, Radioactive Contamination, Chemical Attack, Bacteriological Contamination, and Threat of Flooding). They are also instructed on how to respond to surprise attack and to the preattack government order to evacuate their cities. Instructions are specific and concrete. For example, if at home when the "Air Alert" is given, citizens are told to get together individual protective equipment (gas mask or dust mask, raincoat, and rubber boots), close the windows, turn off heat, gas, stoves, and lights; take the previously prepared supply of food, water, and personal documents, and head quickly for the nearest shelter, warning their neighbors (who may not have heard the signal) on the way out.

"Soviet civil defense training for male youth and adults puts emphasis on going into disaster areas almost immediately after attack to perform rescue and reclamation operations. They are taught to use cranes, bulldozers, and other heavy equipment to dig people out of caved-in shelters, to extinguish fires, to administer first aid, and to evacuate the injured. Training exercises for these complicated operations are realistic with actual protective clothing and heavy equipment being used. Realism extends in other program areas to the simulation of chemical warfare agents from inexpensive materials available in any drugstore and to the practice evacuation of the mothers and newly delivered babies of a maternity home to a kindergarten 37 kilometers away.

"Preattack evacuation of large segments of the urban population to rural areas under certain conditions of crisis escalation is an important plank in the Soviet civil defense platform. Industrial workers in cities are to remain on the job and take refuge in special shelters at or near their place of work; but non essential workers, school and preschool children, and retired people are to be transported to the country. Upon arrival, the evacuees are to assist their rural hosts in constructing hasty fallout shelters on sites that have already been surveyed for this purpose. Plans for evacuation are detailed, including, for example, time schedules for departure to collecting points; the presence of a doctor or nurse on each evacuation train (or with every convoy of trucks); instructions on what each family should bring (depending on climate and season); and special evacuation passes with a stub and a detachable slip for each person."

4. Possession of a first-strike capability does not necessarily mean that the Soviet Union would engage in a first strike. The capability would put the Soviet Union in a position to play the game of political blackmail more effectively than it did at the time of the Berlin ultimatum or the Cuban missile crisis.

Several critics of the ABM, while holding that a first strike is highly improbable, have nevertheless conceded that under certain circumstances the Soviet Union might be tempted or impelled to launch a first strike.

Dr. George W. Rathjens suggests:

"It is conceivable that one of the superpowers with an ABM system might develop MIRVs to the point where it could use them to destroy the bulk of its adversary's ICBM force in a preemptive attack. Its air and ABM defenses would then have to deal with a much degraded retaliatory blow consisting of the sea-launched forces and any ICBMs and aircraft that might have survived the preemptive attack.

"The problems of defense in such a contingency would remain formidable. They would be significantly less difficult, however, than if the adversary's ICBM force had not been seriously depleted. In fact, the defense problem would be relatively simple if a large fraction of the adversary's retaliatory capability were, as is true for the United States and to a far greater degree for the U.S.S.R. in its land-based ICBM's, most of which would presumably have been destroyed.

"It may seem unlikely that either superpower would initiate such a preemptive attack in view of the great uncertainties in effectiveness (particularly with respect to defenses) and the disastrous consequences if even a comparatively small fraction of the adversary's retaliatory force should get through. With both MIRVs and an ABM system, however, such a preemptive attack would not seem as unlikely as it does now."

Dr. Franklin A. Long, former science adviser in the Arms Control and Disarmament Agency, has warned that an effective ABM might tempt its possessor to believe in his own invulnerability and thus might become an encouragement to adventurism:

"A different and more perturbing possible consequence is that a strong BMD system may lead its possessor to contemplate a first strike with his nuclear missile forces. (Against this is the argument that a conservative posture will lead a nation to derogate its own BMD capabilities and hence be very hesitant to carry out programs which, for success, postulate a fully effective BMD)."

Conflicting estimates of the effectiveness of anti-missile defense have sometimes appeared in the Soviet press.

Soviet General Pavel A. Kurochkin, head of the Frunze Military Academy, had electrified the Western defense community on Feb-20, 1967, when he announced at a Moscow press conference that "detecting missiles in time and destroying them in flight is no

Footnotes at end of article.

"One can talk of war occurring through escalation. But it still requires, at some stage, that one major power launch nuclear weapons against the other. This will be, and can be expected to be perceived as, a self-destructive act. For the foreseeable future, war calculations will not seem promising; moreover, leaders are unlikely to believe them if they do seem so. And there is ample evidence in the three decades since World II of great-power caution in treating events that might risk general nuclear war.

"For these reasons, among others, nuclear war between the United States and the Soviet Union has become a low-probability event—possible and well worth worrying about because of its enormous consequences, but still unlikely. Because it has this character, concern with 'getting through the next few years' has gradually been transmuted into concern with maintaining nuclear peace and national security over the next decades. In short, the world situation now warrants paying attention to the medium- and long-term problems attendant upon proposed policies relating to nuclear war."

"Senator Joseph Tydings: A Soviet missile attack on the United States would be 'irrational' because it would be suicidal. Regardless of the destruction wreaked on the United States, the U.S.S.R. would also be obliterated in the process. However, to assume that such a Soviet attack might also be 'irrational' enough to be less than 'all-out' defies reason. Why should any Soviet leader send only a few missiles over when he knows the United States will retaliate with its full second strike force? Even men as mad as Hitler were never guilty of such thoughtless accommodation to their enemies. If the Soviets did attack, it would certainly be with full force, which by the Pentagon's own reckoning would render the proposed Safeguard system useless.

"As for accidental attack, I assume it would consist of one or two missiles that unintentionally 'got away.' Since all missiles are programmed to specific destinations, it is clear that such a missile would either be directed toward a large city or toward a missile site.

"If the former were the case, the Safeguard system would only protect Minneapolis theoretically and might even prove inadequate here owing to the fact that this city is beyond the range of our Sprints. If this enemy missile were targeted at a missile site, at most we would simply lose a few of our 1000 ICBM's, and few lives would be lost. It is hardly worth the vast expense of an ABM system to insure against the loss of a few drastically less expensive ICBM's

"The final justification offered by the Pentagon in support of the Safeguard is the most serious. It is based on the claim that our second-strike capability is being threatened by the Soviets and that measures must be taken to protect portions of our second strike force.

"If in fact our retaliatory capability is in question, we must act immediately to restore it. The Soviets must never doubt our ability to inflict unacceptable damage to their society in response to a preemptive attack. This is the very substance of our deterrent strategy. If our retaliatory capability is in question, additions to our offensive forces, not dubious defensive missiles, ought to be our strategy.

"However, there is no evidence that our second-strike capability is being threatened or that Moscow doubts its effectiveness.

"Last month, before the Senate Foreign Relations subcommittee on Disarmament, Secretary of Defense Laird declared that the Russians 'are going for a first strike capability—there is no question about that.' This came as a shock to those of us in Con-

gress who are acutely interested in this Nation's defense posture. Only 2 months before, outgoing Defense Secretary, Clark Clifford, had announced: 'The U.S. shall continue to have, as far into the future as we can now discern, a very substantial qualitative lead and distinct superiority in numbers . . . and overall combat effectiveness of our strategic forces.'

"He added that the 'most pessimistic' military estimates credit the U.S. with the ability to destroy 40 percent of the Soviet population and 75 percent of their industry even after an all-out attack by the 'highest expected threat' the Soviets could launch in the future. And presumably by 'future,' he meant more than the 8 weeks between the time of his leaving and Mr. Laird's testimony before Congress.

"The National Intelligence Estimate—the consensus view of the Defense Intelligence Agency, the State Department, and the Central Intelligence Agency—denies the existence of any first-strike plans on the part of the Kremlin or any signs that such plans are in the making. In addition, the Secretary of State of this administration, Mr. Rogers, reconfirmed this view in a recent press conference, declaring that he was not aware of any Soviet intentions to develop a first-strike capability.

"The arithmetic of the situation casts further doubts on Mr. Laird's contention. Both we and the Soviets each have slightly in excess of 1,000 operational ICBM's. Let us suppose that Moscow initiated a preemptive strike against the United States and destroyed every one of our Minutemen in their hardened and dispersed sites—a virtual impossibility given what we know about the launch probabilities, megatonnage and accuracy of Soviet missiles. This hypothetical exercise also requires the further doubtful assumption that we chose not to launch our ICBM's in retaliation during the grace period after our radars detected this massive Soviet assault and before the enemy missiles actually struck.

"Our retaliatory forces would still contain 656 submarine-launched Polaris missiles that are invulnerable to enemy attack and 480 B-52 bombers each carrying four nuclear bombs and a nuclear-tipped Hound Dog missile with a range of 700 miles once it is launched from the parent plane. This is a total of more than 3,000 nuclear warheads. According to former Secretary of Defense McNamara's estimates, it would take no more than 400—not 3,000—nuclear warheads to damage the Soviet Union beyond recognition and repair.

"Mr. Laird bases his claims about Soviet intentions to develop a first-strike capability on the deployment of 200 Russian SS9 missiles. We have known about these missiles with large warheads for several years, and our intelligence evaluations have considered them part of the Soviet second-strike force designed to destroy our cities in a retaliatory attack. Suddenly, without explanation the Secretary of Defense has decreed that they are now first-strike weapons.

"Even accepting this questionable turn-about, the SS9 provides no reason for deploying an anti-ballistic-missile system in this country. Assuming these missiles possess the accuracy and launch probability estimated for our own Minutemen missiles, all 200 SS9's with huge multi-megaton warheads would destroy only 90 of our 1,000 land-based ICBM's. The Soviets would require more than 2,000 of these SS9's armed with 20 megaton warheads to destroy our entire Minutemen force—and this would still leave us with 656 submarine-launched missiles and our intercontinental bombers with their 2,400 nuclear warheads with which to retaliate.

"Finally, the credibility of Mr. Laird's contention that Moscow has first-strike designs is undermined by his recommended re-

sponse. He is calling for a limited ABM system that will not "provoke" the Soviets. If, in fact, the Soviets are intent on developing the capability to destroy us and our ability to retaliate, and if the ABM is a workable system, a workable defense, should we not proceed immediately with a "heavy system" to protect our people and all our missiles? Why are we worried about provoking a nation which supposedly already has decided to go all out to annihilate the United States? How can they be further provoked?

"In addition, spokesmen for the administration have indicated U.S. readiness to abandon the Safeguard if the Russians will give up their limited ABM deployment around Moscow. Secretary of State Rogers informed the Foreign Relations Committee only several weeks ago:

"Suppose we started our talks in a few months and the first thing that's said by the Soviet Union is, 'Let's do away with defensive missiles.' We'd have no problem. We'd be delighted."

"These are Secretary of State Rogers' words:

"If we truly believed the Soviets were forging ahead with the development of a first-strike capability, such a concession would be suicidal. We would be playing directly into Moscow's hands. One is forced to conclude that Mr. Laird does not take his own cries of 'wolf' as seriously as he would have us receive them."

"In summary, the Pentagon's claim that the Safeguard is necessary to preserve our second-strike capability is unconvincing."

Dr. William G. McMillan, a nuclear weapons expert at the University of California, Los Angeles, responded to some of these criticisms in his testimony before the Senate Preparedness Subcommittee:

"For some years I have followed closely the growth of the Soviet ABM systems. By my reckoning there have been three systems involved: the first, partially deployed around Leningrad and then apparently abandoned; the second, deployed around Moscow and now approaching operational status; and the third or Tallinn system, very extensively deployed throughout the Soviet Union, and which appears to me likely to have a considerable ABM potential.

"I find very unpersuasive the argument that the Soviets are building in the Tallinn development yet another SAM antiaircraft system to the neglect of a defensive system aimed at what they must surely regard as the more current threat of ICBM's and SLBM's.

"By the counterforce effort I refer to the current Soviet development of multiple warheads for their SS-9 missile. To me the evidence as I understand it points very strongly, if not unequivocally, towards a MIRV—i.e., a multiple independently targeted reentry vehicle-system designed against the U.S. land-based Minuteman system.

"To impart some feeling for the strength of my own conviction on these two intelligence issues, I would strongly support spending a substantial fraction of our Defense budget to assure that neither of these Soviet developments be allowed to degrade our strategic deterrent.

"Put differently, I am most certainly not willing to gamble the survival of our Minuteman force that such an interpretation is wrong.

"In addition to the question of capability, intelligence must concern itself with the question of intent. Here the writing of such high-level Soviet military planners as Marshal Sokolovsky abound with references to the need for a preemptive strategic first-strike capability. They tell themselves they must develop it, and now we see that development in progress. How much more notification do we need?

"In this focusing on the survivability of Minuteman one often encounters the rebut-

Footnotes at end of article.

American people, if not of the military-industrial complex, to call a recess in the nuclear arms race which for so many years has bled our economy and militarized our foreign policy. It would mark a historic turning point, a signal that the American people have decided to break the pattern of 20 years, during which everything the military establishment asked was freely granted with little debate and little question. It would tell the Soviets, and the world, that the military-industrial complex which has been able to escalate the arms race at will and plunge the nation into unsanctioned military adventures no longer exercises exclusive control over American policy.

For these reasons, and for the sake of a more sensible allocation of resources as between weaponry and social progress, the Senate should say "No" to Safeguard.

THE ABM—FIRST-STRIKE CAPABILITIES

Mr. TOWER. Mr. President, the American Enterprise Institute has, in my opinion, put out the best objective study concerning the merit and lack of merit of the proposed anti-ballistic-missile system. Entitled "The Safeguard ABM System," this special analysis is one of many reports issued by this nonpartisan research organization.

I, like all other Senators, have attempted to do as much research as possible on the ABM. Perhaps the most informative and controversial section of this analysis is the chapter dealing with first-strike capabilities. Whether or not the Soviet Union is gearing itself for a first-strike nuclear attack is a related question to the entire debate on the Safeguard system. If our information leads us to answer in the positive the deployment of the Safeguard system, protecting a portion of our ICBM and Minutemen forces is a mandatory step we must take to insure the safety of enough of our deterrent force so that we will be able to launch a second-strike retaliatory attack.

Particularly enlightening to me was the section within this chapter written by Department of Defense Research Chief John S. Foster, Jr. Mr. Foster stated that the Soviet SS-9 and the FOBS, the fractional orbital bombardment system, are offensive weapons not conducive to retaliatory attack. Furthermore, Mr. Foster and others writing in this same chapter take note of the complicated and advanced Soviet civil defense system, which is geared to evacuate city residents to rural areas. Such an evacuation procedure can only be taken as a Soviet belief and fear of a retaliatory attack.

These arguments and many others are discussed back and forth in this penetrating and informative analysis. As I stated before, the first-strike question has great relevance to the debate over the military procurement bill, as well as to the debate over the Safeguard ABM system. For these reasons I ask unanimous consent that the above-mentioned section of the American Enterprise Institute's analysis of the Safeguard system be printed in the RECORD.

There being no objection, the section was ordered to be printed in the RECORD, as follows:

THE SAFEGUARD ABM SYSTEM
FIRST STRIKE

Along with its traditional renunciation of aggression, the United States carries among

its prime articles of strategic doctrine a firm policy against employing a nuclear first strike against any adversary. First strike in the nuclear age has come to mean a surprise nuclear attack sufficient to destroy enough of the enemy's retaliatory force to render it virtually impotent.

As the May, 1969, study of the American Security Council pointed out in referring to the United States' nuclear forces:

"Not only do we have no objective which requires our initiating an attack against the Soviet Union, but we have carefully tailored our nuclear arsenal to exclude all weapons designed to initiate such an attack, or with which we could even credibly threaten such an attack. We have no hundreds of missiles with 25 megaton warheads. We have no orbital or fractional orbital nuclear bombardment systems whose utility is solely to deprive defensive forces of sufficient warning time to survive a surprise attack. We have neither the capability nor the intent of initiating nuclear war against the Soviets."

The Nixon decision on Safeguard, as the President has pointed out, was a further indication of no-first-strike intent. No preparations were made to protect major American cities even from a "broken-back" attack by Soviet forces that might be crippled in an American first strike.

Experts disagree about Soviet intentions to develop a first-strike capability.

Defense Secretary McNamara in his statement of September 19, 1967, generally discounted the possibility of a Soviet first strike:

"It would not be sensible for either side to launch a maximum effort to achieve a first-strike capability. It would not be sensible because the intelligence-gathering capability of each side being what it is, and the realities of lead-time from technological breakthrough to operational readiness being what they are, neither of us would be able to acquire a first-strike capability in secret."

Defense Secretary Laird, however, regarded the possibility that the Soviet Union was developing a first-strike capability as a real danger for the mid-1970s:

"I do not believe that the Soviet Union would be foolish enough, in this year 1969, or 1970, to go with the first strike, and I want to make that very clear. But, as Secretary of Defense, I must consider why they are going forward with the deployment of an SS-9 with such a large massive warhead. If they are developing a retaliatory strike, they don't need that kind of a warhead to hit our cities. They don't need that kind of missile system.

"It only leads me to believe that they are developing a capability to go after our missile bases and to knock out our deterrent force. It is important for us to have a credible deterrent. What I am interested in doing is preserving the peace and protecting our people and preventing nuclear war. We have been successful thus far. We have to keep our guard up, and this is what I have been talking about before the committees the last two days."

Senator Henry M. Jackson of Washington, in a speech on March 17, 1969, spoke in similar terms of the gravity of the Soviet first-strike threat:

"Moreover, the Soviets are moving fast toward parity with us in terms of nuclear missiles. By the end of this year Moscow will have deployed as many—or more—land-based ICBM's than we will have, and with a substantially greater megatonnage. The Soviets are deploying the Fractional Orbital Bombardment System (FOBS)—which is a first-strike oriented weapons system. The Soviets are producing Polaris-type nuclear submarines on a series, assembly-line basis, each with 16 ballistic missiles. Meanwhile, we are witnessing a far-ranging expansion

of other Soviet naval activity, and the Soviet navy is quite evidently in the Mediterranean to stay."

America's long-time disarmament chief, William C. Foster, acknowledged the possibility the Soviet Union might be seeking a first-strike capability in several of its weapons. In the April, 1969, *Foreign Affairs* he outlined steps that could lead to a first strike:

"Several of the weapons systems now being contemplated for deployment in the next few years could increase the risk of war by enhancing the temptation to strike first during a crisis situation.

"The Soviets, for example, have been testing a Fractional Orbital Bombardment System (FOBS). This weapon differs from a 'normal' ICBM chiefly in that it travels at a lower altitude and can take a longer and supposedly less detectable route to its target, via the Southern Hemisphere. . . . Its main purpose would appear to be for use in a surprise first strike against soft targets, such as strategic bomber airfields. Thus, a large-scale FOBS deployment would clearly be in violation of a fundamental 'rule,' which has been tacitly observed in recent years, against the development of weapons which might appear to increase directly the incentive to strike first.

"Another weapons system that would be inconsistent with that fundamental rule is a large-scale Ballistic Missile Defense system (BMD). A BMD system, if presumed to be effective by its possessor, might incline him to calculate that he could launch a massive counter-force strike against enemy land-based strategic forces and then defend himself against unacceptable losses from the enemy's retaliatory attack.

"Thus a large-scale BMD, by permitting its possessor to perceive an enhanced potential for a first strike, could increase his incentive to strike first in a crisis situation. At the same time a power confronting an adversary with a large-scale BMD might in a crisis situation feel impelled to strike first because a sudden, massive first strike with unimpaired offensive forces would have a better chance of penetrating missile defenses than would a retaliatory strike with a partially destroyed offensive force.

"The MIRV or Multiple Individually-Targeted Re-Entry Vehicle, which makes it possible for a missile to deliver separate warheads to several widely separated targets, is another complicating development in nuclear technology. If, in addition to possessing large-scale BMD systems, both sides also possessed large-scale MIRV systems—such as the United States and presumably the Soviets have been developing—there could be an additional incentive to strike first in a crisis situation. The rationale for this is simple enough. Suppose, for example, that a large portion of each side's ICBM force had, let us say, 5 MIRV warheads in each missile. Then the side which strikes first could hope, at least in theory, to destroy up to 25 enemy warheads (in 5 enemy missiles) with each of its attacking missiles. Clearly, this could be viewed as a reason for wishing to strike first."

Challenges to these interpretations of Soviet intentions and capabilities have been made by many critics of the ABM. Most of the arguments made against the first-strike hypotheses are incorporated in the following two excerpts:

"Jeremy J. Stone: A large-scale Soviet attack against American cities is plainly and simply not rational, since the American response is primed to destroy the Soviet Union in return. The Soviet leadership is aware of this. That nuclear war is mutual suicide has attained the status of a cliché with both super-powers. Wide-scale nuclear attacks on American forces are so unlikely to succeed, and so dangerous in any case, that it is very hard to imagine a Soviet leader, or Soviet committee, attempting them.

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year means that the chance of having that full-scale nuclear war by 1990 is about one in three, and by 2000 it is about 50-50.

I think I know what is bothering the students. I think that what we are up against is a generation that is by no means sure that it has a future.

I am growing old, and my future so to speak is already behind me. But there are those students of mine who are in my mind always; and there are my children, two of them now 7 and 9, whose future is infinitely more precious to me than my own. So it isn't just their generation; it's mine too. We're all in it together.

Are we to have a chance to live? We don't ask for prosperity, or security; only for a reasonable chance to live, to work out our destiny in peace and decency. Not to go down in history as the apocalyptic generation.

And it isn't only nuclear war. Another overwhelming threat is the population explosion. That has not yet even begun to come under control. There is every indication that the world population will double before the year 2000; and there is a widespread expectation of famine on an unprecedented scale in many parts of the world. The experts tend to differ only in the estimates of when those famines will begin. Some think by 1980, others think they can be staved off until 1990, very few expect that they will not occur by the year 2000.

That is the problem. Unless we can be surer than we now are that this generation has a future, nothing else matters. It's not good enough to give it tender loving care, to supply it with breakfast foods, to buy it expensive educations. Those things don't mean anything unless this generation has a future. And we're not sure that it does.

I don't think that there are problems of youth, or student problems. All the real problems I know are grown-up problems.

Perhaps you will think me altogether absurd, or "academic," or hopelessly innocent—that is, until you think of the alternatives—if I say as I do to you now: we have to get rid of those nuclear weapons. There is nothing worth having that can be obtained by nuclear war: nothing material or ideological, no tradition that it can defend. It is utterly self-defeating. *Those atom bombs represent an unusable weapon. The only use for an atom bomb is to keep somebody else from using one. It can give us no protection, but only the doubtful satisfaction of retaliation.* Nuclear weapons offer us nothing but a balance of terror; and a balance of terror is still terror.

We have to get rid of those atomic weapons, here and everywhere. We cannot live with them.

I think we've reached a point of great decision, not just for our nation, not only for all humanity, but for life upon the Earth. I tell my students, with a feeling of pride that I hope they will share, that the carbon, nitrogen and oxygen that make up 99 percent of our living substance, were cooked in the deep interiors of earlier generations of dying stars. Gathered up from the ends of the universe, over billions of years, eventually they came to form in part the substance of our sun, its planets and ourselves. Three billion years ago life arose upon the Earth. It seems to be the only life in the solar system. Many a star has since been born and died.

About two million years ago, man appeared. He has become the dominant species on the Earth. All other living things, animal and plant, live by his sufferance. He is the custodian of life on Earth. It's a big responsibility.

The thought that we're in competition with Russians or with Chinese is all a mistake, and trivial. Only mutual destruction lies that way. We are one species, with a world to win. There's life all over this universe, but in all the universe we are the only men.

Our business is with life, not death. Our challenge is to give what account we can of what becomes of life in the solar system, this corner of the universe that is our home and, most of all, what becomes of men—all men of all nations, colors and creeds. It has become one world, a world for all men. It is only such a world that now can offer us life and the chance to go on.

Mr. HANSEN. Mr. President, I compliment the distinguished senior Senator from Arizona for the very informative and dispassionate and reasoned statement he has just made.

I know that a great many Senators have already made up their minds as to what their positions shall be. For those who may not have yet arrived at their position, I am sure they will find useful the remarks of the distinguished Senator, who has the capacity to take a cool and analytical approach to any problem and to weigh the merits and demerits of a proposal and then determine what will best serve this country.

The Senator has once again demonstrated his ability to apply logic, reason, and good judgment to a very difficult problem.

I compliment the Senator very sincerely.

Mr. FANNIN. Mr. President, I thank the Senator. I know that he has given a great deal of thought to the matter. I have heard him express his position on the subject eloquently.

I am pleased that the Senator has come to the conclusion, as I have, that we must support our President and that as the Commander in Chief of our Armed Forces he is entitled to this support. I am very proud that we have seen fit to get behind him on this issue as well as on other issues.

I expressed my deep thanks to the distinguished Senator from Wyoming.

Mr. STENNIS. Mr. President, will the Senator yield?

Mr. FANNIN. I yield.

Mr. STENNIS. Mr. President, undoubtedly the Senator from Arizona has made a contribution in this matter. He has pitched it not only a high plane, but also on the one solid foundation upon which all this question rests: What is necessary for the defense of our Nation? What is necessary to defend our people? That is what it really comes down to. This is merely a protection for our arsenal.

I recall seeing pictures in history books of Indians putting up their barricades, and the colonists would have their barricades. I do not think either blamed the other, or ever did, for putting up a barricade to protect themselves against attack. That is what the ABM boils down to, and it will be a successful barricade.

Mr. FANNIN. Mr. President, I am highly honored that the distinguished Senator from Mississippi has seen fit to make his remarks. He is widely recognized as one of the most informed men in our Nation on the subject of the protection of our country. As chairman of the Committee on Armed Services, the country owes him a debt of gratitude. I have had the privilege many times of discussing a number of these problems with him. I know well his knowledge, his

sincerity of purpose, and the tremendous amount of time he devotes to this subject.

I express my thanks to the distinguished Senator.

Mr. STENNIS. I thank the Senator.

SUMMING UP ON SAFEGUARD

Mr. SYMINGTON. Mr. President, with respect to the debate that is now going on incident to the Safeguard ABM, I ask unanimous consent that a thoughtful editorial published in the St. Louis Post-Dispatch of July 8 be printed in the RECORD.

There being no objection, the editorial was ordered to be printed in the RECORD, as follows:

THE SUMMING UP ON SAFEGUARD

As Senate debate opens on deployment of the Safeguard antiballistic missile system, the country has before it a good summary of the argument in the majority and minority reports of the Armed Services Committee.

The majority calls ABM "essential for the nation's security." The minority, headed by Senator Symington of Missouri, believes the system would not contribute to our security "in any substantial fashion."

Without ABM, says the majority, Soviet weaponry may place in doubt the second-strike capability of "a large proportion" of our strategic deterrent forces. Pointing to the enormous surplus of nuclear power we already possess, the minority holds that even after an attack by Russia we would have enough forces left to "destroy the Soviet Union 50 times over."

The minority questions the technical feasibility of the ABM system, noting that the highly complex radar and computer components have not even been tested singly, and that in combination there is even greater doubt that they would function successfully under conditions of a nuclear attack. The majority rests its case on blind faith that technology can surmount any obstacles.

We think the minority has much the better of the argument. Perhaps its strongest point is one to which the majority offers no rebuttal at all—namely, that whatever protection might be afforded to our Minuteman missiles by the expenditure of billions of dollars on Safeguard could be completely overcome by just a few months' added production of Soviet offensive missiles. In other words, the "security" to be purchased with Safeguard is a costly illusion. It would not actually protect our land-based missiles if the Soviets were determined to knock them out; yet even if these were knocked out, we would still have far more than enough sea-based missiles, European-based missiles and bombers to deliver a crushing retaliatory blow.

The majority falls back on the contention that a decision to deploy Safeguard will strengthen our negotiating position in arms talks with the Soviets. But the tactics of escalation to gain negotiating leverage have never worked in 20 long years of arms talks, and there is no reason to suppose they would work now. The whole history of the arms race is one of escalation on one side inducing escalation on the other. The way to break the cycle is for one side to refrain from an act of escalation which can be forgone without impairing its strategic position.

Such is the case with ABM. When Senator Symington and his colleagues, all of whom have had the same access to secret information as the committee majority, tell us that our security would not be impaired by postponing deployment of the ABM, they deserve to be believed.

A Senate vote against deployment would in our opinion strengthen Mr. Nixon's hand in the arms talks. It would express in the strongest possible way the readiness of the

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Truman Doctrine, and all the rest of it—in 1950 we got down to 600,000 men.

Now we have 3.5 million men under arms: about 600,000 in Vietnam, about 300,000 more in "support areas" elsewhere in the Pacific, about 250,000 in Germany. And there are a lot at home. Some months ago we were told that 300,000 National Guardsmen and 200,000 reservists—so half a million men—had been specially trained for riot duty in the cities.

I say the Vietnam War is just an immediate incident, because so long as we keep that big an army, it will always find things to do. If the Vietnam War stopped tomorrow, with that big a military establishment, the chances are that we would be in another such adventure abroad or at home before you knew it.

As for the draft: Don't reform the draft—get rid of it.

A peacetime draft is the most un-American thing I know. All the time I was growing up I was told about oppressive Central European countries and Russia, where young men were forced into the army; and I was told what they did about it. They chopped off a finger, or shot off a couple of toes; or better still, if they could manage it, they came to this country. And we understood that, and sympathized, and were glad to welcome them.

Now by present estimates four to six thousand Americans of draft age have left this country for Canada, another two or three thousand have gone to Europe, and it looks as though many more are preparing to emigrate.

A few months ago I received a letter from the Harvard Alumni Bulletin posing a series of questions that students might ask a professor involving what to do about the draft. I was asked to write what I would tell those students. All I had to say to those students was this: if any of them had decided to evade the draft and asked my help, I would help in any way I could. I would feel as I suppose members of the underground railway felt in pre-Civil War days, helping runaway slaves to get to Canada. It wasn't altogether a popular position then; but what do you think of it now?

A bill to stop the draft was recently introduced in the Senate (S. 503), sponsored by a group of senators that ran the gamut from McGovern and Hatfield to Barry Goldwater. I hope it goes through; but any time I find that Barry Goldwater and I are in agreement, that makes me take another look.

And indeed there are choices in getting rid of the draft. I think that when we get rid of the draft, we must also cut back the size of the armed forces. It seems to me that in peacetime a total of one million men is surely enough. If there is an argument for American military forces of more than one million men in peacetime, I should like to hear that argument debated.

There is another thing being said closely connected with this: that to keep an adequate volunteer army, one would have to raise the pay considerably. That's said so positively and often that people believe it. I don't think it is true.

The great bulk of our present armed forces are genuine volunteers. Among first-term enlistments, 49 percent are true volunteers. Another 30 percent are so-called "reluctant volunteers," persons who volunteer under pressure of the draft. Only 21 percent are draftees. All re-enlistments, of course are true volunteers.

So the great majority of our present armed forces are true volunteers. Whole services are composed entirely of volunteers: the Air Force for example, the Navy, almost all the Marines. That seems like proof to me that present pay rates are adequate. One must add that an Act of Congress in 1967 raised the base pay throughout the services in three installments, the third installment still to come, on April 1, 1969. So it is hard to un-

derstand why we are being told that to maintain adequate armed services on a volunteer basis will require large increases in pay; that they will cost an extra \$17 billion per year. It seems plain to me that we can get all the armed forces we need as volunteers, and at present rates of pay.

But there is something ever so much bigger and more important than the draft. That bigger thing, of course, is the militarization of our country. Ex-President Eisenhower warned us of what he called the military-industrial complex. I am sad to say that we must begin to think of it now as the military-industrial-labor union complex. What happened under the plea of the Cold War was not alone that we built up the first big peace time army in our history, but we institutionalized it. We built, I suppose, the biggest government building in our history to run it, and we institutionalized it.

I don't think we can live with the present military establishment and its \$80-\$100 billion a year budget, and keep America anything like we have known it in the past. It is corrupting the life of the whole country. It is buying up everything in sight; industries, banks, investors, universities; and lately it seems also to have bought up the labor unions.

The Defense Department is always broke; but some of the things they do with that \$80 billion a year would make Buck Rogers envious. For example: the Rocky Mountain Arsenal on the outskirts of Denver was manufacturing a deadly nerve poison on such a scale that there was a problem of waste disposal. Nothing daunted, they dug a tunnel two miles deep under Denver, into which they have injected so much poisoned water that beginning a couple of years ago Denver began to experience a series of earth tremors of increasing severity. Now there is a grave feat of a major earthquake. An interesting debate is in progress as to whether Denver will be safer if that lake of poisoned water is removed or left in place. (N.Y. Times, July 4, 1968; Science, Sept. 27, 1968).

Perhaps you have read also of those 6000 sheep that suddenly died in Skull Valley, Utah, killed by another nerve poison—a strange and, I believe, still unexplained accident, since the nearest testing seems to have been 30 miles away.

As for Vietnam, the expenditure of fire power has been frightening. Some of you may still remember Khe Sanh, a hamlet just south of the Demilitarized zone, where a force of U.S. Marines was beleaguered for a time. During that period we dropped on the perimeter of Khe Sanh more explosives than fell on Japan throughout World War II, and more than fell on the whole of Europe during the years 1942 and 1943.

One of the officers there was quoted as having said afterward, "It looks like the world caught smallpox and died." (N.Y. Times, Mar. 28, 1968.)

The only point of government is to safeguard and foster life. Our government has become preoccupied with death, with the business of killing and being killed. So-called Defense now absorbs 60 percent of the national budget, and about 12 percent of the Gross National Product.

A lively debate is beginning again on whether or not we should deploy antiballistic missiles, the ABM. I don't have to talk about them, everyone else here is doing that. But I should like to mention a curious circumstance. In September, 1967, or about 1½ years ago, we had a meeting of M.I.T. and Harvard people, including experts on these matters, to talk about whether anything could be done to block the Sentinel system, the deployment of ABM's. Everyone present thought them undesirable; but a few of the most knowledgeable persons took what seemed to be the practical view, "Why fight about a dead issue? It has been decided, the funds have been appropriated. Let's go on from there."

Well, fortunately, it's not a dead issue.

An ABM is a nuclear weapon. It takes a nuclear weapon to stop a nuclear weapon. And our concern must be with the whole issue of nuclear weapons.

There is an entire semantics ready to deal with the sort of thing I am about to say. It involves such phrases as "those are the facts of life." No—they are the facts of death. I don't accept them, and I advise you not to accept them. We are under repeated pressure to accept things that are presented to us as settled—decisions that have been made. Always there is the thought: let's go on from there! But this time we don't see how to go on. We will have to stick with those issues.

We are told that the United States and Russia between them have by now stockpiled in nuclear weapons approximately the explosive power of 15 tons of TNT for every man, woman and child on earth. And now it is suggested that we must make more. All very regrettable, of course; but those are "the facts of life." We really would like to disarm; but our new Secretary of Defense has made the ingenious proposal that now is the time to greatly increase our nuclear armaments so that we can disarm from a position of strength.

I think all of you know there is no adequate defense against massive nuclear attack. It is both easier and cheaper to circumvent any known nuclear defense system than to provide it. It's all pretty crazy. At the very moment we talk of deploying ABM's, we are also building the MIRV, the weapon to circumvent ABM's.

So far as I know, the most conservative estimates of Americans killed in a major nuclear attack, with everything working as well as can be hoped and all foreseeable precautions taken, run to about 50 millions. We have become callous to gruesome statistics, and this seems at first to be only another gruesome statistic. You think, Bang!—and next morning, if you're still there, you read in the newspapers that 50 million people were killed.

But that isn't the way it happens. When we killed close to 200,000 people with those first little, old-fashioned uranium bombs that we dropped on Hiroshima and Nagasaki, about the same number of persons was maimed, blinded, burned, poisoned and otherwise doomed. A lot of them took a long time to die.

That's the way it would be. Not a bang, and a certain number of corpses to bury; but a nation filled with millions of helpless, maimed, tortured and doomed persons, and the survivors of a nuclear holocaust will be huddled with their families in shelters, with guns ready to fight off their neighbors, trying to get some uncontaminated food and water.

A few months ago Sen. Richard Russell of Georgia ended a speech in the Senate with the words: "If we have to start over again with another Adam and Eve, I want them to be Americans; and I want them on this continent and not in Europe." That was a United States senator holding a patriotic speech. Well, here is a Nobel Laureate who thinks that those words are criminally insane. (Prolonged applause.)

How real is the threat of full scale nuclear war? I have my own very inept idea, but realizing how little I know and fearful that I may be a little paranoid on this subject, I take every opportunity to ask reputed experts. I asked that question of a very distinguished professor of government at Harvard about a month ago. I asked him what sort of odds he would lay on the possibility of full-scale nuclear war within the foreseeable future. "Oh," he said comfortably, "I think I can give you a pretty good answer to that question. I estimate the probability of full-scale nuclear war, provided that the situation remains about as it is now, at 2 percent per year." Anybody can do the simple calculation that shows that 2 percent per

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would have us experience? A balance of terror is a balance of terror, but it is not destruction or enslavement. I admit to being unable to follow the doctor's argument.

So there will be no chance of my misquoting Dr. Wald, I ask unanimous consent to have his speech printed in the RECORD at the end of my remarks.

The PRESIDING OFFICER. Without objection, it is so ordered.

(See exhibit 1.)

Mr. FANNIN. Mr. President, the next nonthink example comes from a former Vice President and one of our colleagues here in the Senate. I refer to a prolog to "The ABM: Yes or No?" written by Hubert H. Humphrey and published by the Center for the Study of Democratic Institutions in Santa Barbara, Calif.

I have referred to this organization before in connection with Supreme Court Justice William O. Douglas, who serves as chairman of the board of the parent organization for this group and has also written an epilog to this book.

Former Vice President Humphrey, who wrote the prolog from Waverly, Minn., in January of this year said this about our missile defenses:

The only proof of effectiveness that can be offered in defense of the missile standoff is that we have survived the 20 years of international tensions without precipitating world war III.

Mr. President, it seems to me that Mr. Humphrey makes precisely the point that so many of us who support the President have been trying so long and hard to make. Since we have managed to survive the last 20 years by a missile standoff, shall we not try to continue to refrain from precipitating world war III by making ourselves so weak as to invite attack?

The third and last example of the ABM-nonthink, Mr. President, which I shall cite at this time, occurred in this Chamber last Wednesday, July 9.

A Senator professed amazement at the alleged shifting position of the Senator from Washington (Mr. JACKSON) and the Senator from Mississippi (Mr. STENNIS). Quoting from the RECORD of July 9 at page S7784:

Right now I can classify such logic, most respectfully, as pure hogwash.

Mr. President, the Senators from Washington and Mississippi took the floor immediately in their own behalf and ably defended their positions—so that is neither necessary now nor is it my present purpose. I question how it is possible to be very respectful about "hogwash." It may be the Senator has more experience in that field, and so I will defer to him.

What I do think is noteworthy, Mr. President, is a remark which is on the immediately following page, S7785, by the same Senator in which he states:

We are going to settle this issue with reason, not emotion.

Putting these two remarks together, Mr. President, I can only conclude that the Senator deals in respectful but unemotional "hogwash."

This is a serious question, Mr. President. The fate of the Nation does hang

in the balance. Perhaps, as that Senator has suggested, "the Nation is watching us." I would not attempt to be humorous or facetious at a time like this, Mr. President, except if by calling attention to these continuing examples of "nonthink," we may all stop worrying about our posture before the watching Nation and look at this problem with a clear eye and with minds open to reason and perspective. If we do, I am sure the Nation will be far better served.

EXHIBIT 1

"I THINK I'VE JUST LISTENED TO THE MOST IMPORTANT SPEECH OF MY LIFETIME"—IT MAY WELL BE JUST THAT

The crowd of 1200 at M.I.T.'s Kresge Auditorium March 4th was shifting and restless when Harvard biologist George Wald rose to speak.

Students and professors there as a part of the "March 4 movement" protesting the misuse of science were disturbed at the lack of focus in the day's numerous panel discussions and speeches.

The 1967 Nobel prize winner in physiology and medicine provided a focus.

As in his popular lectures at Harvard, Wald talked extemporaneously, his head back, his eyes almost closed. His words had an electric effect.

A hush fell over the audience, broken just once by sustained applause midway in the speech, and climaxed by a prolonged standing ovation at its conclusion.

Two Boston Globe staffers, reporter Crocker Snow Jr. and editorial writer James G. Crowley, covered the M.I.T. meeting, returned to the office independently of each other and each told an editor, "I think I've just listened to the most important speech of my lifetime."

All of you know that in the last couple of years there has been student unrest breaking at times into violence in many parts of the world: in England, Germany, Italy, Spain, Mexico and needless to say, in many parts of this country. There as been a great deal of discussion as to what it all means. Perfectly clearly it means something different in Mexico from what it does in France, and something different in France from what it does in Tokyo, and something different in Tokyo from what it does in this country. Yet unless we are to assume that students have gone crazy all over the world, or that they have just decided that it's the thing to do, there must be some common meaning.

I don't need to go so far afield to look for that meaning. I am a teacher, and at Harvard, I have a class of about 350 students—men and women—most of them freshmen and sophomores. Over these past few years I have felt increasingly that something is terribly wrong—and this year ever so much more than last. Something has gone sour, in teaching and in learning. It's almost as though there were a widespread feeling that education has become irrelevant.

A lecture is much more of a dialogue than many of you probably appreciate. As you lecture, you keep watching the faces; and information keeps coming back to you all the time. I began to feel, particularly this year, that I was missing much of what was coming back. I tried asking the students, but they didn't or couldn't help me very much.

But I think I know what's the matter, even a little better than they do. I think that this whole generation of students is beset with a profound uneasiness. I don't think that they have yet quite defined its source. I think I understand the reasons for their uneasiness even better than they do. What is more, I share their uneasiness.

What's bothering those students? Some of them tell you it's the Vietnam War. I think the Vietnam War is the most shameful episode in the whole of American history. The

concept of War Crimes is an American invention. We've committed many War Crimes in Vietnam; but I'll tell you something interesting about that. We were committing War Crimes in World War II, even before the Nuremberg trials were held and the principle of war crimes stated. The saturation bombing of German cities was a War Crime. Dropping atom bombs on Hiroshima and Nagasaki was a War Crime. If we had lost the war, some of our leaders might have had to answer for those actions.

I've gone through all of that history lately, and I find that there's a gimmick in it. It isn't written out, but I think we established it by precedent. That gimmick is that if one can allege that one is repelling or retaliating for an aggression—after that everything goes. And you see we are living in a world in which all wars are wars of defense. All War Departments are now Defense Departments. This is all part of the doubt talk of our time. The aggressor is always on the other side. And I suppose this is why our ex-Secretary of State, Dean Rusk—a man in whom repetition takes the place of reason, and stubbornness takes the place of character—went to such pains to insist, as he still insists, that in Vietnam we are repelling an aggression. And if that's what we are doing—so runs the doctrine—anything goes. If the concept of war crimes is ever to mean anything, they will have to be defined as categories of acts, regardless of alleged provocation. But that isn't so now.

I think we've lost that war, as a lot of other people think, too. The Vietnamese have a secret weapon. It's their willingness to die, beyond our willness to kill. In effect they've been saying, you can kill us, but you'll have to kill a lot of us, you may have to kill all of us. And thank heavens, we are not yet ready to do that.

Yet we have come a long way—far enough to sicken many Americans, far enough even to sicken our fighting men. Far enough so that our national symbols have gone sour. How many of you can sing about "the rockets' red glare, bombs bursting in air" without thinking, those are *our* bombs and *our* rockets bursting over South Vietnamese villages? When those words were written, we were a people struggling for freedom against oppression. Now we are supporting real or thinly disguised military dictatorships all over the world, helping them to control and repress peoples struggling for their freedom.

But that Vietnam War, shameful and terrible as it is, seems to me only an immediate incident in a much larger and more stubborn situation.

Part of my trouble with students is that almost all the students I teach were born since World War II. Just after World War II, a series of new and abnormal procedures came into American life. We regarded them at the time as temporary aberrations. We thought we would get back to normal American life some day. But those procedures have stayed with us now for more than 20 years, and those students of mine have never known anything else. They think those things are normal. Students think we've always had a Pentagon, that we have always had a big army, and that we always had a draft. But those are all new things in American life; and I think that they are incompatible with what America meant before.

How many of you realize that just before World War II the entire American army including the Air Force numbered 139,000 men? Then World War II started, but we weren't yet in it; and seeing that there was great trouble in the world, we doubled this army to 268,000 men. Then in World War II it got to be 8 million. And then World War II came to an end, and we prepared to go back to a peacetime army somewhat as the American army had always been before. And indeed in 1950—you think about 1950, our international commitments, the Cold War, the

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"Seward's folly," and that figure of \$7.2 million was arrived at to repay the Russian Government for the expense incurred in sending its two war fleets overseas to our shores to demonstrate its support of the Union and as a warning that any armed intervention by France and Great Britain would lead to a conflict with Russia.

Until recent years the Russian leaders have always demonstrated friendship to the United States. Historically, over hundreds of years Russia has not been an aggressor nation. Now the opportunity seems at hand to achieve an understanding with the leaders of the Kremlin for a nuclear arms limitation. We should grasp it.

A defeat of the ABM proposal by the Senate will be helpful to attain the end and advance the hope of a treaty to limit deployment of nuclear weapons. Despite what we have heard earlier today, I predict we in the Senate will defeat President Nixon's ABM proposal. However, if he should win by a margin of one, two, or even five, which is improbable, it would be a pyrrhic "victory" for the administration, and would not be helpful.

Pending achievement of an agreement for talks which might lead to a nuclear limitation treaty it should be unthinkable for us to even consider deployment of a safeguard system at bases in Montana and North Dakota.

If, however, such deployment is undertaken for any reason let it be at Kwajalein Island instead of within the borders of the United States close to Canada.

I am confident that if there should be a vote this week or next week or 4 weeks from now on the ABM proposal, the Senate would demonstrate its wisdom by defeating the proposal.

Mr. President, I yield the floor.

ABM-NONTHINK

Mr. FANNIN. Mr. President, I have listened and participated in the debate that has gone on sporadically for some time now concerning the deployment of the antiballistic-missile system.

This issue, as I have said before, transcends party loyalties and pivots on the more basic issue of the necessity to defend the Nation. Obviously good men can have honest differences of opinion over the best way to accomplish the goal. My difficulty comes when there is either deliberate or unconscious obscuring of the goals.

We have heard it parroted over and over that the money we save on the ABM we can then put to use in the cities, or put to work solving more pressing domestic needs.

One side says that if we do not defend the country there is little need to worry about the cities for they will not then be worth spending money to preserve.

The other side says if we do not solve the problems of the cities there will be little need to defend the country.

I find myself more sympathetic to the first viewpoint, because of the better chance for survival in that direction. The President himself has pointed out that if we make a mistake in favor of the ABM we lose some money; if we make a mistake against the ABM we lose the country.

This argument, I realize, is apparently not a very persuasive one in the eyes of ABM opponents. I understand their opposition to the ABM centers around the idea that we are safer by negotiating an arms freeze, and presumably an arms freeze would, in their estimation, be more difficult to negotiate if we had an effective ABM. The principal weakness of this reasoning is that it speculates on the possibility of Russian willingness to negotiate and abide by agreements in good faith, and ignores the evidence that the Soviets abide by agreements only when it continues to suit their national purpose to do so. I am aware that some members of the Foreign Relations Committee do not agree with my assessment of their probable behavior. Several colleagues on that committee seem to regard foreign relations as some kind of mystical realm into which the privileged few may tread. A noted Senator has been most generous in his criticism of the Vice President whom he considers to have neither the "background nor experience" to speak on foreign policy.

It is my intention as the debate goes along within a day or two to inject some material regarding the Soviets that indicates their present intentions along the foreign policy line, and perhaps then the Senator from Arkansas can give us his highly valued opinion.

For today, however, I would like to examine recurring phenomena which I call the ABM-nonthink.

This affliction is not limited to politicians or scientists or jurists. It seems to strike each profession with equanimity. I first noted it when I received three copies of the same anti-ABM speech from different sources.

The speech to which I refer is one delivered, apparently extemporaneously, to a group of scientists and students at the Massachusetts Institute of Technology by Dr. George Wald, on March 4, 1969.

In one instance the speech was entitled "A Generation in Search of A Future." In another reprint is was called, with rather understated modesty, "the most important speech of my lifetime." That remark was reportedly uttered by two staffers of the Boston Globe who returned to the office after covering the meeting, and independently each told an editor, "I think I've just listened to the most important speech of my lifetime."

Certainly this is an amazing instance of clairvoyance and worthy of further investigation in its own right.

So what was pronounced in this amazingly important speech? I believe it, along with a couple other examples which I shall cite, is one of the prime instances of the ABM-nonthink—a condition brought on by approaching the subject with a completely closed mind, which causes the person afflicted to seize upon the opposition's key argument and use it upon himself.

First, note Dr. Wald's restrained and dispassionate style as he talks of one of the most esteemed Members of the Senate:

A few months ago Senator Richard Russell of Georgia ended a speech in the Senate with the words: "If we have to start over again

with another Adam and Eve, I want them to be Americans; and I want them on this continent and not in Europe."

Continuing to quote Dr. Wald—

Now that was a United States Senator holding a patriotic speech. Well, here is a Nobel Laureate who thinks that those words are criminally insane.

The reprint notes there was prolonged applause at this point.

I should like to point out that the distinguished Senator from Georgia, who served the Nation outstandingly as chairman of the Armed Services Committee and continues to serve as chairman of the Appropriations Committee, has differed greatly from Dr. Wald in that he has always been a model of restraint. Far from questioning the Senator's sanity, I am sure the great majority of Americans would be absolutely appalled at Dr. Wald's unbecoming immodesty.

Another point from this "most important speech" in these Boston Globe writers' lifetime concerns the statistical probability of a nuclear war. Dr. Wald, it should be noted, is a doctor of biology. That becomes rather abundantly clear when he ventures into the field of statistics.

The doctor quotes another nonstatistician friend of his—a professor of government at Harvard—on the probability of a nuclear war. His friend is reported to have replied that given the present situation the odds for an all-out nuclear war are around 2 percent per year.

The good biological doctor seizes upon this and says:

Anybody can do the simple calculation that shows that 2 percent per year means that the chance of having that full-scale nuclear war by 1990 is about one in three, and by 2000 it is about 50-50.

Perhaps anybody can do the simple calculation, which I presume is multiplying 2 percent by the number of years, but that does not give Dr. Wald a probability figure. It seems to escape the academician that the nuclear odds, under a given fixed assumed situation, remain at 2 percent per year, just as the odds on any given flip of the coin are always 50-50 heads or tails.

But the real nonthink comes near the end of this work in which the doctor contradicts himself in the space of exactly two sentences. He opines that all nuclear weapons everywhere must be got rid of and says:

The only use for an atom bomb is to keep somebody else from using one.

And immediately following that statement says:

It can give us no protection . . .

Mr. President, I admit to being unable to understand all the labyrinthine ways of academics, but I do think I am able to understand plain English. It seems to me that "keeping somebody else from using one"—a nuclear weapon—is some degree of "protection."

The doctor goes on to state that—

Nuclear weapons offer us nothing but a balance of terror; and a balance of terror is still terror.

That is all quite true, I suppose, but what is the alternative that Dr. Wald

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would leave both sides with no more real security than each has now.

After both sides have anti-ballistic-missile systems, we may rest assured that the race will then start all over again to produce new, more expensive, and more sophisticated missiles than can penetrate the antimissile systems. After another costly race is over, there is then every reason to believe that the balance of power will settle at the same point where it now rests.

Mr. President, the appropriation provided for in the bill under consideration would be the first step in a boondoggle that would cost the taxpayers at least \$12 billion and perhaps as much as \$100 billion or more. The Pentagon estimates the cost of the Safeguard ABM at \$7 billion. This, just to protect two ICBM sites near Malmstrom, Mont., and Grand Forks, N. Dak. Experience of the past 20 years has taught us that weapons systems consistently cost 300 to 700 percent more than their original estimates. Once we permit this outrageous expenditure, we may rest assured that in short order Pentagon officials will be asking for money for a so-called thick system.

It is unconscionable to squander taxpayers' money on this enormous boondoggle. The days of unquestioning approval of money for pet projects of the Pentagon are behind us.

Have the generals of the Joint Chiefs of Staff and other proponents of the ABM never heard of the cost-effectiveness ratio of the Maginot Line or the Great Wall of China? Giving the generals whatever they want is a luxury we simply can no longer afford. The deployment of an ABM system, like our involvement in the ugly civil war in South Vietnam, will lead to ever-increasing expenditures that will further distort our priorities, cause more inflation, higher taxes, and deterioration of our economy.

There are extremely heavy demands on our limited resources. Problems which have been set aside for too many years require immediate solutions—poverty, health, education, food for hungry children, law enforcement, and protection of our environment, to name a few.

It is clear that deployment of the ABM will result in a squandering of national resources and treasure and will actually subtract from our national security rather than strengthen it.

The appropriation of billions of dollars for deployment of ABM missiles, first termed "Sentinel" and then renamed "Safeguard" when there was an outcry against deployment of ABM in Hawaii, Seattle, Los Angeles, Boston, and elsewhere, would be a decision that would haunt the Nation for decades to come.

Mr. President, it was more than a coincidence that Washington, D.C., which has no Senators and Representatives in Congress to voice strong protests, as was done by every Representative in the Congress from areas previously selected, was chosen as the one city in the east for ABM deployment.

That public relations pipsqueak who conceived the name Safeguard to replace Sentinel did not refer to Washington, D.C., by name. His Pentagonese phrase is

"National Command Authority," a new euphemism for the District of Columbia.

As the city selected for the ABM, it was contemplated that 250 acres of land would be purchased in Washington, D.C., for its deployment. When the Sentinel was proposed, there was talk of about 250 acres of land close to Los Angeles. It was ascertained that the cheapest land there would cost from \$100,000 to \$250,000 an acre.

This proposal contemplates a reckless expenditure of public funds to spend billions of dollars in construction and deployment of the ABM in various places in our country. We should first seek to negotiate a treaty with leaders of the Soviet Union limiting or banning altogether the deployment of ABM's. It is very evident that our tremendous and superior offensive power is our best defense against any aggression from the Soviet Union. Leaders of the Kremlin are well aware of our superiority. They certainly know that as matters stand, no matter how powerful or unexpected an attempted nuclear Pearl Harbor might be, we have the capacity with our Polaris submarines, to say nothing of our Strategic Air Force and Minuteman missiles, to obliterate every military base and every city in the Soviet Union in a matter of but a few hours.

Very definitely, I maintain that the leaders of the Kremlin know it is to their advantage to negotiate with us at this time to either freeze or reduce ABM deployment.

We should give top priority to seeking nuclear arms control and reduction by mutual agreement.

To those few rightwing extremists in our country, members of splinter groups, lunatic rightwing groups, such as the John Birch Society and the so-called Liberty Lobby, who claim that the Communists have never kept their agreements, we present the fact that the Limited Nuclear Test Ban Treaty achieved by Ambassador Averell Harriman and the late, great President John F. Kennedy has been scrupulously complied with by both the Soviet Union and our Nation. In fact, since that treaty was entered into, only a small number of underground tests have been undertaken by both parties. Very definitely an arms control agreement should be sought by us and it is the best means of achieving meaningful security at this time. Furthermore, we do know that if any threat to our Nation should become more serious a few years from now, we can readily give top priority to increasing offensive weapons to meet such threat.

We should be considering arms cutbacks, not increases; encouraging disarmament negotiations, not a new and accelerated arms race. The authorization of the Safeguard system would be a tragedy of enormous proportions.

It is of the utmost importance that the President give topmost priority to seeking and achieving a nuclear missile limitation agreement with the leaders of the Soviet Union.

The Foreign Minister of the Soviet Union, Andrei Gromyko, late last week made a strong bid for closer and more

friendly relations between his nation and the United States. He stated that his government was ready for strategic arms limitations negotiations with Washington and he even suggested the desirability of a summit meeting with President Nixon seeking to achieve a treaty limiting nuclear missiles.

President Nixon should withdraw his ABM proposal to deploy Safeguard missiles and seek talks relating to limiting nuclear missiles. Foreign Minister Gromyko stated:

We have noticed President Nixon's statement that after a period of confrontation, the era of negotiations has arrived.

In view of the fact he explicitly stated:

We favor the good development of relations with the United States.

Our official and immediate response should be to seek a meeting between representatives of our two countries, the only two great nuclear powers, to confer together on the details of a treaty regarding nuclear missile limitation.

The PRESIDING OFFICER. The Senator's time has expired.

Mr. YOUNG of Ohio. I ask unanimous consent to proceed for 10 additional minutes.

The PRESIDING OFFICER. Is there objection? Without objection, it is so ordered.

Mr. YOUNG of Ohio. If the ABM proposal of President Nixon is not withdrawn then, very definitely, it should be defeated by a vote in the Senate. I am opposed to any compromise. It is fearful to contemplate what the situation may be a year hence if we proceed with the deployment of the so-called Safeguard missile as proposed despite the opportunity now before us for friendly talks with leaders of the Soviet Union who were our wartime allies in World War II.

We know that historically Russians have always been our friends. We know that more than a hundred years ago—in 1862 to be exact—when our Nation was torn by the Civil War, and when in the darkest period for the Union in 1862 at a time France and Great Britain were about to recognize the Confederacy that the Government of Russia sent two of its naval squadrons on the long voyage to our shores as a gesture of friendship to the Union, and a squadron of Russian warships entered San Francisco Bay, and a second squadron came up the Potomac to Washington. Great Britain and France backed down, largely and probably entirely because of this gesture of friendship from the Russians at that time, and the talk of recognizing the Confederacy no longer existed.

In a few years, fortunately, that terrible War Between the States was over, and at that time, in 1867, Secretary Seward proposed the purchase of Alaska. It was considered that Alaska was an ice house, of no use nor value whatever to the United States. The czarist Russian Government had spent \$7.2 million during the Civil War in sending their fleet here, and to reimburse the Russians for that expenditure, students of American history know that Secretary Seward entered into what at that time was termed

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the end of which is not in sight. This could well compromise the future security and well-being of the Nation, indeed of world peace.

I was one of seven Senators to vote against this proposed boondoggle in the Armed Services Committee. I am proud to have joined with my colleagues, the distinguished senior Senator from Missouri (Mr. SYMINGTON) and the distinguished junior Senator from Hawaii (Mr. INOUYE), in the minority report on the Safeguard ABM system.

Throughout the committee hearings, witnesses who testified for deployment of the system devoted most of their time to emphasizing their fears of the Soviet Union. Secretary of Defense Laird at first tried to frighten the country into believing that the Soviets "are going for a first-strike capability." He was compelled to revise his remarks in subsequent testimony.

"First-strike capability" in any language means the ability of one nation to destroy another's offensive missiles so completely that the second nation would be unable to retaliate. Secretary Laird's implication was that without the Safeguard system our ability to retaliate could be wiped out in a first strike.

This argument always was and still is unsupportable. It is incredible to assert that the Soviet Union or any other nuclear power could with one blow destroy all our Minuteman missiles, all our SAC bombers, all our Polaris and Poseidon submarines, all our intermediate missiles based in Europe. That is unthinkable, unsupportable, and impossible.

Furthermore, for years Defense Department officials have assured Americans that if the Russians should strike first we possess a second-strike capability with our Minuteman missiles in underground sites that would inflict unacceptable damage upon the Soviet Union. We were assured that the hardened sites were adequate and that we would not need additional protection for our intercontinental ballistic missiles.

Were we being misled then, or now? The argument that we need more protection of our land-based ICBM's completely ignores the fact that we have at this time 41 Polaris submarines with more than 656 ICBM's which cannot be destroyed by a first strike because they are underwater and moving all the time. These missiles have a maximum range of 2,875 miles and no area in the vast land mass of the Soviet Union or Communist China is safe from devastation from missiles fired from these submarines.

Secretary Laird hinted that the Polaris fleet might be neutralized in the future, but he was unable to support that veiled assertion with evidence. Furthermore, our own intelligence apparatus declines to support his scary talk of all our nuclear power being simultaneously in jeopardy at some future date.

The Poseidon program will soon increase our offensive power to 4,000 nuclear warheads capable of being fired from mobile bases under the oceans and seas of the world, as well as on the surface. If such a second-strike capacity will not deter an attack, nothing will. Placing the Safeguard ABM around a

small share of our land-based missiles will certainly not add one iota of credibility to our deterrent capacity.

During the past decade we have built up the strength of our strategic forces so that each individual component alone—our ICBM's, SAC bombers, and the Polaris and Poseidon fleets—could deliver on target more than the minimum retaliatory destruction required for deterrence. Our combined strategic bombers and land-based missile forces by themselves assure survival of one or the other from attack, not to mention our missiles on submarines throughout the oceans and seas of the world.

Our only real defense against the threat of a nuclear attack is the deterrence of our overwhelming offensive forces. Our tremendous potential offense is our best defense and has been all along. We must keep our offensive power so far ahead of the Russian and Chinese defenses that it will remain perfectly clear and obvious to the Soviet and Chinese leadership that a first strike against us will trigger an unbearable response.

At the present time, we have an overwhelming offensive capacity, superior to that of the Soviet Union. For its part, Communist China has only the crudest capacity and is not able to deliver any missiles on target in this country at this time, nor will it be able to do so before 1976 or 1978 at the earliest.

Now, Secretary Laird is saying that by first-strike capability he means only the power to attack our Minuteman missiles, and Safeguard, he says, is necessary to prevent that. As the minority report points out, Dr. Wolfgang Panofsky, one of the universally respected experts in this field, in an address last month stated:

If the threat to Minuteman grows at the rate projected by the Defense Department, and if Minuteman became vulnerable at a certain time several years hence, then if the Safeguard system were installed and if it functioned perfectly, then the Minuteman would be just as vulnerable as before only a few months later.

In other words, the Soviets could offset any protection offered by Safeguard simply with a few additional months' production of offensive missiles.

Mr. President, there is also the serious question as to the actual capability of the proposed ABM. In his testimony before the Armed Services Committee, Dr. Herbert F. York, whom Senators will recall was Director of Defense Research and Engineering in the Office of the Secretary of Defense from 1958 to 1961, and one of the Nation's foremost experts on defense weaponry stated:

I continue to have the gravest doubts as to the capability of any ABM system I have heard of, whether or not the problem has been defined into being 'easy' and whether or not it 'works' on a test range. I stress that I am not just talking about some percentage failure inherent in the mathematical distribution of miss distances, nor statistically predictable failures in system components, but rather about possible catastrophic failure in which at the moment of truth either the system doesn't fire at all, or all interceptions fail for some unforeseen reason.

The fact is that more than \$23 billion of taxpayers' money has been spent since

World War II on missile systems that either were never finished or were out of service on completion because of obsolescence. More than \$5 billion was spent on the Nike-Ajax missile system, the Nike-Zeus, and following that the Nike X. This was taxpayers' money down the drain, utterly wasted. There are missile sites around my home city of Cleveland, and elsewhere in this country, which are utterly useless. The men servicing them are merely sitting around waiting for the bomb to drop. Experience keeps a dear school, but, as Benjamin Franklin said, "Fools learn no other way." It is high time we profit by our mistakes of the past and not perpetrate further boondoggles such as proceeding with the Safeguard ABM system. Patrick Henry on an historic occasion said:

There is but one lamp by which my feet are guided, and that is the lamp of experience. I know of no way to judge the future but by the past.

Furthermore, Safeguard was originally designed for the "thin" defense of cities against Red China. It was originally called Sentinel. However, an outcry followed President Nixon's proposal of the Sentinel, an outcry that came not only from Illinois and California, but also from the two Senators from Hawaii, the two Senators from the State of Washington, and, of course, an outcry from Massachusetts. Thus, the name Sentinel was changed. Some clever public relations man in the Pentagon changed the name to Safeguard. Its components are basically the same. The anti-Chinese rationale has been abandoned by no less an authority in the administration than the President himself. The argument that Safeguard ABM's around two of our ICBM sites would protect us from a Soviet nuclear attack is only slightly less ridiculous. The fact is—and the Russians know it—that if we were attacked by the Soviet Union, we could destroy the Soviet Union some 50 times over.

Our ICBM's can hit their targets. I remember hearing the distinguished Senator from Arizona (Mr. GOLDWATER) state the if the target of one of our ICBM's was the men's room in the Kremlin—whoosh, and there would be no more men's room. That illustrates the power and the accuracy of our offensive capability. No one can take that away from this great Nation.

Mr. President, perhaps the worst implication of the ABM is the fact that it will help to continue the deception that there is a technical solution to the dilemma of the nuclear age. This false hope could be extremely dangerous if it diverted us from efforts to find a solution in the only place where it may be found—in a political and diplomatic search for peace combined with arms limitation and disarmament measures.

Should we proceed to build this ABM system, the leaders of the Soviet Union are almost certain to respond with increases in offensive strength which would negate any advantage from ABM deployment. By plunging ahead with an ABM system, we Americans run the risk of escalating the arms race to a fantastically high and unbelievably costly plateau. This upward spiral of the arms race

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The moral aspect of the matter is important. I believe it is significant and significant far beyond the costs or comparative costs of any weapons system.

I associate myself with the very fine presentation made by the Senator from Vermont and commend him for the manner in which it was done.

Mr. HANSEN. Mr. President, will the Senator yield?

Mr. PROUTY. I yield.

Mr. HANSEN. Mr. President, I am sure I am not the first to observe that during the days we have been debating the Safeguard system, we have certainly heard some very learned and knowledgeable people explore all the facets and ramifications of this very complicated issue.

I have no further knowledge to bring to the Chamber. However, I must say that as I reflect upon the role of our country in the context of all the nations of the world, it seems to me that we have a twofold objective—one, to assure the continuation of freedom in this country, and the other to do all we possibly can do to insure greater world peace.

I think the distinguished Senator from Vermont this afternoon has made a very worthwhile contribution in analyzing the statistics that have been before us and in exploring further in the context of those statistics the motives of not only this country, but the other nations of the world as well. These are difficult assignments. It is hard to say what someone else may do if we do something. We know that the distinguished Senator from Washington gave a very erudite presentation insofar as the motives of the Soviet Union are concerned. These are difficult problems to mull over. How does one determine what another man or another nation may think? It takes a great deal of thoughtful, sober consideration and reflection.

I am certain that the distinguished Senator from Vermont has made a very worthwhile contribution in helping all of us, analyze these complex and difficult problems and in trying to arrive at a reasoned, sustainable position and conclusion. It seems to me that the dispassionate manner in which the distinguished Senator from Vermont has gone about this task will serve us all well. I suspect that the decision at which he has arrived will serve as a useful guide to many who yet may not have fully made up their minds in seeing how we may best serve the purposes of America, in protecting the freedom we have and assuring that there shall be reasonable expectation on the part of other peoples in other nations of the world to anticipate sometimes a fuller sense of freedom than they now have; and, secondly, to look to the security of America, because today more than ever I believe all nations of the world look to America for guidance on how they may implement a national course of action which will result in achievement nationally of the goals that we have insofar as their own countries are concerned.

With that in mind, I pay my respects to the very worthwhile contribution that has been made by the distinguished Senator from Vermont.

Mr. PROUTY. I am very grateful to the Senator.

Mr. HRUSKA. Mr. President, will the Senator yield?

Mr. PROUTY. I yield.

Mr. HRUSKA. Mr. President, today's presentation of the junior Senator from Vermont was not necessary to bring to the Members of this body the awareness that the Senator is a man of independence in his thought, of thoroughness in his analysis, and of great courage to speak out at proper and strategic times. Certainly, on many other occasions we have had the benefit of the sensible thoughts of the Senator. Today's presentation is simply a reaffirmation of what we have come to expect.

The presentation is very thorough. It is dispassionate, and it is logical. It certainly is in keeping with the proposition that President Nixon has often emphasized, and I quote: "I believe it is essential for the national security and it is essential to avoid putting an American President, either this President or the next President, in the position where the United States would be second rather than first or at least equal to any potential enemy."

Certainly, the decision to deploy a limited ABM system was made advisedly and deliberately by the Commander in Chief of our military forces.

While the Senator has carefully covered several reasons for supporting the President, there is one of particular good sense and appeal that has not been stressed enough. That is his statement that his vote on the immediate issue will not be considered by him, and should not be considered by anyone else, to lock him irrevocably in a position of support for the ABM and its continued deployment. He wants to keep his options open. That is the position of many of us. I believe it is a sound position.

As was pointed out by the Senator from Texas in debate last week, those who would follow the "no" scientists on this issue would be locked in their position because there would be nothing upon which future options could be based. Those of us who would follow the "yes" scientists, those that say Safeguard can be made to do the job, would be holding our options open. If there were problems in the development of this weapons system or if there were favorable results in negotiating armament limitations or restrictions, then the decision that we make on this issue can be modified accordingly.

This is not the first time that this body or the United States has been called upon to make a choice between "no" scientists and the "yes" scientists. That choice was debated very thoroughly in regard to development and production of the A-bomb. At that time, thank goodness, America had the good commonsense to follow those who said: "Yes; let's develop it, and let's hold it as an additional deterrent to those who would do us irreparable damage."

So I commend the Senator for so constructively adding to this debate. It is my hope that the position he so ably advocated will prevail, when the votes on this issue are recorded.

Mr. PROUTY. I thank the Senator.

Mr. THURMOND. Mr. President, will the Senator yield?

Mr. PROUTY. I yield.

Mr. THURMOND. Mr. President, I commend the able Senator for the magnificent address he has delivered today in favor of the Safeguard ABM system.

I wish to read one sentence from "Military Strategy," by V. D. Sokolovsky, Marshal of the Soviet Union. This is the third edition, for 1968:

In our country the problem of eliminating rockets in flight has been successfully solved by Soviet science and technology. Thus the task of warding off strikes of enemy missiles has become quite possible.

It is clear, Mr. President, that the Russians feel they have solved the ABM system. They have built a system. They built one in 1962. They have been working on it since; they have improved it. They now have two systems in their country. We have one. They are at least 5 years ahead of us.

I shall probably speak more in detail about General Sokolovsky's book tomorrow. But it is clear from this book that the Russians have plans now for a first strike. They also expect to have the capability soon. So it is urgent that we go forward and build the ABM and not delay a single day.

Again, I compliment the distinguished Senator from Vermont.

Mr. PROUTY. I thank the Senator.

Mr. ALLOTT. Mr. President, will the Senator yield to me for just a moment? I know he is under the press of time.

Mr. PROUTY. I yield to the Senator from Colorado.

Mr. ALLOTT. I join my colleagues in praising the remarks of the Senator from Vermont today in support of the Safeguard system. Of course, I think it is characteristic that the distinguished Senator from Vermont would take his time and deliberate and listen to all the arguments, both for and against before taking a position on as important a matter as this.

Although I was not able to be present, I have read his speech. I feel that the points he has made and the reasoned logic he has used to support these points in his speech constitute one of the high marks of this debate. It is a speech which appeals to my own sense of reason in this matter, and one which I believe will appeal to many Members of the Senate. I think the Senator is to be complimented very greatly.

Mr. PROUTY. I am grateful to the Senator from Colorado.

I yield the floor.

The PRESIDING OFFICER (Mr. DOLE in the chair). Under the previous order, the Senator from Ohio (Mr. YOUNG) is recognized.

THE SAFEGUARD ABM SYSTEM
Mr. YOUNG of Ohio. Mr. President, the administration's decision to proceed with the deployment of an ABM system is one of the most crucial matters with the most far-reaching implications to come before Congress in this decade. The Safeguard ABM supposedly to protect our offensive missile silos will start the Nation down a multibillion-dollar road,

There being no objection, the editorial was ordered to be printed in the RECORD, as follows:

SENATE SHOULD VOTE "Yes" ON ABM

Issue: Now that the ABM debate has finally begun in the U.S. Senate, what are the basic questions confronting our lawmakers?

Millions of words have already been uttered in the long and tiresome debate over the proposed Safeguard ABM system and thousands more will be uttered before the U.S. Senate gets around to voting "yes" or "no" later this month.

Strip away all the verbiage, however, and it turns out that the senators fundamentally are facing two related questions:

Are they will or unwilling to give the President of the United States the bargaining strength which he believes that he needs in order to negotiate an arms limitation agreement with the Soviet Union?

Keeping in mind that the arms control talks may fail, do they or do they not think it is worth investing less than 1% of our total defense budget to keep open the option of building a system of defense against the kind of missile threat which the Soviet Union may pose during the 1970s?

Members of the Senate should think very carefully before giving negative answers to these questions.

Although the fact has tended to become obscured in the heat and complexity of the propaganda battle over the ABM, Congress is not being asked to commit itself now to the entire \$10.8 billion Safeguard system. It is being asked to approve a \$750 million first installment for construction of two prototype installations.

Additional congressional approval will be necessary for work to proceed beyond these first two installations. And, as the Nixon Administration has made quite clear, the entire system need never be built if Washington and Moscow can agree to freeze or limit deployment of offensive and defensive missiles.

If the polls are any indication, a majority of those Americans who have made up their minds on the ABM are in favor of it.

Critics of Safeguard have mounted a massive, well-financed campaign to create the impression that the scientific community is overwhelmingly against the ABM.

The fact is that disagreement among scientists is as widespread as it is among laymen. Those who favor Safeguard include Dr. Lee DuBridge, former president of Caltech, and Dr. Frederick Seitz, president of the National Academy of Sciences. Equally prominent scientists are to be found among the opponents.

The Times suggests that members of Congress should resolve any doubts in their own minds in favor of the national security and a strong American negotiating posture.

Mr. PROUTY. Mr. President, I thank the Senator from California.

Mr. President, I yield now to the Senator from Colorado.

The PRESIDING OFFICER. The Senator from Colorado is recognized.

Mr. DOMINICK. Mr. President, I have had the honor of serving with the distinguished junior Senator from Vermont on three committees since I have been a Member of the Senate. Invariably, the Senator makes a very careful and detailed analysis of the problem, whether it be on the Committee on Labor and Public Welfare, the Committee on Commerce, or the Committee on the District of Columbia.

The Senator has done a very fine job here today.

One of the things that I believe cannot be overemphasized is the other button

concept which he produced in his speech. It is a matter which I have spoken on both in speeches and on the radio and television.

That concerns the awful, awesome dilemma that any President would be in in the event of an unauthorized, accidental launching of a nuclear missile targeted on our country, where the President, whomever he may be, did not have an antinuclear capability.

The President would be in an impossible situation, a situation in which we should never put any President, in my opinion, the situation in which he must determine in his own mind whether he was going to let the thing hit and explode and annihilate millions of Americans without doing a single thing, or whether he was going to automatically empty our silo in the general area from which the missiles had come.

We remember in reading Neville Shute's "On The Beach," that the accidental launching was done in one of the Middle Eastern countries. We had no other alternative but to fire at the Soviet Union. They started, and then the Chinese got going. The result was a holocaust before we got through.

This is the type situation in which we could put a President of the United States unless we give him another alternative in the decision he would have to make.

It is my hope that we can start taking steps to give him the other button, as the distinguished Senator from Vermont so wisely and aptly put it in his speech.

I congratulate the Senator. I am delighted that he came to this conclusion. I hope that his conclusion gets the maximum exposure as stated in his speech.

Mr. DOLE. Mr. President, will the Senator yield?

Mr. PROUTY. I yield.

Mr. DOLE. Mr. President, as a junior Member of the Senate, I commend the Senator from Vermont.

I have wrestled with this complex problem this year as a Senator and last year as a Member of the other body. I supported President Johnson's Sentinel system then because I felt he made the right decision considering all the circumstances.

The importance of the Senator's momentous speech today is not that his decision may tip the scales in favor of any point of view in the Senate, or for any President of the United States, but that his decision could well mean added security in the very highest and proper sense for all free people of the world.

The speech today by the Senator from Vermont, and the speech last week by the Senator from Washington (Mr. JACKSON), have been two of the highlights of this interesting, informative, and controversial debate.

After all the rhetoric, however, the issue is relatively simple. Either the President gets the tools he feels necessary to defend this Nation or he does not. Either this Nation will proceed to build a Safeguard system of missile defense or it will not. Either this Nation, ourselves included, has confidence in the judgment of the President of the United States or it does not.

There are arguments for and argu-

ments against. No argument, no matter how noble in motive, no matter how inspiring, nor how impassioned the delivery may have been, means much when compared with the paramount question involved. This question is, again, whether or not we have confidence in the judgment of the President of the United States. The Senator from Vermont has expressed this confidence and again, I express my appreciation for his outstanding statement of position.

Mr. BAKER. Mr. President, will the Senator yield?

Mr. PROUTY. I yield.

Mr. BAKER. Mr. President, I express my gratitude to the Senator from Vermont for an exquisitely constructed and excellent speech on what is obviously one of the most important subjects that has confronted the Senate for some years.

Most, if not all, of the points made by the distinguished Senator have been touched directly or obliquely in debates so far. Obviously, I believe no other Senator has pulled together all the pieces as rationally, as fully, or as logically as has the Senator.

I commend him.

There is an inference I draw from the remarks of the Senator, one that I believe has not been touched upon frequently in the debate, but is inevitably present in his remarks today. That is the moral role the United States of America with respect to its overall defense posture.

The United States prides itself on being the most moral and most concerned nation on earth. I think it is. We have concern for the future destiny of mankind.

It falls our lot on occasion to put ourselves in the place of the Russian and to think of how we might react to an attack by the United States. In that respect, I grew concerned when I heard debate to the effect that there is no need for a defensive system such as the Safeguard because the sufficient and extravagant deployment of intercontinental missiles such as the Minuteman and of the Polaris gives us such a degree of overkill than any other system is ill-advised and unnecessary and an economic waste.

It is not fitting that the moral nation on earth should assume an ICBM mentality and put all of its eggs in one offensive basket to assure its own capacity to annihilate Moscow and Russia and all of its citizenry.

If I were a citizen of the U.S.S.R. and of the city of Moscow and saw the United States reject the defensive button in favor of continuing to depend entirely on an offensive capability, I would be pretty upset about it, too.

I believe that putting ourselves in the Moscowite position and seeing a determination by the United States to assume a defense of its own continental facilities, a defense of its own credible deterrent, we can feel far surer of the prospects for intimate offensive arms limitation and the postponing or elimination of the prospect of nuclear holocaust than we can by rejecting Safeguard and relying on offensive capability pointed directly at the heartland of the Soviet Union.

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mediate relative status of the child adopted by citizens of the United States.

PFC. JOSEPH ANTHONY SNITKO

The bill (H.R. 1948) to confer U.S. citizenship posthumously upon Pfc. Joseph Anthony Snitko was considered, ordered to a third reading, read the third time, and passed.

Mr. MANSFIELD. Mr. President, I ask unanimous consent to have printed in the RECORD an excerpt from the report (No. 91-312), explaining the purposes of the bill.

There being no objection, the excerpt was ordered to be printed in the RECORD, as follows:

PURPOSE OF THE BILL

The purpose of the bill is to confer U.S. citizenship posthumously upon Pfc. Joseph Anthony Snitko.

ALEKSANDAR ZAMBELLI

The bill (H.R. 3166) for the relief of Aleksandar Zambelli was considered, ordered to a third reading, read the third time, and passed.

Mr. MANSFIELD. Mr. President, I ask unanimous consent to have printed in the RECORD an excerpt from the report (No. 91-313), explaining the purposes of the bill.

There being no objection, the excerpt was ordered to be printed in the RECORD, as follows:

PURPOSE OF THE BILL

The purpose of the bill is to enable Aleksandar Zambelli to file a petition for naturalization notwithstanding the provisions of section 313 of the Immigration and Nationality Act relating to one who was formerly a member of a proscribed organization.

RYSZARD STANISLAW OBACZ

The bill (H.R. 3167) for the relief of Ryszard Stanislaw Obacz was considered, ordered to a third reading, read the third time, and passed.

Mr. MANSFIELD. Mr. President, I ask unanimous consent to have printed in the RECORD an excerpt from the report (No. 91-314), explaining the purposes of the bill.

There being no objection, the excerpt was ordered to be printed in the RECORD, as follows:

PURPOSE OF THE BILL

The purpose of the bill is to enable Ryszard Stanislaw Obacz to file a petition for naturalization notwithstanding the provisions of section 313 of the Immigration and Nationality Act relating to one who was formerly a member of a proscribed organization.

YOLANDA FULGENCIO HUNTER

The bill (H.R. 3172) for the relief of Yolanda Fulgencio Hunter was considered, ordered to a third reading, read the third time, and passed.

Mr. MANSFIELD. Mr. President, I ask unanimous consent to have printed in the RECORD an excerpt from the report (No. 91-315), explaining the purposes of the bill.

There being no objection, the excerpt was ordered to be printed in the RECORD, as follows:

PURPOSE OF THE BILL

The purpose of the bill is to facilitate the entry into the United States in an immediate relative status of the alien child adopted by a U.S. citizen.

MARIA DA CONCEICAO EVARISTO

The bill (H.R. 3376) for the relief of Maria da Conceicao Evaristo was considered, ordered to a third reading, read the third time, and passed.

Mr. MANSFIELD. Mr. President, I ask unanimous consent to have printed in the RECORD an excerpt from the report (No. 91-316), explaining the purposes of the bill.

There being no objection, the excerpt was ordered to be printed in the RECORD, as follows:

PURPOSE OF THE BILL

The purpose of the bill is to waive the excluding provisions of existing law relating to one who is illiterate in behalf of Maria da Conceicao Evaristo. The bill provides for the posting of a bond as surety that the beneficiary will not become a public charge.

L. CPL. PETER M. NEE

The bill (H.R. 10060) for the relief of L. Cpl. Peter M. Nee (2465662) was considered, ordered to a third reading, read the third time, and passed.

Mr. MANSFIELD. Mr. President, I ask unanimous consent to have printed in the RECORD an excerpt from the report (No. 91-317), explaining the purposes of the bill.

There being no objection, the excerpt was ordered to be printed in the RECORD, as follows:

PURPOSE OF THE BILL

The purpose of the bill is to confer U.S. citizenship posthumously upon Lance Cpl. Peter M. Nee.

NIKOLAS GEORGE POLIZOS

The Senate proceeded to consider the bill (S. 1110) for the relief of Nikolas George Polizos, which had been reported from the Committee on the Judiciary, with an amendment, on page 1, line 6, after "June 16," strike out "1957, upon payment of the required visa fee. Upon the granting of permanent residence to such alien as provided for in this Act, the Secretary of State shall instruct the proper officer to deduct one number from the total number of immigrant visas and conditional entries which are made available to natives of the country of the alien's birth under paragraph (1) through (8) of section 203(a) of the Immigration and Nationality Act," and insert "1957.;" so as to make the bill read:

S. 1110

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That, for the purposes of the Immigration and Nationality Act, Nikolas George Polizos shall be held and considered to have been lawfully admitted to the United States for permanent residence as of June 16, 1957.

The amendment was agreed to.

The bill was ordered to be engrossed for a third reading, read the third time, and passed.

Mr. MANSFIELD. Mr. President, I ask unanimous consent to have printed in the RECORD an excerpt from the report (No. 91-318), explaining the purposes of the bill.

There being no objection, the excerpt was ordered to be printed in the RECORD, as follows:

PURPOSE OF THE BILL

The purpose of the bill, as amended, is to enable the beneficiary to file a petition for naturalization.

ORDER FOR RECOGNITION OF SENATOR YOUNG OF OHIO

Mr. MANSFIELD. Mr. President, I ask unanimous consent that the distinguished senior Senator from Ohio (Mr. YOUNG) may proceed for not to exceed 30 minutes at the conclusion of the remarks of the distinguished junior Senator from Vermont (Mr. PROUTY).

The VICE PRESIDENT. Without objection, it is so ordered.

THE DEATH OF HERBERT HOOVER, JR.

Mr. MANSFIELD. Mr. President, it was with sorrow and regret that I noted in the newspaper last week the passing of Herbert Hoover, Jr.

Mr. Hoover served as an Under Secretary of State during the Eisenhower administration. I found him to be a very kind, a very gentle, and a very understanding man. I had many contacts with him, and my relations with him were exceedingly good. He was never one to flash his own light. He was a man of extreme modesty and performed his duties with efficiency and with deflection.

I express my deep regret on the Nation's loss of this outstanding American and extend to his wife my condolences.

Mr. DIRKSEN. Mr. President, will the majority leader yield?

Mr. MANSFIELD. I yield.

Mr. DIRKSEN. Mr. President, I do not know how I missed the news with respect to Herbert Hoover, Jr. I came to know him quite well and had high esteem and great affection for him. He contributed much to the country and was indeed one of our solid citizens.

Together with others, I share the message of condolence to the family.

THE SAFEGUARD ABM SYSTEM—THE NEED FOR A CLOSED SESSION

Mr. SYMINGTON. Mr. President, for reasons that have never been clear, and even though the House has not yet started on its Army and Navy authorization hearings, it was apparently considered necessary to rush through the authorization and markup for the deployment of this Safeguard ABM system without any check at the Kwajalein Testing Range by the Senate as to whether the system was ready for deployment; and statements made on this floor in the debate last Friday demonstrated conclusively how unfortunate was all this haste from the standpoint of our future security and well-being.

Week", and inviting the Governors and mayors of State and local governments of the United States to issue similar proclamations.

DR. DIEGO AGUILAR ARANDA

The bill (S. 571) for the relief of Dr. Diego Aguilar Aranda was considered, ordered to be engrossed for a third reading, read the third time, and passed, as follows:

S. 571

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That, for the purposes of the Immigration and Nationality Act, Doctor Diego Aguilar Aranda shall be held and considered to have been lawfully admitted to the United States for permanent residence as of August 12, 1957.

JAMES F. WEGENER

The bill (H.R. 1828) to confer U.S. citizenship posthumously upon James F. Wegener was considered, ordered to a third reading, read the third time, and passed.

Mr. MANSFIELD. Mr. President, I ask unanimous consent to have printed in the RECORD an excerpt from the report (No. 91-303), explaining the purposes of the bill.

There being no objection, the excerpt was ordered to be printed in the RECORD, as follows:

PURPOSE OF THE BILL

The purpose of the bill is to confer U.S. citizenship posthumously upon James F. Wegener.

DUG FOO WONG

The bill (S. 2019) for the relief of Dug Foo Wong was considered, ordered to be engrossed for a third reading, read the third time, and passed, as follows:

S. 2019

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That, for the purposes of sections 203(a) (1) and 204 of the Immigration and Nationality Act, Dug Foo Wong shall be held and considered to be the natural-born alien son of Mr. and Mrs. Chun P. Chin, citizens of the United States: Provided, That the parents, brothers, or sisters of the said Dug Foo Wong shall not, by virtue of such relationship, be accorded any right, privilege, or status under the Immigration and Nationality Act.

WU HIP

The bill (S. 1963) for the relief of Wu Hip was considered, ordered to be engrossed for a third reading, read the third time, and passed, as follows:

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That, in the administration of the Immigration and Nationality Act, section 204(c), relating to the number of petitions which may be approved in behalf of orphans, shall be inapplicable in the case of petition filed in behalf of Wu Hip by Mr. and Mrs. Ralph A. Kelley, citizens of the United States.

DR. YAVUZ AYKENT

The bill (S. 1798) for the relief of Dr. Yavuz Aykent was considered, ordered

to be engrossed for a third reading, read the third time, and passed, as follows:

S. 1798

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That, for the purposes of the Immigration and Nationality Act, Doctor Yavuz Aykent shall be held and considered to have been lawfully admitted to the United States for permanent residence as of June 26, 1957, and the periods of time he has resided in the United States since that date shall be held and considered to meet the residence and physical presence requirements of section 316 of the Immigration and Nationality Act.

ANDREW CHU YANG

The bill (S. 1645) for the relief of Andrew Chu Yang was considered, ordered to be engrossed for a third reading, read the third time, and passed, as follows:

S. 1645

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That, in the administration of the Immigration and Nationality Act, Andrew Chu Yang may be classified as a child within the meaning of section 101(b) (1) (F) of such Act, upon approval of a petition filed in his behalf by Mr. and Mrs. Shiang Ping Yang, citizens of the United States, pursuant to section 204 of such Act: Provided, That no brothers or sisters of the said Andrew Chu Yang shall hereafter, by virtue of such relationship, be accorded any right, privilege, or status under the Immigration and Nationality Act.

DR. YILMAZ BILSEL

The bill (S. 1527) for the relief of Dr. Yilmaz Bilsel was considered, ordered to be engrossed for a third reading, read the third time, and passed, as follows:

S. 1527

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That, for the purposes of the Immigration and Nationality Act, Doctor Yilmaz Bilsel shall be held and considered to have been lawfully admitted to the United States for permanent residence as of June 24, 1958, and the periods of time he has resided in the United States since that date shall be held and considered to meet the residence and physical presence requirements of section 316 of the Immigration and Nationality Act.

Mr. MANSFIELD. Mr. President, I ask unanimous consent to have printed in the RECORD an excerpt from the report (No. 91-307), explaining the purposes of the bill.

There being no objection, the excerpt was ordered to be printed in the RECORD, as follows:

PURPOSE OF THE BILL

The purpose of the bill is to enable the beneficiary to file a petition for naturalization.

DR. ZILIIHA BILSEL

The bill (S. 1526) for the relief of Dr. Ziliha Bilsel was considered, ordered to be engrossed for a third reading, read the third time, and passed, as follows:

S. 1526

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That, for

the purposes of the Immigration and Nationality Act, Doctor Zeliha Bilsel shall be held and considered to have been lawfully admitted to the United States for permanent residence as of June 27, 1957, and the periods of time she has resided in the United States since that date shall be held and considered to meet the residence and physical presence requirements of section 316 of the Immigration and Nationality Act.

Mr. MANSFIELD. Mr. President, I ask unanimous consent to have printed in the RECORD an excerpt from the report (No. 91-308), explaining the purposes of the bill.

There being no objection, the excerpt was ordered to be printed in the RECORD, as follows:

PURPOSE OF THE BILL

The purpose of the bill is to enable the beneficiary to file a petition for naturalization.

RUEBEN ROSEN

The bill (H.R. 2890) for the relief of Rueben Rosen was considered, ordered to a third reading, read the third time, and passed.

Mr. MANSFIELD. Mr. President, I ask unanimous consent to have printed in the RECORD an excerpt from the report (No. 91-309), explaining the purposes of the bill.

There being no objection, the excerpt was ordered to be printed in the RECORD, as follows:

PURPOSE OF THE BILL

The purpose of the bill is to grant the status of permanent residence in the United States to Rueben Rosen. The bill does not provide for a quota deduction, inasmuch as the beneficiary is entitled to immediate relative status.

FRANCESCA ADRIANA MILLONZI

The bill (H.R. 2536) for the relief of Francesca Adriana Millonzi was considered, ordered to a third reading, read the third time, and passed.

Mr. MANSFIELD. Mr. President, I ask unanimous consent to have printed in the RECORD an excerpt from the report (No. 91-310), explaining the purposes of the bill.

There being no objection, the excerpt was ordered to be printed in the RECORD, as follows:

PURPOSE OF THE BILL

The purpose of the bill is to facilitate the entry into the United States in an immediate relative status of the minor child adopted by citizens of the United States.

FRANKLIN JACINTO ANTONIO

The bill (H.R. 2224) for the relief of Franklin Jacinto Antonio was considered, ordered to a third reading, read the third time, and passed.

Mr. MANSFIELD. Mr. President, I ask unanimous consent to have printed in the RECORD an excerpt from the report (No. 91-311), explaining the purposes of the bill.

There being no objection, the excerpt was ordered to be printed in the RECORD, as follows:

PURPOSE OF THE BILL

The purpose of the bill is to facilitate the entry into the United States in an im-

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One never buys a house or a car without first looking, and that is especially true if some people one respects assert that the house or car in question is not right for purchase; and it was with that in mind that I had planned to visit the Kwajalein Atoll week before last. Kwajalein is where one can obtain by far the most solid information as to the degree of completion and testing of four of the five major components of the Safeguard system; and also much information with respect to the status of the fifth.

When we were told, however, that the markup of the overall Defense authorization, including Safeguard, could not be held up for even a few days, it became necessary for me to cancel this Kwajalein trip; but I did send a staff assistant. He has now returned, and his classified report on the results of his trip, checked against some of the sweeping and at times inaccurate assertions made in the debate last Friday, once again nails down the absurdity of the Senate proceeding to approve what all agree is the most complicated system conceived to date by man without adequate investigation.

One could well ask, why are some in the Senate so casual about spending billions of dollars of other people's money without giving the matter even a semblance of the attention they would give to a personal transaction.

For these reasons, plus one other, I would hope that we would postpone approval of this deployment until we had more facts. The other is my belief that a good many statements made in debate last Friday by those opposing the Cooper-Hart amendment were either inaccurate in implication or inaccurate in fact.

This proposed ABM system is a difficult matter to discuss in open session; but that does not mean, prior to decision, we should refrain from doing everything possible to obtain the facts.

Accordingly, Mr. President, in effort to that end, I am requesting the leadership that after the morning hour on Thursday, July 17, the Senate go into closed session.

THE PROPOSED EXTENSION OF THE SURTAX

Mr. CURTIS. Mr. President, it is my firm belief that the tax bill which extends the surtax and repeals the investment credit should be passed and passed very quickly.

There is no reason why the taxpayers of the country should be misled. The bill is a necessity. The issue should be settled now so that our economy can make its appropriate adjustment. To delay this bill with weeks of speeches would produce nothing but an unsettling effect on our economy.

I do not like taxes. I do not like high taxes. I am supporting this bill because it is necessary. I firmly believe that the best political course is always that course which is honest and sound and improves the fiscal position of our Government. The American people are intelligent and it is a mistake to underestimate them.

There should be another bill dealing with tax reform. We need to direct our

attention to tax reform constantly. The object of tax reform is to promote justice and fairness as between all individuals and all segments of our economy. Those provisions of our tax law needing reform have been in the tax program for one or two or three score of years. None of them are of recent making. They pose difficult problems. Some of them are controversial. Adequate hearings and a skillful approach will bring about needed reforms. Oratory that jeopardizes our fiscal position and fires the flames of inflation are not in the public interest.

A vote for the bill which was sent to us by the House of Representatives is a vote for a course of action that will make tax reform a reality. It is a vote for fiscal responsibility. To oppose or delay this bill will bring neither reform nor fiscal responsibility.

Mr. MANSFIELD. Mr. President, I have listened with interest to what the distinguished Senator from Nebraska has just said. I would point out to him that the course which he advocates could well bring about unconsidered, ill considered, and poorly considered tax reforms if we take up the surtax extension at this time.

The fact that we have agreed to an extension of the withholding levels in no way undermines the efficacy of the situation as it exists. If another extension is needed it will be forthcoming. If we were to bring out the surtax measure at this time, however, without the assurance of a tax reform bill following some time in the immediate future, in my opinion it would mean that the surtax bill, as such, would itself be jeopardized. It would be amended by tax reforms on the floor of the Senate to such an extent, I would think, that it would become what has been called, slightly, in previous times, a Christmas tree bill.

I am interested in the passage of a surtax bill somewhat on the order of the bill reported by the House committee and passed by the House of Representatives. But I would call the attention of the Senate to the fact that the distinguished chairman of the Ways and Means Committee, Mr. MILLS, did promise that there would be a tax reform bill reported by his committee about the first part of next month. During the debate on the surtax the President sent a letter to Chairman MILLS advocating tax reform.

Furthermore, I would point out that the distinguished chairman of the Committee on Finance has indicated that beginning on a date certain he would be prepared to hear proponents in this body on various matters of tax reform.

It would be my hope that on the basis of these hearings there would be reported a surtax bill in just about the same form as the bill passed by the House of Representatives, where the vote was 210 to 205, as I recall, and that the reforms in which all of us are interested to some degree would be placed on a tax reform bill which would be reported shortly after the surtax bill. In that way, I think a procedure would be provided that would assure the Senate, fairly and reasonably, that the surtax bill would be considered and passed, hope-

fully, without any added tax reforms. Those in this Chamber who, in my opinion, if the surtax bill came out by itself, would try to add tax reforms to it, could be told we have the bill on which hearings have been held justifying it, and it is on the second bill that these major reforms could be attached.

In my opinion, this procedure which has been outlined is in the interest of the economy and in the interest of the administration because in this way hopefully we can keep major tax reforms from being placed on the surtax bill and keep them for reforms in the later bill which will be reported.

The VICE PRESIDENT. The time of the Senator has expired.

Mr. MANSFIELD. Mr. President, I ask unanimous consent that we may proceed for 2 additional minutes.

The VICE PRESIDENT. Without objection, it is so ordered.

Mr. CURTIS. Do I understand that the distinguished majority leader, then, favors a bill extending the surtax and dealing with investment credit which will be considered separately when it is considered on the floor of the Senate?

Mr. MANSFIELD. Yes, indeed.

Mr. CURTIS. Does the distinguished majority leader have any reservations or feeling that the able chairman of the Committee on Ways and Means of the House of Representatives will be unable to reach his announced objective in sending us a tax reform bill?

Mr. MANSFIELD. I would hope not. I would hope that the chairman of the Committee on Finance and the membership, both Republican and Democrat, would put their shoulders to the wheel to do what they can to bring out a major tax reform bill—the country is crying for one—and to begin the initiation of such a procedure next week or later this week when hearings on tax reform will start. It would then be my hope that when the tax reform bill from the House arrives in the Senate, tax reforms agreed to in the committee could be put on the bill as it is prepared for Senate consideration. A commitment has been made by the chairman of the Committee on Ways and Means that such a bill will be sent over some time around the first of August.

Mr. CURTIS. I commend the distinguished majority leader. I understand he believes that the surtax bill should be voted upon as a separate measure by the Senate and not merged with the tax reform bill.

Mr. MANSFIELD. Yes, indeed. I would hope that when the surtax bill is taken up and disposed of, the next order of business, or one shortly thereafter, would be the tax reform bill.

Mr. METCALF. Mr. President, I concur completely with my colleague from Montana. Extension of the surtax and the bill that came from the House should be considered separately and apart from Federal tax reform, but there should be some assurance in Congress this year, that there will be some tax reform before we pass a 10 percent, or a 5 percent surtax, thereby compounding and magnifying the inequities in our present tax system.

Mr. President, I served on the Ways and Means Committee of the House and I know of my own knowledge that the very distinguished chairman of that committee is dedicated to tax reform. However, I believe that we should follow the procedure outlined by the policy committee and go forward with extensions of the surtax, maybe from time to time, and then pass a tax reform bill and extensions of the surtax at the same time.

It was with a great deal of misgiving that I read in the newspaper yesterday that the distinguished Senator from Louisiana (Mr. Long), chairman of the Finance Committee, who is now in the Chamber, stated that no one had come forward with a tax proposal.

I introduced S. 500, and it was referred to the Finance Committee. I realize that such legislation must first clear the House, but I introduced it because I wanted it before the Finance Committee. I thought that, as the policy committee had made a statement that the bills would be considered together, I would not have to do anything further to get the Senator from Louisiana to give me a hearing and have consideration of this legislation.

After reading the statement yesterday in the newspaper, I find that in order not to default in this situation, I will have to introduce a bill to the surtax amendment. I regretfully do this because I feel that the bills should be brought up separately and apart, that my amendment for tax reform should be considered with other amendments for tax reform; but, nevertheless, in order to protect my interests, I have had to introduce this bill today.

Mr. President, S. 500 is cosponsored by 26 Senators. It is an important and vital part of tax reform. I testified before the Ways and Means Committee on it. The administration has sent down a similar proposal on this legislation. I do not intend to default. I do not intend, if this bill is going to be brought up as part of the surtax, to be considered in default. Thus, today, I am introducing an amendment to the surtax bill.

Mr. LONG. Mr. President, will the Senator from Montana yield?

Mr. METCALF. If I have any time remaining, I am glad to yield to the Senator from Louisiana.

The PRESIDING OFFICER. How much additional time does the Senator from Montana request?

Mr. METCALF. One minute.

The PRESIDING OFFICER. Without objection, it is so ordered.

Mr. LONG. Mr. President, if the Senator from Montana would be so kind as to remain in the Chamber until such time as I have been able to gain recognition, I think I can satisfy him about this matter. If not, why I would be glad to discuss it with him now.

Mr. METCALF. Of course. I shall be delighted to remain here.

DR. BENJAMIN SPOCK

Mr. YOUNG of Ohio. Mr. President, liberty-loving Americans have every reason to rejoice. The First U.S. Court of

Appeals reversed the verdict and judgment of guilty rendered in the court of U.S. District Judge Francis J. W. Ford, and this higher court in a landmark decision unanimously acquitted Dr. Benjamin Spock, who had previously been convicted by a hand-picked, all-male jury. Then on top of that, the cards had been stacked against him in that the trial was assigned to U.S. District Judge Francis J. W. Ford. I suspect this was arranged by the assignment commissioner at the behest of the district attorney. Judge Francis J. W. Ford, 86 years of age, who was, I understand, nominated by President Herbert Hoover to be U.S. district judge.

Mr. President, at the same time I express my delight over the fact that Dr. Benjamin Spock has been judged not guilty. I denounce the merciless severity of the actions throughout the trial of Judge Ford.

Mr. President, I know something personally about the facts. I spent a day in Boston, testifying as a character witness on behalf of Dr. Spock and Judge Ford tried to give me a hard time as a witness. He did give me a hard time, but I did not crawl under the witness chair.

What I observed, brought to mind what I have read in English history of the judicial misconduct of Justice George Jeffreys in the latter part of the 17th century. As Chief Justice in the reign of King James II at the Winchester "assizes" in his so-called Star Chamber sessions, history narrates that he condemned hundreds of defendants to death in alleged trials which were a mockery of justice.

It happens that Dr. Benjamin Spock is my good friend. I have known him over the years. He was a most highly respected resident of the community where I live. I knew Dr. Spock personally during the years when he lived in Cleveland Heights. I knew that he had served as a lieutenant commander in the U.S. Navy in World War II. I knew him as a member of the American Legion. I knew him as one of the most famous and highly respected pediatricians in our entire country. I was happy to testify before Judge Ford and this so-called blue ribbon jury of 12 stern-faced men that Dr. Spock was and is a man of the highest moral character; that his reputation in the community where he and I lived is excellent; that he is a peaceable law-abiding and peace-loving citizen.

Mr. President, in the past I served for some years as chief criminal prosecuting attorney of Cuyahoga County. I believe that certain punishment like a shadow should follow the commission of crime. I knew that Dr. Benjamin Spock had not committed any crime; had not conspired to commit any crime; that he was a man of such noble character he could not possibly engage in any conspiracy to commit a crime. As a prosecuting attorney and as a trial lawyer, I have met up with and had the misfortune to appear before tyrannical judges but Federal Judge Ford in his actions, words, and attitude which I had observed, and the hard time he tried to give me as a witness in his court, takes a rating in my considered judgment as a tyrannical

judge determined he would supplement the prosecution of the district attorney that the jury find the defendant guilty. In a landmark decision, the judges of the First U.S. Circuit Court of Appeals not only determined and judged that Dr. Benjamin Spock was not guilty but also determined that Trial Judge Ford went far beyond the routine conspiracy instruction to a jury and arbitrarily called for special findings by the all-male jury panel which were highly prejudicial to Dr. Spock.

Mr. President, it makes me happy to observe that sanity has returned; that this good man has been vindicated and acquitted; that the judges of the First Circuit Court of Appeals have spoken out loud and clear; that the very first amendment of the Constitution of the United States is as meaningful today as it was in 1791. It should be remembered by all of us that when the Constitution as drafted was first announced, there was an uproar from every liberty loving patriot, who had fought and won the war for independence. The conservatives of that time were compelled to accept those first 10 amendments which we affectionately term the Bill of Rights, else the Constitution as drafted would not have been ratified by the Thirteen Original States.

This landmark decision reaffirms and breathes renewed breath of life into the first amendment to our Constitution, which provides:

Congress shall make no law respecting an establishment of religion, or prohibiting the free exercise thereof; or abridging the freedom of speech, or of the press; or the right of the people peaceably to assemble, and to petition the Government for a redress of grievances.

PRIVATE INDUSTRY AND NUTRITION

Mr. MCGOVERN. Mr. President, the Select Committee on Nutrition and Human Needs, of which I am chairman, has been devoting itself these past 6 months to documenting the extent of hunger and malnutrition among the poorest of our citizens across this country. Our field hearings—held in Florida, Washington, D.C., California, and East St. Louis—as well as our hearings here in the Capitol, have investigated in detail the unhappy relationship between the conditions of hunger and the ineffectiveness of our federally funded food assistance programs such as food stamps, commodity distribution, school lunch, school breakfast, and supplemental food plans. We have found these programs failing because of inadequate funding and haphazard or deliberately restrictive administration. These findings have aroused a sense of outrage among the American people that the administration and congressional committees have responded to by recommending increased funding and administrative reforms in these programs. As I have said before, I do not believe that these efforts had gone far enough, and I shall continue to fight for more money and more reforms; but I commend the administration, and my colleagues in both Houses, for their recognition of hunger and malnutrition as

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division in which she was presently working. The monitoring was through use of the "snooper button." It was done by order of her superior. Finally, and most important and despicable, it was done without the knowledge of those whose phones were being monitored.

The next day, June 4, 1969, Mr. X received even more disturbing information. Another secretary formerly employed in the office of his superior informed him that at that superior's instruction she monitored every telephone call that came into his office.

AUTHORIZATION OF APPROPRIATIONS FOR FISCAL YEAR 1970 FOR MILITARY PROCUREMENT, RESEARCH AND DEVELOPMENT, AND FOR THE CONSTRUCTION OF MISSILE TEST FACILITIES AT KWAJALEIN MISSILE RANGE, AND RESERVE COMPONENT STRENGTH

The PRESIDING OFFICER. The hour of 1 o'clock having arrived, the Chair lays before the Senate the unfinished business, which will be stated.

The ASSISTANT LEGISLATIVE CLERK. A bill (S. 2546) to authorize appropriations during the fiscal year 1970 for procurement of aircraft, missiles, naval vessels, and tracked combat vehicles, and research, development, test, and evaluation for the Armed Forces, and to authorize the construction of test facilities at Kwajalein Missile Range, and to prescribe the authorized personnel strength of the Selected Reserve of each reserve component of the Armed Forces, and for other purposes.

ILLEGAL ELECTRONIC EAVESDROPPING IN THE FEDERAL GOVERNMENT

The PRESIDING OFFICER. The Senator from Nebraska may resume.

Mr. CURTIS. I thank the distinguished Presiding Officer, and I ask unanimous consent that I may proceed until I have finished my prepared remarks.

The PRESIDING OFFICER. Without objection, it is so ordered.

Mr. CURTIS. Mr. President, the point to keep in mind is that this secretary operated a telephone which served all of the lines of all of the employees in that office. All calls coming in and going out of the office, regardless of by whom or to whom they were made, were wired through telephone equipment located on and near her desk.

Thereafter, on the same day, Mr. X discovered that in his office "snooper buttons" remained operable. Mr. X tested them personally for effectiveness, and took photographs of these installations.

For the information of Senators, I have pictures of these infamous snooping devices, in operation as of June 4, 1969.

Since then, Mr. X has talked with several employees in GSA and the Department of the Interior, who confirm the widespread, deliberate, systematic use of "snooper" devices over the past 2 years. In each case, employees were instructed by their superiors to monitor all calls, to take notes, and to make no disclosure

of any kind that might make either party to the telephone conversation aware of such eavesdropping.

One more fact: I am sure it will be of interest to Senators to learn that this monitoring included calls from Members of Congress. In fact, one person charged with responsibility for taking notes on such telephone calls said she was specifically instructed to monitor calls from Representatives, Senators, Government officials, and others.

Again, let me point out to Senators that these telephone calls were being monitored without at least one participant, and in many cases both participants, knowing about it, and certainly without their permission.

As to the mechanics of setting up such snooper systems, the telephone company installed these devices at the request of GSA officials. I hope to find out who these officials were, whether they are still with GSA, and if not, what they are presently doing.

The General Services Administration is, after all, a quarter of a billion dollar agency, with almost 40,000 employees.

It lets annual contracts amounting to millions of dollars for the provision of supplies to the Government, and for 1970 alone, the General Services Administration will spend on the order of \$100 million for the acquisition of new facilities.

Thus, there could well be an economic motive for this high level eavesdropping.

The only other possible motive is political at best, and since the facts point to intraagency use, it seems more likely to be of the cheap, bureaucratic, gutter-fighting variety.

Equally obnoxious is the use of such "snoopers" simply to spy on subordinates, to deny them the privacy to which they are entitled. We have had too many examples of how Federal employee rights are invaded by peeping tom superiors.

It seems to me that both the Senate Government Operations Committee and the Senate Judiciary Committee should find this information of great interest and worth pursuing further.

There is a collateral issue that must be faced. As I have said, the telephone company installs such snooper devices, technically styled "transmitter cutoffs," although it does not advertise the service in its available promotional brochures. The general justification of such devices is that they allow a secretary on a third phone to take notes of a phone conversation between two parties, without the office noise intruding through her phone mouthpiece into the conversation between the principals. I could accept this, I suppose, if I had definite assurance that such devices would be used only in such a situation and, of course, with the full knowledge and consent of the two principals.

Instead, here we have a clear example of how ridiculously easy it is to convert these devices into eavesdroppers, little spies for crooks or paranoids who hope to profit one way or another by denying the honorable right of privacy to others.

I am coming rapidly to the conclusion that such "transmitter cutoffs," as they are euphemistically called, are far too tempting to the crook or the paranoid.

Mr. President, this type of eavesdropping and electronic snooping—where there is not the slightest pretext that the national security is involved—must stop. It must stop now, without equivocation or exception. I am convinced that the new administration wishes to reverse this proliferation of illegal eavesdropping devices throughout Government. I compliment Administrator Kunzig for making this a first order of business within the GSA. I commend his action to other Government agency heads. I could only wish that Mr. Kunzig's subordinates—many of them holdovers from a previous administration—had taken his orders to heart and halted this nefarious practice.

It seems to me, however, that the telephone company should take a long, hard, and careful look at its practice of installing such devices, in light of the misuse that can be made of them. They offer too easy a temptation for the users to turn them into electronic eavesdroppers with unlimited scope. I sincerely request the cooperation of the telephone company in changing this practice.

In closing, Mr. President, let me restate my case.

We know that there has been and apparently still is large-scale electronic snooping going on in one major U.S. agency, the General Services Administration. This is happening not only here in Washington but apparently in regional offices across the country as well.

There is evidence that it is going on in a major Government department—the Interior Department.

I ask, Mr. President, and I think all my colleagues are justified in asking the same question, how much further has this practice permeated our Government?

How many agencies and departments in which no national security is involved are in the habit of listening in on their employees' most private conversations?

I submit that this is a matter which the Justice Department should investigate—and at once. I submit further that our own Committees on Government Operations and the Judiciary should oversee such an inquiry by the Justice Department, to determine that this evil is brought to a complete and total halt.

Mr. President, to be specific, the General Services Administration let contracts, many of which, by the nature of them, cannot be competitive; they are negotiated. The individuals in places of power have been monitoring the conversations of their subordinates to find out what their subordinates know. Is that not an open invitation to corruption? It is a practice that should end.

Mr. President, I yield the floor.

AGM

AUTHORIZATION OF APPROPRIATIONS FOR FISCAL YEAR 1970 FOR MILITARY PROCUREMENT, RESEARCH AND DEVELOPMENT, AND FOR THE CONSTRUCTION OF MISSILE TEST FACILITIES AT KWAJALEIN MISSILE RANGE, AND RESERVE COMPONENT STRENGTH

The Senate resumed the consideration of the bill (S. 2546) to authorize appropriations during the fiscal year 1970 for procurement of aircraft, missiles,

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elderly for community projects, massive funds are not necessarily needed. For example, the House Education and Labor Committee adopted the Retired Senior Volunteer Program (called RSVP) which requires only \$5 million—money that will be returned many times over in services rendered by the elderly.

The Senate Labor and Public Welfare Committee will shortly consider new amendments to the Older Americans Act, and will likely see the need for an authorization figure equal to the House's \$62 million. It is not too late for the Administration to go beyond its \$28.3 million sum and begin recognizing that 19 million older Americans have not just rights and needs to be met, but contributions of talent and wisdom to be made.

TV STATEMENT BY SENATOR BYRD OF WEST VIRGINIA ON THE BUREAU OF MINES BUDGET

Mr. BYRD of West Virginia. Mr. President, on June 9, 1969, I made a statement for television regarding the Bureau of Mines budget.

I ask unanimous consent that the transcript of that statement be printed in the RECORD.

There being no objection, the transcript was ordered to be printed in the RECORD, as follows:

BUREAU OF MINES BUDGET

Through the Appropriations Subcommittee, of which I am Chairman, I have been able to add three quarters of a million dollars to the Bureau of Mines budget for three items of utmost importance to West Virginia. One of these is a mine health and safety institute which could provide highly-specialized, long term training for mine inspectors, engineers, and laboratory research technicians. National attention has been focused on mine health and safety problems and I believe that the need for such an institute is very evident. The other two items which I have been able to place in the Bureau of Mines budget were money for the immediate hiring of additional federal mine inspectors, and money for a research program to develop effective methods for suppression and control of mine dust. I intend to do my utmost to see that these programs become a reality.

ORDER OF BUSINESS

The PRESIDING OFFICER. Before the Senator from Nebraska is recognized, the Chair informs the Senate that at the hour of 1 o'clock the unfinished business will be laid before the Senate. The Senator from Nebraska will then be recognized again, after which the Chair will recognize the Senator from Texas.

The Senator from Nebraska is recognized.

ILLEGAL ELECTRONIC EAVESDROPPING IN THE FEDERAL GOVERNMENT

Mr. CURTIS. Mr. President, today I am going to disclose, with proof, the existence of illegal electronic eavesdropping in at least one large Government agency. There is added evidence that this same electronic snooping is going on in other agencies of the Federal Government.

This malodorous practice started under the previous administration and was

so widespread that it has been impossible to root out in the 6 months that the Nixon administration has been in office. I hope my disclosures today will speed the process.

I think it is a fair statement that a Federal agency cannot, without notifying either employee or caller, listen in on telephone conversations where national security is not involved. To do so, I believe, is a violation of law.

Seven States—California, Illinois, Maryland, Massachusetts, Nevada, New York and Oregon—prohibit surreptitious eavesdropping by mechanical or electronic device.

Thirty-six States prohibit the specific type of eavesdropping known as wiretapping.

And Congress itself, in the enactment of title III of the Omnibus Crime Control and Safe Streets Act of 1968, outlawed all wiretapping and electronic eavesdropping other than that occurring within certain tightly drawn instances involving suspected organized criminal activity or the national security. In cases involving suspected syndicate crime, listening devices can be used only with court permission. Even in emergencies, court permission must be obtained within 48 hours or the listening device and its use are illegal.

Yet, I have here such a device, taken within the past few weeks from a telephone at a major Government agency. It was brought to my attention by a Government official whose own telephone was being monitored illegally. I have sworn affidavits from him recounting the whole story. But for his honest courage we would know nothing of this illegal activity.

The agency in question is the General Services Administration. I have already discussed this case with Administrator Robert Kunzig of GSA. He is entirely in agreement with me as to the illegality and impropriety of such electronic eavesdropping.

In fact, Mr. Kunzig, when he heard about the use of "snooper button" telephones and monitoring systems within GSA, was shocked. This was shortly after he became Administrator. He at once—on May 6—issued orders forbidding this practice which is both questionable as to ethics and illegal by law.

Someone in GSA apparently did not feel compelled to abide by the Administrator's orders.

I call attention to the fact that the actual discovery of the device I have here was made over a month after Mr. Kunzig's order prohibiting the use of what he termed "telephone monitoring." I further call attention to the fact that these devices were installed and in use prior to Mr. Kunzig's appointment as Administrator.

What I intend to do today is recount for you the shameful story in a straightforward and factual a manner as possible.

This Federal employee, a well-educated, responsible, professional person and, incidentally, highly knowledgeable in the field of electronics, states that many months ago—long before Mr. Kunzig took over under the Nixon ad-

ministration—he became aware of "excessive electronic noise and a very slight decrease in power" on his telephone line.

Mr. President, I have no personal knowledge of what this sort of thing means.

However, I have consulted experts, and they tell me these are characteristics of a telephone where the distribution of sound and current serves more than two outlets being used by more than two parties in a telephone conversation.

In other words, these are the conditions that exist when a telephone conversation is being monitored by a third party.

On May 5, 1969, our Mr. X was informed by a fellow employee that there was "a listening post" on Mr. X's phone, and that it was then in operation. Another employee present at the time has sworn in an affidavit as to the truth of this conversation as reported.

The next day, May 6, 1969, a memorandum from Mr. X's superior was issued. It stated that the new Administrator, Mr. Kunzig, at a staff meeting on May 6, 1969, announced there was to be no more monitoring of phone calls.

This new policy, according to Mr. X, was transmitted to all offices in the agency. As Mr. X puts it:

To my knowledge, the request to cease telephone monitoring constituted an attempt to stop the day-to-day practice of using the so-called "snooper button."

When asked to describe this "snooper button" system, a representative of the C. & R. Telephone Co. supplied, in writing, this summary:

TRANSMITTER CUT-OFF

As a key telephone system arrangement, the transmitter cut-off is a feature that enables the telephone user to cease transmission of sound into the telephone without losing the capability of listening to the other person's conversation. Because of its monitoring nature, the installation and use of it has been highly discouraged by the General Services Administration.

According to Mr. X, these snooper buttons have been used in his office to monitor calls of employees to other persons in Government as well as persons outside the Government, without the knowledge of participants in the telephone calls.

Mr. X took no action in May about the information concerning a "listening post" on his phone, since the policy announced by Mr. Kunzig could be expected to end such snooping.

One month later, despite the Administrator's order, there was evidence that in certain offices telephone snooping was continuing. And there was no evidence that such devices had been removed from various telephones.

At this point, Mr. X decided to collect information on the extent of these illegal eavesdropping operations within GSA.

His determination to do so was reinforced by information given him on June 3, 1969, by a secretary to a high official in GSA.

She informed him that she had monitored telephone conversations in Mr. X's division during 1968, and in the

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Approved For Release 2004/11/30 : CIA-RDP71B00364R000300100001-3 S 7935

naval vessels, and tracked combat vehicles, and research, development, test, and evaluation for the Armed Forces, and to authorize the construction of test facilities at Kwajalein Missile Range, and to prescribe the authorized personnel strength of the Selected Reserve of each Reserve component of the Armed Forces, and for other purposes.

The PRESIDING OFFICER (Mr. GRAVEL in the chair). Under the previous order, the Chair recognizes the Senator from Texas (Mr. TOWER).

Mr. TOWER. Mr. President, I am going to make some remarks on the compromise proposals or amendments that have been offered to the procurement bill, and I ask unanimous consent that those remarks appear at the conclusion of my main address on the military procurement bill.

The PRESIDING OFFICER. Without objection, it is so ordered.

COMPROMISING THE SAFEGUARD ABM SYSTEM

Mr. TOWER. Mr. President, there has been considerable discussion in these last few days of debate about the possibility or advisability of compromising the Safeguard ABM system. To that end, two amendments have been offered for consideration by the Members of the Senate.

While I have the greatest respect for the authors of the amendments, I must oppose them because I am convinced that acceptance of either amendment would materially weaken our defense posture.

Let me discuss first the amendment offered by the distinguished Senator from Kentucky (Mr. COOPER) and the able Senator from Michigan (Mr. HART).

This amendment would prevent the use of funds appropriated with this year's act and earlier acts for other than research, development, testing, evaluation, and normal procurement incident thereto. It would specifically prevent their use for deployment or for acquisition of any site for deployment without further action by Congress. To all intents and purposes, then, the very large effort already underway in preparation for deployment would cease. The program would revert to a purely R. & D. status. The results of such an action would be profound. Let me mention a few of them.

If this amendment is accepted, the effort already underway would be almost a complete waste. Furthermore, it would cause a substantial delay in deployment, should we decide, at some future time, that deployment was in fact necessary. In fact, if we decided as early as the next session of Congress to proceed with deployment, it would not be possible to have the first site ready until some 2 years after the date presently planned. A first site then could not be available until early 1976, and a full deployment, such as that called for in phase II of the program would not be ready until 1978. This delay would result from the problems of personnel dislocation. If we destroy the reason for the existence of the present talented and trained personnel base, which is necessary for production, site engineering, construction, and the like, we cannot expect to be able to re-

build it overnight. I wonder whether the highly talented individuals involved in the program would return at all if once separated from the program.

There are serious implications to this kind of delay. It is within the U.S.S.R.'s capability to build an ICBM force which would seriously threaten our Minuteman by 1975 and, as well, pose a serious threat to our alert bombers. The United States could be left with a period of years in which we had no counter other than to increase greatly our offensive retaliatory forces. Additionally, the Chinese Communists could have an operational ICBM capability by the mid-1970's. And there would be no way of regaining that lost time in the installation of defensive deployment.

Second, of course, a very great loss of funds would be involved. As you know, Congress has already appropriated for deployment \$1.744 billion. An estimated \$500 million of these funds would be lost effort if we decided to cease deployment. Even if we again decided to deploy in the next Congress, the cost of a 12-site deployment would be over \$250 million and possibly \$500 million higher than if we continue our current effort. This cost includes the effect that comes about naturally from the discharge of some 5,000 trained personnel which we now have on preproduction and construction engineering efforts and the necessity to replace them later. The greater cost also comes through the termination of contracts with subcontractors throughout the country who have made commitments for undertaking parts of the program. It comes about from the necessity to build up and train again, to reestablish production lines and build a new construction engineering base.

A third point of great significance is the possible impact of such unilateral action by the United States on the strategic arms limitation negotiation. It has been our position that any such negotiation should apply to both offensive and defensive missiles—that the negotiation should effect overall strategic potential, not just consider separate parts in isolation. With such unilateral action, what can we expect in the way of bargaining power with the U.S.S.R. in the defensive weapon area? We would then be dealing with a U.S.S.R. which has already initiated deployment of a defensive system, has some sites operational, and is presently carrying on a most active test program on an advanced ballistic missile defense system. In brief, we will enter the negotiation having not only lost—but having publicly denied—a very great bargaining factor.

There are those who argue that delay in deployment will give time to determine whether the U.S.S.R. will undertake logical agreement. I would remind all of my colleagues that the whole history of negotiations with the U.S.S.R.—even on simple matters—has been one of long and careful debate and negotiation. It would seem questionable that any meaningful and effective agreement could be reached in a 1-year period. I hope that this will change, but there is little reason to believe that it will. In the meantime, however, I cannot advise that

we adopt a policy which will delay deployment of Safeguard 2 or 3 years.

Part of the argument for delaying Safeguard lies in the assertions that if the Soviet threat develops we can always deploy additional Minuteman, and that this can be done in a very short time—say 1½ to 2 years. This does not say that from decision to deploy to operational status is 1½ to 2 years. To go through the entire budgetary, appropriation, procurement, and construction cycle would normally take 4 to 5 years, and even on an expedited basis 3 to 4 years. Consequently, if we heed those who favor delay, we may well face a much earlier decision to deploy offensive missiles than we now anticipate.

Even more importantly, those who are favoring delay are advocating—perhaps unknowingly a decision now that if the Soviet threat develops we will meet it by proliferation and not by defense. The option for defense might be lost, and, with it, the chance for stabilizing the relative postures of the two countries at a lower level of offensive weapons.

The proposed deployment is a phased one. It takes an initial limited step to minimize the time for deployment and to prove out the system. It does so at limited cost. It does so without committing us to the full phase II deployment while preserving the ability to respond flexibly to the threat as it evolves and to the possible results of the arms control negotiations.

For these reasons, then, I oppose the amendment offered by Senators COOPER and HART. It simply eliminates any possibility that Safeguard will be a viable defense weapons system.

Mr. COOPER. Mr. President, will the Senator yield.

Mr. TOWER. I would be happy to yield to the Senator. I would prefer to finish my remarks which will require only 1 more minute. Then I shall yield to the Senator.

My colleague on the Armed Services Committee (Mr. MCINTYRE) has also offered an amendment to the bill before us. Another member of the committee, the distinguished Senator from Colorado (Mr. DOMINICK), effectively raised several significant objections to the amendment. Since they are preserved in yesterday's RECORD, I shall not repeat them. I do not think a more able rebuttal could be presented.

I would like to comment on the philosophy of the amendment, however. The amendment has been referred to as a "compromise." I respect the sincerity of those who so view it, but I must in good conscience point out that it is really no such thing. Any proposal which eliminates deployment from the Safeguard plan is not a compromise. The Safeguard plan is itself a compromise. It recognizes that there is considerable disagreement among intelligent, sincere men over the advisability of developing a significant anti-ballistic-missile system.

But, Mr. President, it is the minimum acceptable alternative. I cannot emphasize that point too much. I firmly believe, like President Nixon, that the Safeguard system represents the most limited defensive missile system that is consistent

with the national defense of this country.

In light of a lot of rumor that seems to be flying around about possible compromise and a favorable climate at the White House for compromise by the administration, may I say emphatically that the administration is not now disposed to compromise. The administration opposes the two amendments offered; it believes it made a minimal proposal and it wants to see this provision passed intact. There is currently no intention on the part of the administration to participate in such compromise effort.

I am delighted to yield to the Senator from Kentucky.

Mr. COOPER. I wish to ask the Senator, since he spoke of delay in deployment, at what date, if the present plan is approved, could an integrated deployment of the first stage be completed?

Mr. TOWER. About 1975—1974.

Mr. COOPER. In 1974. If we should proceed on the deployment of the entire system, as I believe the testimony of Secretary Laird shows an intention to do, when would the full system be deployed?

Mr. TOWER. Around 1976 or 1977, I believe.

Mr. COOPER. Is there any component of this system that could be placed on one or two missile sites of phase I in the coming fiscal year?

Mr. TOWER. I am not sure I understand the Senator's question.

Mr. COOPER. What we are talking about primarily is whether or not the Senate should vote to deploy Safeguard, phase I. As I understand the word "deployed," it means the physical emplacement of the system on the two proposed sites at Grand Forks and Malmstrom.

Mr. TOWER. There is no provision for deployment in this fiscal year but we will face substantial delay in deployment if we proceed on the R. & D. route.

Mr. COOPER. Is it correct then that there is nothing in the bill which provides that any part of this system would be placed on these two sites in the coming fiscal year?

Mr. TOWER. It was. There is nothing to prevent it, but there is no provision for it. I do not think we would be ready to deploy by the end of this fiscal year, anyway.

Mr. COOPER. Is not the basic reason for the decision not to deploy in fiscal year 1970, the fact that none of the elements have been fully tested, approved for deployment?

Mr. TOWER. All the components have been tested, which lead us to believe that the system will work.

Mr. COOPER. Has PAR been tested?

Mr. TOWER. I will yield to the distinguished Senator from Arizona to answer that.

Mr. COOPER. Is it not correct that PAR has not even been built?

Mr. GOLDWATER. Will the Senator from Texas yield?

Mr. TOWER. I yield.

Mr. GOLDWATER. Both radars have been built in model form. The theory has been tested. There is no question about the radars. The MSR is merely a greatly enlarged radar with 5,000-some-odd sensing units, instead of the one we

usually associate with the radars we see around the field.

One important thing, if I may interject here, concerning the delay, is that we are now talking about acquisition money for missiles. If this is delayed, what happens will be to put people out of employment in the plants building the components. I am not arguing for or against unemployment, but merely state that should we decide in another year or two to go ahead with it, we will have lost the expertise needed to make the missiles, and the factories will have been shut down, so that we cannot proceed even with testing. All the components of the system, with the exception of the actual radar, not only have been tested, but are being tested right now. They work.

In fact, the results with Sentinel are fantastic. I know that some opponents will say, "Yes, but it is something else to shoot at a target, whose position is known, than to shoot at a target whose position is not known."

However, I think I can say this, without violating confidential matters, that it does not take a great deal of genius to figure out where a missile from Russia will be coming from to hit any city in this country, that it would not be more than two or three degrees. So that the success we have achieved with Sentinel, and are now beginning to achieve with Sprint, so far as I am concerned, indicates that the system could be made operable as soon as the large radars are finished. They are being constructed now.

Mr. COOPER. What I am trying to elicit is the status of the components. I will take each component in turn. The testimony of Secretary Laird before the House Appropriations Subcommittee on May 22, testimony which he described as the latest situation analysis, was that PAR had not been constructed. Is that correct?

Mr. GOLDWATER. That is correct, but models have been constructed, and the models have worked.

Mr. COOPER. Where is the model?

Mr. GOLDWATER. At Bell Laboratories. They have charge of that.

Mr. COOPER. Just a model?

Mr. GOLDWATER. Well, it is just a model but it is a pretty good model. When we get through with the PAR, it will have an antenna with a diameter of 116 feet, which is a tremendous antenna.

Mr. COOPER. Yes; a tremendous antenna. What about the MSR? Is it not correct that it must be redesigned?

Mr. GOLDWATER. No; I do not think so—

Mr. COOPER. It must be redesigned to provide more faces and must be hardened, is it not correct?

Mr. GOLDWATER. There is discussion of redesigning it. It now has four faces, but the antenna diameter will be 13.5 feet, which is still a pretty large antenna. The redesigning they are interested in is more for hardening, to be able to have it withstand any close hits or direct hits. However, that is not really of great concern, because the detection ability of radars will take place, we hope, long before the missiles come close to the target. If they do not, then it does not do any good to have them, anyway.

Mr. COOPER. The point I am making—which my questions and the answers indicate—is that Safeguard is still in the research and development stage. PAR has never been built. MSR is being redesigned, according to the testimony of Secretary Laird, to provide more faces. Also, as the Senator from Arizona has said correctly, it is a soft component. Unless it is redesigned—hardened—it cannot withstand missile attack.

Mr. TOWER. The components of PAR are currently being used for space tracking. All we have to do is put them together and integrate the package. It works. All the components now work.

Mr. COOPER. At the space center it is used for its tracking purposes. Secretary Laird stated, using the base of that design, an appropriate PAR for missile-site defense could be designed and built; but the point I am making is that this has not been done and cannot be done in fiscal year 1970. It is correct, also, that to have an effective MSR it must have more faces, and if it is to be able to withstand an attack from incoming missiles, it must be hardened.

Mr. TOWER. We can put them together. The fact that we do not have it all put together now I do not believe is an argument against proceeding to do it.

Mr. COOPER. My purpose is to show that we can have nothing ready in the coming year and for some time after that. Sprint and Spartan, again according to the testimony of Secretary Laird—I want to give his testimony the best possible construction—the interceptor missiles have not been tested as to intercepts. They have been tested for firing.

Mr. GOLDWATER. No, that is not correct. I have seen motion pictures of them being used off Kwajalein—interceptor missiles sent from Vandenberg—and they have been used successfully. I think the correct interpretation of Mr. Laird's remarks would be that Sprint, at that time, had not actually been tested against a target, but that it has been tested as to firing. Sentinel had been fired, at that time, and I think they made some 10 shots and achieved about 70 percent, as a rough guess, success with it. Success, of course, is the diameter of the CEP. I would not want to talk about that here.

One point, though, that the Senator has not mentioned, where I think we will have more trouble, although it will be solved, is in the computers.

Mr. COOPER. I am coming to that. There were some intercepts under the Nike-Zeus system, but I cite the testimony of authority—that if Secretary Laird—that no actual intercepts had been made by Sprint or Spartan. They have only been flight-tested.

Mr. GOLDWATER. Well, we were shown motion pictures of Sentinel being fired. We saw no pictures of any hit, because, of course, that would be impossible; but Sprint, at that time, had only been tested in firing.

Mr. COOPER. It is correct, is it not, that Spartan is being modified?

Mr. GOLDWATER. It is being modified. As I have said very often, it would not surprise me to know that when we

finally conclude that we have an ABM system, what we are talking about could well not be the weapon that we will use. I say that because just like Minuteman, we started out with Titans and then we got to the Minuteman and we are now up to a fourth stage of the Minuteman. We never quit developing weapons. We cannot do that.

Mr. COOPER. I understand. It is an evolutionary process. The Senator is absolutely correct. Has this system, as yet, been tested as an integrated unit?

Mr. GOLDWATER. No.

Mr. TOWER. No. It has not been.

Mr. COOPER. Is it finished?

Mr. TOWER. They do have it tested in the area of Kwajalein.

Mr. GOLDWATER. Yes.

Mr. COOPER. Suppose phase I of Safeguard were deployed in the United States as the administration wants, with the PAR designed and constructed, as well as the MSR, Sprints, and Spartans, and computer systems, could it be tested in the United States?

Mr. GOLDWATER. I do not think it would have to be tested in the United States. I think the testing would be confined to ranges we already have such as in Kwajalein and possibly on Johnson Island.

Mr. TOWER. In Eniwetok.

Mr. GOLDWATER. Yes. Eniwetok. I would say frankly, there is no feasible way of testing it in the present suggested sites because all of our in-continent, down range sites are down into the White Sands region of New Mexico.

I think it would be ridiculously expensive to erect a test site there, to have something fired from Wyoming into New Mexico; so I would assume it would not be tested, any more than they tested the Minuteman in our country.

Mr. COOPER. Could the Spartans and Sprints be fired in the United States for tests, as they do in Arizona?

Mr. GOLDWATER. The landing area would certainly have to be somewhere where people did not live, because we would not use nuclear heads. We could not use them. We prohibited ourselves from using them under the Test Ban Treaty. So all we could do would be to see how close we could come to intercepting.

Mr. COOPER. Could a nonnuclear interceptor be used in the United States?

Mr. GOLDWATER. The Senator probably knows that a nonnuclear interceptor is in the process of research. In fact, there are two of them.

Mr. COOPER. But the Defense Department is preparing to test at Kwajalein. It has MSR. As I read the testimony, a radar to simulate PAR would be used. Missiles could be firing from the United States and the system could be tested in Kwajalein. Is that correct?

Mr. TOWER. A missile could be fired from the United States toward the Kwajalein range, yes; but we could not do anything that would require using the United States as a recovery area.

Mr. COOPER. I think the Senator has answered my inquiries. My questions were to establish that what is contemplated by the Department of Defense is a continuation of research and development in fiscal year 1970.

Mr. TOWER. That is it essentially, and preproduction procurement. This whole matter is going to be geared to deployment, of course. There will be some pre-deployment procurement.

Mr. COOPER. The amendment that the Senator from Michigan (Mr. Hart) and I have offered, for ourselves and other Senators, provides the Defense Department with all the money it needs. It does confine the use of the funds to research and development, test and evaluation, and to procure all the elements necessary for the testing. If all that is going to be done in this coming year is to continue the testing, without physical deployment, why would not our proposal provide all the money needed, and without a time lag?

Mr. TOWER. Because they are already underway for deployment. Thousands of personnel are already engaged in that activity. Skilled technicians are employed. If we cut them off, we may never get them back.

Mr. COOPER. Where are they employed? What are they doing?

Mr. TOWER. They have been employed in connection with the Sentinel program. They are employed at present at existing sites. The fact of the matter is that there are nearly 5,000 persons involved in this program who would probably have to be discharged. It is something like what many people do not understand in the oil business. They say we do not have to encourage oil exploration in this country because we have all the oil we need in Arabia and all we have to do is turn the faucet on when we need it. But the people would not be there at the time we needed it.

If we cut off this program, the approximately 5,000 people who will be thrown out of jobs will be absorbed by industry or other elements of the Defense Establishment. So to that extent we would not have them there when we needed them. By disturbing this pipeline now, it would cost an additional half billion dollars in the future, plus about 2 years' delay.

Mr. COOPER. All the department is, in fact, doing now is testing elements for later production of an ABM system. If this has hardly started yet, why would those people be discharged? I do not think the labor cost element is essential to this discussion. But what would be lost in time? What are they doing?

Mr. GOLDWATER. Mr. President, will the Senator yield?

Mr. TOWER. I yield.

Mr. GOLDWATER. Actually, I may say to the Senator from Kentucky, what will be going on for the next 4 or 5 years is essentially what the Senator is suggesting in his amendment. That is what has me rather puzzled. We are not ready to deploy these ABM's yet. I am interested, for example, in how the Senator's amendment would affect the \$345.5 million that is new obligational authority in this budget.

Mr. COOPER. It does not remove it. It does not strike any funds. Questions have been asked, why it does not strike funds asked for deployment. All that will be done during the year—as the Senator's answers have shown—is research and development. In fact, or someone in

the administration, has described next year's work as a research and development program. If the money is available to carry on the program and these people are working on the program, I cannot see any time lag. One purpose in providing the money was to assure there would be no time lag if at some later date—next year or before—the threat as projected by the amendments became a reality and deployment became necessary.

Mr. GOLDWATER. Let me explore a little what the Senator's amendment really does. For example, by the Senator's amendment, he is not going to deny any money.

Mr. COOPER. That is correct.

Mr. GOLDWATER. Under the fiscal year 1970 procurement program, we do some other things. For example, we plan to procure a missile site radar at Grand Forks; a missile site radar data processor at Grand Forks; training equipment; advance procurement for a perimeter acquisition radar and a missile site radar and another missile site radar at Malmstrom; leadtime missile parts requiring \$600,000.

We already have acquired some sites. The items to be procured with the fiscal 1968 and 1969 funds are one perimeter acquisition radar at Grand Forks; one perimeter acquisition radar data processor at Grand Forks; one of the same at Malmstrom; a data processor at BTL at Whippany, N.J.

Again, I know what the intent of the Senator's amendment is—it is to try to convince the Soviets that we are not going to install these weapons—

Mr. COOPER. Not at this time.

Mr. GOLDWATER. Not at this time; but, at the same time, I cannot understand the psychology, or the double shuffle, an old river term, if one wants to call it that, of fooling the Soviets. If we are going to buy radar sites and sites for radar data processors and leadtime for missile parts, the Soviets know we cannot develop the system until 1974, no matter how hard we work on it. So I do not see how the Senator's amendment is going to convince the Soviets that we have no intention of deploying an ABM system.

Mr. COOPER. Because the political decision will not have been made by the Congress to proceed with deployment of the ABM. The desire of the administration is this: Although the full system cannot be put on the ground until 1974, and could not put in components on the site in the coming year, yet, upon the basis of the projected threat—and extrapolations made by Secretary Laird—the administration and proponents of the system want Congress to decide this year to deploy the ABM system.

I believe the Senator knows of the doubts that have been raised about the reliability of the system. Does the Senator have any doubts about it?

Mr. GOLDWATER. I have no doubts about it. I may say to the Senator that I can remember, just before the onset of World War II, an electronic marvel called radar. People did not even know what it was. They called it a direction finder, which came into being in England. We doubted seriously that they

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would be practical devices, because they would require people with at least a doctor's degree to be able to operate them.

Yet we have progressed in radar until today a man who owns a small boat or a small airplane can, by spending \$5,000 or \$6,000, have a radar and operate it himself, even though he has never even seen the inside of his home television set.

I cannot think of a single weapon we have ever developed that was not approached with this same thought, that it could not work.

I remember, in the days of World War II, when, to fly a new fighter plane, for example the P-40, the P-31, or the P-38, you had to have a thousand hours of flying time behind you. This was the amount of experience they thought was required. Today we put kids in airplanes that you would not have been allowed to fly in the forties unless you had 10,000 hours.

So the argument by some of the scientists that it will not work is, to me, to use a popular term used yesterday by my friend from Illinois, "hogwash." Because it is working. We have radar that we know will work. The computer is not working now, but I cannot believe that the Bell Laboratories, plus all the scientific know-how in this country, cannot make a computer that will work under these situations.

We always approach these things with the idea they will not work. I am a little surprised that the scientific community would, for the first time in my memory, say they did not have the ability to make it work.

Mr. COOPER. Mr. President, I have never said we cannot build a system that will work. I believe, too, that the scientific and engineering people in this country can build one that will work. But the question is, How effective it will be?

Another purpose of our amendment opposing a decision to deploy is to keep open for the Department of Defense the opportunity to design a better system, before it is locked in with the modified Sentinel.

The Senator from Missouri (Mr. SYNINGTON), at some point in the debate, I hope next week, or whenever he wants to, will call for a closed session. I do not know whether I should be speaking for him, since he is in the Chamber. But he will show that though you may assemble the Safeguard system, with all its elements, it will still not provide a defense against an attack by the SS-9.

Mr. TOWER. Mr. President, will the Senator yield?

Mr. COOPER. I yield.

Mr. TOWER. Probably an essential difference between us is that the Senator from Kentucky appears to believe that we should always wait and see what the Soviets do, and just react to what they do, rather than proceed on our own. The Soviets do not do that, as far as we are concerned. They have programed certain weapons systems for the future, and they are going to go ahead and build them, regardless of what we do, if history and experience are any guide.

If we are going to just sit down and react to the Soviets, wait and see what they do, see if they develop something sophisticated and then say we will de-

velop something sophisticated, we are not going to find ourselves in a position of military parity with the Soviet Union in the mid-1970's; we are shortly going to find ourselves in a position of military inferiority.

I yield to the Senator from Arizona.

Mr. COOPER. Mr. President, the Senator from Texas is not drawing a correct distinction between those who support and those who oppose an ABM system at this point.

Mr. TOWER. The Senator keeps saying he wants to wait and see what the Russians do.

Mr. COOPER. With respect to negotiations—not because of any fear that the Soviets can overcome us. It amazes me that those who want to produce new systems of nuclear weapons, who know that today we have full retaliatory power—we can destroy the Soviet Union 48 times over—are so glum and think the Soviet Union can overcome us.

Mr. TOWER. It occurs to me that our deterrent would be far more credible if we have a better ability to defend it, than if we cannot defend it against a first strike.

We do not have a first-strike policy; the Soviets do. If the first blow is struck, the Soviets will strike it. We do not intend to initiate a war. We do not choose war as an instrument of national policy. We are not going to war unless somebody else starts one. We do not have a first-strike mentality.

Thus it seems more logically that we ought to be in a state of preparedness to defend ourselves against a first-strike mentality.

I yield to the Senator from Arizona.

Mr. COOPER. Let me make a short statement; then I think we will understand each other better.

Those who oppose deployment this year have great confidence in the retaliatory power of the United States, as I believe the Senator from Texas has. The President has said. The Secretary of Defense has said. The testimony is that our ability to inflict upon the Soviet Union full retaliation and assured destruction would not be threatened until at least the middle 1970's.

The United States has something like 4,200 warheads, capable of delivery upon the Soviet Union when only 200 or 300 are needed for its destruction. The Soviet Union has some 2,000 deliverable warheads when only 200 or 300 would destroy this country. Year after year we keep adding to this armament. I do not know whether the figure is accurate or not, but I have heard it stated that the nuclear weapons of the United States and the Soviet Union are equal in destructive power to something like 15 tons of TNT on every person on the earth.

The continuation of the arms race will choke the world with nuclear weapons, far beyond the number needed to destroy our two countries and without ultimate and true security.

We differ, and I must be clear in saying so, in our conception of security. It may be a false hope that the arms race can be halted. It may not be possible to come to any formal agreement with the Soviet Union in a year—and frankly, I

do not think we could—but in the course of talks, each side knowing that it can destroy the other, that ABM and MIRV are in the offing and that each has the capacity to build up and match destructive power, this mutual danger and power might lead to an agreement, formal or tacit, that our countries will not go ahead with the nuclear arms race, and civilization may be saved. This is a year when negotiations are possible, and we should not deploy weapons we seek to control. This, I think, is the essential difference between those who oppose deployment of ABM and those who support it.

Mr. MANSFIELD. Mr. President, will the Senator yield to me?

Mr. TOWER. I promised to yield to the Senator from Arizona next.

I should like to respond by saying that to argue we have more bombs or more warheads than are required to destroy the enemy is like saying, in effect, that if there are a hundred enemy soldiers, you ought to make only a hundred rounds of ammunition; whereas sometimes you are going to use up a hundred rounds of ammunition on one enemy soldier.

The fact of the matter is that this is a long leadtime item. The President of the United States has determined that it is essential to the security of the United States. The fact of the matter is that negotiations with the Soviet Union traditionally drag out for a long time, so we could hamstring ourselves by being good guys, going to the bargaining table and negotiating with the Soviets, while all the time they are getting ahead of us, technically, because they are not observing that kind of restraint.

So they are getting ahead of us. Furthermore, as long as they think that we will hold back on technological development as long as they negotiate with us, they might negotiate for a long, long time, until they have the biggest arsenal in the world, until they have more weapons than they will ever need to assure their superiority over the United States.

I yield to the Senator from Arizona.

Mr. GOLDWATER. Mr. President, I want to assure the Senator from Kentucky that our basic desires in this matter are exactly the same. I would be the first to stand up and agree to disarmament talks, if they are multilateral. If we can be convinced that the Russians will do what they say, I think we should engage in these talks.

I will agree that they certainly have a first-strike capability. I disagree with the statement that we do. We do not. I think we have a retaliatory ability. However, the thing that bothers me relative to the amendment of the Senator is that we are doing precisely what he is seeking to do. So why have the amendment? An amendment to a bill this year providing that we may go ahead and do what we are doing can be changed in the next Congress.

Also, what disturbs me to some extent about the attitude of those people who oppose the ABM is that they see in this gesture a real possibility of getting together with the Russians.

I remind the Senate that we have been disarming in this country for about 8

years. The percentage of money we spend—and that includes \$2.6 billion a month for the South Vietnamese war—is about the same percentage of the gross national product as we spent in the forties during World War II.

When the South Vietnamese war ends and we are able to bring men home, every 100,000 men we bring home out of the service will mean that we will save \$1 billion. However, if we do not buy new weapons, we will be in a very disarmed position.

Having been through this, the Russians are not saying, "We like what you are doing. You are not building up your armament. Let us talk."

We were supposed to have 1,800 Minuteman. That figure was cut off at 1,000. Our submersive force is limited. The Russians are making eight "Y" class submarines a year and 15 attack submarines a year.

I cannot see any indication on the Russian's part that they want to disarm.

As I said earlier this morning, they have opportunities all over the world to show the world that they want peace and disarmament.

They ship 85 percent of the merchandise of war to our enemies in Vietnam. If they have any power in the Communist world—and I do not believe communism is a monolithic structure—and if they have any respect for themselves, certainly they can have some effect on the peace talks. We have been waddling around over there for a year or so and have gotten nowhere.

I am not even partially filled with a sense that we can reach a detente with the Russians if we are not building an ABM system or if we delay it.

I say this with all respect. I know exactly what the Senator has in his mind. His amendment would do precisely what we are doing.

Mr. COOPER. I think the Senator should vote for it.

Mr. GOLDWATER. No. I do not think you should vote for it. If the Senator votes for the bill, he will have his amendment included therein.

Mr. COOPER. Mr. President, I made the point awhile ago that in one way the amendment will do exactly what they are doing in that it will continue research and development, which the Senator has admitted is all they are doing now. The answer to the question is the time lag.

The Senator says—and this is from a majority of the Armed Services Committee—that it would delay—and I speak honestly—the political decision to deploy until we determine whether the Soviets will actually go ahead with the threat which has been projected by Secretary Laird, or if it will be possible in this year to see if we can reach some agreement.

Would the Senator agree that if we could control the arms race or if it could be stopped, we would be better off than if we were to go ahead with the nuclear race?

Mr. GOLDWATER. I would not argue that for 5 seconds.

Mr. TOWER. Mr. President, we are the only ones who have acted with restraint, as the Senator from Arizona has pointed out. We have leveled off, and they have gone up. Since 1950 we have

developed one superiority aircraft. How many have they developed?

Mr. THURMOND. Eighteen.
Mr. COOPER. Perhaps we do not care for them and they do not care for us. However, we might have a mutual interest. Both might want to save themselves from retaliatory destruction. To say that we have not armed ourselves is incorrect.

In 1959 or 1960, it was said a missile gap left the United States behind the Soviet Union. I have not served on the Armed Services Committee for some time, but I have tried to keep up with the State of our defenses and security.

The missile gap fiction came after the Soviets had launched sputnik. The Soviets had a launcher of great thrust and power and we did not have one.

Mr. GOLDWATER. Mr. President, I believe that was more of a political phrase than an actual phrase.

Mr. COOPER. We had bombers.
Mr. GOLDWATER. But we will not have them much beyond 1974, and we have no new bombers coming.

Mr. COOPER. In 1960 we had superiority. Neither force had strategic intercontinental missiles. However, we had more bombers. We were ahead.

After the missile gap scare came along, I might say that in 1961, after we had heard about the missile gap scare, I was going home to my State. I knew that I would be asked by people in my State about the missile gap.

I did not know about it myself. However, I knew that I could not talk to them honestly and say there was no missile gap if, in fact, there were.

I went to the Defense Department to see Mr. McNamara. I told him that I was going to my State and that I knew people would be asking about this question and that I had to speak to them honestly.

I said, "Is there a missile gap?"

He brought out a book—I will never forget the scene—about 12 inches long and about 6 inches wide. He opened up the book and showed me in that book every missile, bomber, everything we had that we could use against the Soviets. He showed me his understanding of what the Soviets had. Even then, we had superiority of at least 2 to 1.

He said, "You cannot use these numbers, but you can tell these people that there is no missile gap."

I said to him, "If this is correct, why do you not make a statement disclosing these figures to the people of the United States and to our enemies?"

I do not know whether I caused him to do it, but a month or two later he and Mr. Gilpatrick made speeches and told the world that we had superiority over the Soviets.

There never has been a day when we did not have it.

After that, we began to build intercontinental missiles. We built up to 1,054. At one point the Soviets had about 200 or 300.

Then we began to add another element to our retaliatory force—the Polaris. We built 41 with 656 nuclear missiles. We, of course, have over 7,000 tactical nuclear weapons in Europe and others elsewhere in the globe.

The Senator now says we are disarming and that the Soviets have been just

moving up to us. They have not gotten close to us yet.

Then we began to develop the MIRV. Am I correct?

Mr. GOLDWATER. The Senator is a little mistaken on some of his figures.

Mr. COOPER. I might be mistaken on a figure or two, but I am not mistaken on our overall superiority.

Mr. GOLDWATER. I have heard it stated on the floor quite a few times that we hold a 5-to-1 superiority over the Soviets in nuclear strength. That is not so.

Our nuclear strength does not include the warhead we have buried some place. Placing a warhead on a missile is not done in 10 or 15 seconds, 10 or 15 minutes, or 10 or 15 hours.

We have now approximately the same number of ICBM's as the Russians. I think they have 1,078. And, if we count the Titans, we have about 1,054.

We are not building any more sites or doing anything but modernizing the Minuteman force.

They are able with their SS-9 to deliver 25 megatons if they want to do so. I think that is rather a large load with which to do any targeting job that is needed. However, they have developed, the footprint in the Pacific shows, a MIRV. We are testing a MIRV also.

However, one of the figures Secretary McNamara was always careful to leave out was—and I tried to have it shown to the public—the 1,100 intermediate-range missiles that the Russians have aimed at us and our allies in Europe.

If we have to go to war in Europe, we will have to depend upon the use of their strategic destructive force. And the transportation capability and the missiles could deny us that.

So it is just as important to the Russians to have Europe targeted as it is to have our country targeted.

We are heavy in submersible missiles, but they are building nuclear submarines, 80 of the conventional type and six attack submarines.

I do not want to get into a technical discussion of what an increased Soviet submarine force and Soviet Navy means. I will discuss that in a speech I shall give next week. But the point I am bringing out is that we are now behind the Soviet Union in deliverable weapons for a retaliatory attack. We are not up with them—unless we want to count what we can carry in the bomb bays of our B-52's. But we have modified most of those bomb bays, but not as to the Mark bomber—I will not quote the number—which is a gigantic thing, but is now laid up, designed for 500-pound bombs. We are using them in Vietnam. It would take quite a modification program to replenish the force. So we can depend on the B-52, and we would probably have the same percentage of them get through as got through in World War II. But even in spite of the size of the bombs, we could not do the damage we would have to do. We have not kept pace with the Russians. I doubt whether we would have, had not Vietnam come along.

Vietnam forced Secretary McNamara to do something in the weapons field. He had lagged. I think this debate, if it shows one thing, is showing that for 8

years we had a Secretary of Defense who did not do anything for the U.S. military forces. I hate, as an American, to admit that with this country's great technological ability and great academic ability we have not produced a modern fighter plane since 1955 or 1956. I think we built 13 of one model, and they are now in storage on a desert in sunny California. It is the mach 3 type. But that is beside the point.

I hope, when my time comes to speak on this subject, to show the Senate that we have gone through a period of almost disaster, so far as our military goes; and that had it not been for the unfortunate war in South Vietnam, which pointed up immediately our deficiencies, we would still be suffering.

Mr. President, I ask unanimous consent to have printed at this point in the RECORD, a table showing the national defense purchases as a percentage of gross national product from 1958 to 1970.

There being no objection, the table was ordered to be printed in the RECORD, as follows:

NATIONAL DEFENSE PURCHASES AS PERCENT OF GNP, 1958-70¹

Year	Calendar year	Fiscal year
1958	10.3	10.2
1959	9.5	9.9
1960	8.9	8.9
1961	9.2	9.1
1962	9.2	9.2
1963	8.6	8.9
1964	7.9	8.3
1965	7.3	7.5
1966	8.1	7.5
1967	9.2	8.8
1968	9.2	9.2
1969	8.9	8.9
1970	8.5	8.8
		8.6

¹ Federal Government purchases of goods and services for defense on national income accounts basis in current dollars as percent of GNP in current dollars.

² Assumes GNP growth of 6 percent over calendar year 1968 and Defense purchases of goods and services of \$81,000,000,000.

³ Uses BOB estimate of fiscal year 1969 GNP and of Defense purchases of goods and services on national income basis of \$79,900,000,000.

⁴ Assumes GNP growth of 5 percent over calendar year 1969 and Defense purchases of goods and services of \$81,000,000,000.

⁵ Assumes GNP growth of 5 percent over fiscal year 1969 and Defense purchases of goods and services on national income basis of \$82,200,000,000 (Johnson budget).

⁶ Assumes GNP growth of 5 percent over fiscal year 1969 and Defense purchases of goods and services of \$81,100,000,000 (Laird budget).

Mr. GOLDWATER. Mr. President, I invite the attention of the Senator from Kentucky to the fact that in 1960 the percentage was 8.9; in 1970, it will be 8.8, and that includes the \$2.6 billion a month that is spent for the war in South Vietnam.

To get back for a moment or two to the amendment, I cannot see any psychological advantage, in dealing with the Russians, merely to tell them we are going to do what we will have to do anyway. We cannot develop these weapons fast enough to complete them by 1971 or 1972, 1974 is the earliest date. They know that.

One night the Senate had a secret session, the only one I ever attended. Of course, it was about as secret as Sunday's funny paper. But it was secret, and the distinguished Senator from South Carolina (Mr. THURMOND) told us about the Russian ABM.

Mr. COOPER. I was present.

Mr. GOLDWATER. That was several years ago.

Mr. COOPER. It was 1963.

Mr. GOLDWATER. Only today the Russians seem to feel that they have a system they can deploy. This is their third phase.

If we are going to say to the Russians, "We are never going to deploy this missile," I do not think we will entice them to the bargaining table. I think that if we do what the President has asked us to do—and he is the Commander in Chief; we are not—we are going to show them that we are no longer going to lag.

We do not want an arms race. I would like to see disarmament just as much as the Senator from Kentucky or anyone else. But I do not think we can bargain the safety of the 200 million people of this country.

Mr. COOPER. Mr. President, will the Senator from Texas yield 1 minute to me?

Mr. TOWER. Mr. President, I have a speech that I have been waiting 1 hour to deliver.

Mr. GOLDWATER. I thought the Senator had delivered his speech.

Mr. TOWER. I want to address myself to the amendment, so as to try to clear up some doubts that have been flying around, concerning the administration's position. I reiterate that the administration does not support either of the amendments and is not disposed to compromise its minimal proposal.

At this moment, I think it would be better if I presented my speech, because it covers many matters that we have already discussed, and others. Then I shall be glad to engage in a colloquy, and we can "colloquize" all night, if we wish.

Mr. GOLDWATER. I would not want to have this item go too far beyond the colloquy with the Senator from Kentucky, because it deals with PAR. It refers to the statement of Secretary Laird.

Mr. President, I ask unanimous consent to have printed at this point in the RECORD a paragraph, which I have marked, concerning the principal functions of PAR.

There being no objection, the paragraph was ordered to be printed in the RECORD, as follows:

The principles, functions, power level, and frequency of the PAR are quite similar to existing operational space and air defense radars. Hence, there is no need to build a complete R. & D. PAR, and the first PAR can be assembled directly at an operational site. The status of the work on this radar is as follows: The equipment configuration has been chosen, the design and performance specifications have been prepared, a partial prototype test model has been started and is now 40 percent complete, the design for the PAR structure has been finished, and the PAR computer is 25 percent complete. In short, work on the PAR is well along and no major problems are anticipated.

The PRESIDING OFFICER. The Senator from Texas has the floor.

Mr. COOPER. Mr. President, in view of the last statement, would the Senator from Texas be kind enough to yield me 30 seconds?

Mr. TOWER. I yield 30 seconds to the distinguished Senator from Kentucky.

Mr. COOPER. I thank the Senator. He has been very generous.

I ask unanimous consent to have printed in the RECORD a statement concerning the PAR radar, of which no prototype has yet been built, furnished me by Mr. Foster, of the Department of Defense. It is from the unclassified portion of a letter written to me by Dr. Foster which supplies answers to various questions I asked about Safeguard.

There being no objection, the statement was ordered to be printed in the RECORD, as follows:

There will be no prototype of the PAR constructed because the technology is well known. The PAR is similar to the FPS-S5 which is now in full operation at Eglin Air Force Base. The first PAR will be the tactical radar constructed on site and it will be ready for testing in mid-1972.

Mr. TOWER. Mr. President, I hope that we can keep the audience in the Chamber. A number of Senators have left, and I intend to cover quite a number of items. I hope that Senators will remain in the Chamber.

First, I wish to commend the distinguished Senator from Mississippi on the excellent job he has done in explaining the military procurement bill. It would be superfluous for me to expound on the material he has so ably presented.

I also wish to commend the ranking minority member of the committee, the distinguished Senator from Maine (Mrs. SMITH), for her able presentation of this important subject and for the work she did when the committee considered the bill. My objective today is to give my general views on the bill and to ask the support of the Senate for it.

Our committee's examination of the military requirements under the directions of our able chairman (Mr. STENNIS) has been most critical and exhaustive. Wherever we have found room for reductions without exposing this Nation and its military forces to undue risks, we have trimmed the requests. In areas where there appeared to be unnecessary duplication of effort among the services—as in the case of air-to-surface missiles, for example—we have made reductions. Projects which we felt, however reluctantly, could safely be postponed have been deferred—such as fast deployment logistics ship, for example. Overall, the Committee on Armed Services reduced the military request for equipment by over \$860 million. We reduced the request for research and development—an area in which I have always supported a strong effort—by even more: by \$1,042 million. But however much we may have wished to make even greater reductions in military expenditures, it became very apparent during our deliberations that to do so without some concomitant reduction in our worldwide commitments would be folly.

Until our involvement in Vietnam ends, we must provide our fighting men there with the most effective weapons we can produce. As long as we maintain forces in Europe to deter and repel Communist aggression, we have an obligation to man and equip them properly. We cannot ask our military men to be first-rate soldiers, sailors, and airmen around the world if

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we give them second-rate support here in Washington.

I sense among Members of Congress and the public a temptation to try to alter our military commitments by manipulating the military budget. We must not succumb to this temptation. There are valid questions concerning our national goals and priorities which ought to be debated, but we cannot resolve these problems simply by the indiscriminate withholding of funds. It is the responsibility of this Congress to support adequately and properly those forces which are required—even while this country's role in international affairs is being decided.

To do this, a certain amount of modernization of equipment is essential. The bill before the Senate provides for only very modest progress in that. The same is true for research and development. We must not be lulled into a state of insecurity either by reassurances of good intentions from the Communist world or by the vocal dissent here at home. We cannot afford to err on the side of unacceptably lowered security under the guise of savings; any indiscriminate reductions could cost us dearly in the long run.

Furthermore, we must recognize that the expenditures which are authorized by the bill before the Senate fall generally into two categories. First, we have those expenditures needed to insure that our Armed Forces are capable, up to a decade or more from now, to meet those requirements arising from threats to our national security. I see nothing in the world situation to make me believe that we can safely disregard these threats. Thus I see no justification for further cuts in our long-range programs.

The second major category of expenditures in this bill is to support our men in Vietnam. I will not predict what the judgment of history on our involvement in Vietnam will be. On the other hand, I will predict that no Senator wants to have on his conscience a single American death in Vietnam which results from an unwise reduction of funds to support them. There are some signs of relief from our heavy military commitments, however. Skeptics notwithstanding, we are making progress toward disengagement in Vietnam. The South Vietnamese forces are improving slowly but surely.

We are beginning an ever-increasing measure of stability to Vietnam, and loosening the hold of the North Vietnamese and Vietcong on the country. We must have the patience and resolve to see the struggle through to a satisfactory conclusion while at the same time, keeping our guard up elsewhere around the world. That is what the major portion of this year's authorization bill is designed to do.

While the funds allocated for the continued development and initial deployment on the Safeguard anti-ballistic missile system do not represent a high percentage of the money authorized in the military procurement bill, they have been the subject of greater discussion and debate than any other appropriation authorization in the bill. Many of my able colleagues on both sides of the aisle have spoken out on the issue, and I suspect

that all will voice an opinion before the debate is through.

This is all well and good for the importance of the issue at hand justifies considerable discussion.

It has been interesting to note the various ways in which the issue before us has been phrased. Some seem to see it as a test of our determination to establish national priorities. Others see it as a measure of our determination to seek peace through disarmament. Still others say that the issue is to what extent this body will exert direct control over expenditures and recommended expenditures made by the Department of Defense. Indeed, it has been suggested that the ABM itself was not so very important, but that it was merely a vehicle to provide the Senate with an opportunity to demonstrate a "get-tough" policy with the Department of Defense and, presumably, the military-industrial complex—whatever that term may encompass.

While all of these issues, or all of these manners of stating the issue before us are important—and deserving of comment and analysis by this body—they do not go to the heart of the matter. What is before us for discussion is the authorization of funds for the Safeguard anti-ballistic-missile plan—a plan proposed by the President and approved by a majority of the full Senate Committee on Armed Services. Therefore, we should concentrate our efforts upon determining the merits and demerits of the Safeguard weapons system—and not get completely entangled in an attempt to correct all of our previous shortcomings in disarmament, legislative independence, and establishment of priorities. Granted, it is important that these issues be discussed in order to place the Safeguard ABM system in the proper context of past, present, and future events. However, we must not lose sight of the subject under discussion—we cannot allow the ABM to become a mere vehicle to be used to raise other issues. To do so, I fear, would open the doors of this Chamber to emotionalism at a time when reason is essential.

As I have said, what is before us is the military procurement bill, a part of which authorizes funds for the Safeguard ABM system. We must decide then, whether to authorize those funds as part of our overall defense plan. Therefore, the issue is this: Will the Safeguard ABM system make a great enough contribution to our national security to justify the expenditure of the \$759.1 million authorized in the bill before us?

Because I am deeply committed to the approval of the Safeguard plan, my answer to this question is "yes"—and I shall share my reasons for favoring approval with Senators, who, in the final analysis, will resolve this issue.

It seems to me that there are two main considerations directly relevant to the issue as I have stated it. I do not mean to suggest that all other commentary is irrelevant. I simply wish to avoid all but the essential points. Those main considerations can be phrased best in the form of simple questions: Are the costs of the Safeguard ABM system acceptable? How

well will the Safeguard system work? I think the answers to these simple questions demonstrate the need for approval of the initial implementation of the Safeguard system.

So many cost figures have been bandied about as authoritative that it is very difficult to separate fact from fictional estimates. I think it is absolutely essential that we remember the exact amount which we are talking about in this bill today. That amount is \$759.1 million. We are not here to accept or reject a \$20 or \$100 billion weapons system as some would have us believe.

Those who claim that the costs of the system will reach the latter amount should remember that not one penny more than \$759.1 million will be spent without further approval of this body. I, for one, will feel no obligation to approve a \$100 billion request for a missile system next year simply because I voted "aye" to spend \$759.1 million for it this year. To Senators who are concerned about cost overruns as I am, I say this: If the next request for the funding of this missile system is so great as to indicate that we are not getting a dollar's worth of national defense for each dollar spent, we can simply refuse to further fund the program.

For the present I would like to present reasons for accepting the initial phase costs of the Safeguard ABM system. The continued research and development, when coupled with minimal deployment, will do much to provide us with accurate estimates of the cost of missile defense. Probably the major reason for the proliferation of cost estimates on the ABM is that no actual construction and deployment of missile defense weaponry has been done. Instead, we have always concentrated on retaliatory missiles because we assumed that the "cost exchange ratio" between defense and offense was in the nature of 100 to 1. This meant that \$1 spent on offensive weaponry would develop equipment sufficient to overcome \$100 worth of defensive missile weaponry. There is reason to believe, however, that the cost exchange ratio is actually much lower. Our own difficulty in developing penetration aids designed to insure that our missiles pierce Russian defenses has shown that penetration is an expensive thing to insure. On the other hand, as we become knowledgeable about defensive weaponry, we are able to reduce the costs of developing it. Consequently, there is reason to believe that the cost exchange ratio may be approaching 1 to 1.

The initial phase of the Safeguard ABM system will greatly increase our ability to understand the cost exchange ratio. After minimal deployment we will have an actual example of defensive missile weaponry to serve as a basis from which to more accurately estimate the costs of defense vis-a-vis offense. If it turns out that the cost exchange ratio is still very high, we can opt for retaliatory weaponry. But, if it is 1 to 1 or less we can concentrate our efforts on defensive weaponry. Bear in mind that we do not have a first-strike mentality; that the only reason for this kind of weaponry is to defer offensive weaponry.

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The point is this. Without some actual deployment, we will know no more about the cost exchange ratio than we do now. If we do not deploy, we will have abandoned the entire concept of defensive missile systems without ever realistically examining the cost of such weaponry. We will have said, "Because we are not sure that the system has an acceptable cost, we will not spend even a small amount to find out if it is acceptable." We will have made a decision on the basis of ignorance rather than on the basis of knowledge. This, I suggest, is not sound.

Before I leave the question of cost, I would again like to point out that a "yea" vote on the military procurement bill as it stands now would obligate us to spend only \$759.1 million on the Safeguard ABM system. The expenditure of that money will greatly increase our ability to judge whether to proceed with defensive missile weaponry in the future. We will have the opportunity to make that judgment in the next military procurement bill in the next Congress.

EFFECTIVENESS OF THE SAFEGUARD

A great debate has raged over whether the Safeguard ABM System is technically effective. Scientists of every pedigree imaginable have come forward with statements, position papers, and books to show why the Safeguard system will or will not work. I am not a great scientist and can add little to the technical expertise which has been made available to all of us. I barely passed the minimum requirements in physics as a freshman in college.

However, I think it is important to stand back from the battle a moment and view the overall situation. The situation is this. On one side, we have a group of distinguished scientific minds who say that the Safeguard cannot work because it is too easily overpowered by the offense, which has many options for deception. In addition, they believe that Safeguard can never be brought up to and maintained at the peak of perfection required.

On the other side, we have an equally eminent group of scientists who say that the Safeguard system will work well enough to do the job. They argue that protection of missile sites does not require the great degree of freedom from technical breakdowns that a city defense would need to have.

In my opinion, we do not, at this time, have to irrevocably commit ourselves to one side or the other. Refusing to approve deployment of the Safeguard system would be equivalent to accepting the views of the "no" scientists and rejecting those of the "yes" scientists. Approving the Safeguard plan, however, would not amount to an acceptance of the "yes" scientists. It would simply be a decision to proceed to find out who is correct. It appears, then, that we have a choice between a course of action which stops the scientific search and one which continues it. When faced with a decision to close options or keep them open, I suggest that it is militarily sound to retain options.

Finally, I would like to say that I am impressed by the distinction between technical effectiveness and military ef-

fectiveness. The mere existence of the deployed ABM forces the enemy to re-evaluate his military stance. Unless there is "assured destruction capability," an attacker cannot attack a target. The retaliatory risk is too great. Consequently, the mere existence of Safeguard would force a potential enemy to concentrate more missiles on the protected targets. This means that for other targets there will be fewer missiles. Perhaps there will be no missiles for some targets. So far as those targets are concerned, then, the Safeguard system has been militarily effective. They have not been destroyed because they have not been attacked. They have not been attacked because of the Safeguard.

In addition, inability to be sure of "assured destructive capability" might very well deter a potential attacker from becoming an actual one. This, of course, means that the Safeguard system, which will have created this doubt, will have been 100 percent effective.

Mr. President, I have studied this proposal as thoroughly as time has allowed. I know that the question is complex. But I believe that an analysis of the two factors, cost and effectiveness, which directly relate to the issue, dictate the conclusion that the Safeguard ABM plan should be approved.

The cost of the system is acceptable. Let me repeat: we are not being asked to commit ourselves to the expenditure of \$10, \$20, or \$100 billion for a weapons system. If we will simply concentrate on the actual dollar amount requested in this bill, we find that we are talking about \$759.1 million. That is all that is in the bill.

For this money, we get the initial phase of Safeguard. We get a knowledge of the effectiveness of defensive missile systems, and we get the groundwork for actual deployment of the missiles. This alone represents a satisfactory return on our investment. But, Mr. President, we may never know what else we have gotten. It may well be that the Safeguard ABM system will contribute to the prevention of a disastrous nuclear holocaust. It may then have saved the lives of countless American citizens and people around the world. But we will never know this. I will not be able to come into this Chamber and definitively prove that Safeguard contributed to the existence of peace. Neither I nor anyone else can show a war that did not happen.

On the other hand, we may find, a year from now, that missile defense systems do not represent the most effective deterrent to nuclear attack. We may find that we should abandon the ABM. But, let us not do so now. Not now, when there is every bit as much reason to believe that the Safeguard system will work as there is to indicate that it will not work. So, let us proceed. If we err, let us err by acquiring too much knowledge rather than by acting out of ignorance. If we err, let us err by having too much national defense. We certainly owe that much to the citizens of our country and to the people of the free world.

Mr. President, 2 days ago the distinguished Senator from Maine (Mrs. SMITH) delivered an extremely impor-

tant message to the Senate. She expressed her great concern over the disparagement of our men in uniform for what some see as past mistakes. I, too, feel that such disparagement is completely unwarranted. We have a grand tradition in this Nation of civilian control of the military. Our military men wholeheartedly support this tradition. They have done what their civilian leaders have told them to do. They have done what they were told to do with the tools that their civilian leaders have made available to them. And, in some instances, they have done what they were told to do in the specific manner directed by their civilian leaders, although the military mind would have advised otherwise. To assign them the blame when events turn out not as all would desire is manifestly inconsistent and unfair. Our soldiers, sailors, marines, and airmen should be granted, instead, the Nation's praise. After viewing their efforts around the world, after seeing them in combat conditions, I can affirm the fact that they are the finest generation of fighting men this country has ever produced. I am proud of them and their accomplishments.

Mr. President, I am confident that the Senators here today will base their decisions on this authorization bill on a sober and rational evaluation of the facts, as our committee has done. Only in this way can we keep our country strong as we search for solutions to the many problems which face us. I urge the Senate to approve this bill. In my judgment, we cannot afford to do less.

Mr. PEARSON. Mr. President, will the Senator from Texas yield?

Mr. TOWER. I yield.

Mr. PEARSON. Mr. President, I want to commend the Senator from Texas for his most careful and excellent analysis of the position supporting his views. It has been my very great honor for 2 years to sit in the chair next to his as a member of the Armed Services Committee.

Earlier, the Senator from Texas made reference to the fact that if the so-called Cooper-Hart amendment were to be adopted, there may very well not only be a lapse of time but also a loss in the technical and scientific team which we have put together. Am I correct on that point?

Mr. TOWER. That is correct.

Mr. PEARSON. I do not have the opportunity to sit in the hearings as the Senator does, but I recall the excellent presentation made by Under Secretary of Defense Packard before the Republican Senate group, when he made a pretty good point in reference to those people who were opposed to the system on the basis of its cost. He said that in relation to phase I, if we go back merely to research and development, we will spend as much money as we will if we proceed with phase I deployment.

That, as I understand it, is the thrust of the amendment offered by the Senator from Kentucky and the Senator from Michigan. They do provide the full amount.

I also recall—and the Senator may correct my memory if it is faulty—that at the time of our discussion, he indicated

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we would be able to hold together the scientific and technical team to date, without deployment in view; also—if I am correct in my memory—that we could do so in the future without proceeding to deployment.

Does the Senator recall those conversations with Under Secretary of Defense Packard?

Mr. TOWER. I am not sure that I remember what it is the Senator is referring to.

Mr. PEARSON. In the question-and-answer period, I thought he made the statement that even if we continued with research and development, we would be able to maintain our scientific and technical team.

Mr. TOWER. I would say that we could, even though we made no plans for deployment; but I do not recall that.

Mr. MURPHY. Mr. President, will the Senator from Texas yield?

Mr. TOWER. I yield.

Mr. MURPHY. I think that I recall the conversation. I think the word "deployment" may be one that is creating a hangup here, because I think in the discussion his intention was as to construction. Deployment is a word which envisions many spreadings out of this thing, which is not in the present plan. The present appropriation bill calls for construction. Until there is a construction, we do not have the unit. I think he was talking about the figure, as the figure breaks down as to the cost of research and development.

I believe that pure research, without possible development, amounts to about \$400 million. I think the construction asked for in the bill adds less than \$400 million. It comes to about \$380 million. So that the figures which we have been hearing, of \$700-odd million, includes research, development, and construction as envisioned and requested by the President under the present bill. I think that is the thrust of what the Senator said.

Mr. PEARSON. I am grateful to the Senator from California. I merely wanted to clarify the point that the full amount is made available under this amendment for research and development and make reference to what I understood the Under Secretary of Defense to say in relation to maintaining this very excellent scientific and technical team.

On another point, I thought the Senator from Texas made reference to the fact that the ABM, as authorized under this proposal, was essential as a bargaining point for the President and for those who represent this Nation.

Mr. TOWER. I believe it is, and the President thinks it is.

Mr. PEARSON. I have some trouble in accepting that belief. Let me indicate to the Senator why I feel that way. We have a lot of figures offered here in the Senate, but with reference to the ABM, the Minuteman II, and the Titan, is it agreed that we can use the figure 1,054?

Mr. TOWER. It is 1,054.

Mr. PEARSON. The Senator said we had 1,078 ICBM's.

Mr. TOWER. The figure is 1,078.

Mr. PEARSON. So if we add our ICBM's and the Polaris together, and add their ICBM's and their Polaris-type

missiles together, we really come, in round figures, to about 1,700 for the United States to 1,100 for the Soviet Union. Is that correct?

Mr. TOWER. The Soviet Union has missiles that can be launched from ships. I am not sure what the figures are. They do not have submersible missiles. They do not have any Polaris- or Poseidon-type missiles.

Mr. PEARSON. What is the Senator's recollection of their ICBM's?

Mr. TOWER. I am sorry; I cannot give that figure. I do not have it now.

Mr. PEARSON. In relation to bombers, the estimate is that we have about 650 to their 150. Is that correct?

Mr. TOWER. That is correct. To be sure, they have some other bombers, but those bombers do not have a long range.

Mr. PEARSON. I am talking about strategic bombers.

Mr. TOWER. About 150. There are others they could use in Europe.

Mr. PEARSON. I understand; but we are talking about strategic forces.

Mr. TOWER. I would say they would be strategic forces for use in Europe.

Mr. PEARSON. I am talking about strategic forces as they relate to an ABM defense. There are many measurements for strategic force, but when we move to the ICBM's, the Polaris, the intercontinental bombers, and the number of warheads on each side, it is my understanding we have about 4,300 warheads on our side—

Mr. TOWER. I agree with all this. I see the Senator's point. We are currently superior to the Soviet Union in terms of strategic power. I think we are superior in most areas. However, I think in some areas they have superiority to us. But, overall, we do currently possess superiority.

Mr. PEARSON. Now I come to my point. I think terms like "superiority" and "parity" in relation to thermonuclear warfare are useless terms. I think the President's use of the term "sufficiency" is the correct one. But if we are superior in numbers of ICBM's, superior in numbers of bombers, superior in numbers of warheads—

Mr. TOWER. Superior overall.

Mr. PEARSON. Then I fail to see why we have to have an ABM as a bargaining point to go to the bargaining table, when we are superior in all these other fields.

Mr. TOWER. We are superior this year. At the present rate of military development in this country and the Soviet Union, we will be in a position of inferiority by the mid-1970's.

Mr. PEARSON. The Senator assumes, then—

Mr. TOWER. I assume that they are going to keep on doing what they are doing, and I think it is dangerous to proceed on any other assumption.

Mr. PEARSON. Will the Senator also assume that, having reached the level of 1,000 ICBM's—and that was the figure that was determined almost one decade ago—we are going to maintain that level in strategic weapons?

Mr. TOWER. Our present situation is good. The Russian's R. & D. is much better than ours. From the standpoint of submarine technology, they are very

good. As a matter of fact, they are building at a greater rate than we are, and we cannot hope to think that one day they will not have Poseidon or Polaris type submarines. As far as air superiority is concerned, they are superior to us now.

Mr. PEARSON. In swept-wing aircraft and in numbers of submarines?

Mr. TOWER. They are superior in numbers of submarines. I do not think they are superior in quality right now, but they may be some day. The Senator from Maine (Mrs. SMITH) has some interest in that subject. I think she can enlighten the Senator at much length and has far more expertise in that subject than I have. But the fact is that we have lagged in development or in the level of research and development. We have not developed a superior research and development program. We have stabilized it, and the Russians keep going up and up. They keep devoting more and more of their resources to development. We cannot proceed on the assumption that they are going to have a sudden change of heart and do differently than they are now proceeding to do.

Mr. ERVIN. Mr. President, will the Senator yield?

Mr. TOWER. I yield to the Senator from North Carolina.

Mr. ERVIN. Is it not a fact that the United States has not been building big bombers capable of carrying a nuclear load to Russia during the last few years?

Mr. TOWER. We have not. The B-52 is an old weapon.

Mr. ERVIN. Is it not a fact that the Russians have in their bomber the finest bomber of any nation on the face of the earth?

Mr. TOWER. I do not know the relative performance figures. It does seem to be very good. They do not have it in the numbers we have, but they have a good one, and it is much newer than our B-52.

Mr. ERVIN. According to information by General Twining, he says it is the most dependable bomber in existence.

Has the Senator read a copy of the letter which Admiral Rickover wrote to the Senator from Rhode Island (Mr. PASTORE)?

Mr. TOWER. I do not recall it.

Mr. ERVIN. It was inserted in the CONGRESSIONAL RECORD. Admiral Rickover says that, with the exception of the Polaris submarine, Russia has a vast superiority in submarines over the United States. He also states in that letter that the Russians now have the capability of building Polaris submarines at such a rate that at present rates they will equal or overtake us in Polaris submarines by 1974.

Mr. TOWER. I was aware of that information.

Mr. PEARSON. Mr. President, will the Senator yield?

Mr. TOWER. I yield to the Senator from Kansas.

Mr. PEARSON. Mr. President, I am grateful for the contribution made by the distinguished Senator from North Carolina, because he brings me to my next concern, and that is in relation to the cost of the ABM. I understood that the ABM, as first announced, was a system that would cost about \$6.5 billion.

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Then research and development were added to it. Then the cost of warheads was added. Then the cost of possible sites in Alaska and in the Hawaiian Islands was added. So it is now, as I understand it, about a \$10.4 billion system.

I make reference to the cost, not because I have so much concern with it; I have a concern, but it is not a commanding concern that this money should be pulled out and put into so many social welfare programs that many of us would like to promote. But the point was made, and made very well, that we are behind in submarines, we are behind in adequate manned bomber aircraft, and in conventional systems that we usually associate with the kind of warfare which is going to be essential if we are not going to be children of the concept of massive retaliation, which was so massive that it was useless.

We have great expenditures to make in relation to our naval fleet, in which some authorities say we are 20 years behind the Soviet Union. I did not see the letter written by Admiral Rickover, though I have the highest regard for him. For example, a Navy fighter to come after the F-111, with which we have not had very good luck—

Mr. TOWER. Mr. President, if the Senator will yield—

Mr. PEARSON. One can go on down the list. There are also other limitations.

Mr. TOWER. Those are in the bill. We have the F-15 and the F-14, the Air Force and Navy patrol planes. They are in the bill. If the Senator wishes to offer an amendment providing for additional submarines, additional shipbuilding, and additional airplanes, I will support him, provided he supports me on the ABM.

Mr. PEARSON. I do not think we can make that deal, Mr. President. But if the Senator will indulge me, I think the point I was trying to make is valid. Perhaps there are within this procurement bill adequate funds to build up our conventional forces. I accept the judgment of the committee on that. I simply wish to make the point and express the concern that as the cost noses upward, as the \$6.5 billion becomes \$10.3 billion in the space of 2 months, in the years ahead, when the cost of this program jumps more drastically, we may very well feel the pinch on some very necessary, conventional warfare items, a pinch similar to that felt in connection with the Vietnam war.

Mr. TOWER. Mr. President, I shall stand warmly at my friend's side any time the question comes up about development of weaponry. I think we need a full spectrum of tactical weapons, everything from improved rifles to the most sophisticated nuclear weapons. I believe, too, in a full spectrum of deterrents. You can deter nuclear war if you have nuclear weaponry to do it with.

I think basically the argument in behalf of this amendment is that we should not make a political decision to deploy the ABM now, because apparently it might rupture the good and wonderful relations we have with the Soviet Union, and the immediate prospect for negotiations for disarmament. They say we are basing our arguments on assumptions;

but this is the most dangerous assumption I can think of to base an argument upon.

Mr. ERVIN. Mr. President, will the Senator yield, so that I may lay down a premise and then ask a question?

Mr. TOWER. I am happy to yield.

Mr. ERVIN. I saw former Secretary of State Dean Acheson testifying before what I call the Proxmire committee with respect to the cost of national defense, and he said, in reference to the cost of national defense, that we could overspend for national defense, or we could make the determination to underspend for national defense; and he said the difference between the mistake one way or the other would be this: If we overspend for national defense, and deploy some weapons the future shows are not needed, all we have done is lost some money, but if we underspend for national defense, we might run the risk of losing everything, including our liberty. Does not the Senator think that was a sound observation?

Mr. TOWER. I certainly concur with that statement; and I have always said we cannot have a great society, or an affluent society, or a free society, unless we first have a secure society. That is all we are trying to achieve here.

I would love to see the day when we can beat our swords into plowshares and our spears into pruning hooks. I detest war as much as anyone. But while there are nations in this world that choose war as an instrument of national policy, nations with aggressive designs on the rest of the world, we cannot afford to be ill prepared.

Mr. ERVIN. I should like to ask the Senator if it is not a teaching of Marxism, as adapted for Russia by Lenin, that there is an irreconcilable conflict between a nation with a free enterprise system of government, such as ours, and a nation with a Communist system of government, such as Russia; and if it has not been stated on many occasions by leaders and officials of the Communists that there will be a fight to the finish, either economically, politically, or militarily, between these two irreconcilable systems, until communism triumphs.

Mr. TOWER. This, of course, is part of the Marxian historical analogy, that ultimately this will come about, that ultimately we will have a Communist world; and, indeed, for communism to succeed at all, the whole world has to be Communist. Then, when that happy day occurs—happy in Marxian eyes, of course—all the trappings of government will be done away with, and we will live in an anarcho-syndicalist society. I do not believe the Russians believe that is ever going to happen, but the fact of the matter is that they do have imperialistic designs on the rest of the world, and that is a certainty.

Mr. ERVIN. They have a combination of Russian imperialism and communism as modified to adapt it to Russia by such Communists as Lenin.

Mr. TOWER. Right.

Mr. ERVIN. Does the Senator from Texas understand, as does the Senator from North Carolina, that virtually ever since the end of the Second World War,

the United States has been attempting to negotiate at lower than summit levels with the Russians to obtain an enforceable arms limitation agreement?

Mr. TOWER. We have certainly tried.

Mr. ERVIN. And does the Senator think that after all these years, from the end of the Second World War down to the present date, that we now have any additional reason for thinking that Russia is any more susceptible to being persuaded to enter into any such agreement than it was in years past?

Mr. TOWER. They do not seem to be any more susceptible, though some of my friends seem to think that if we cut the ABM out of this bill, the Russians will immediately become so friendly that they will want to sit down and negotiate with us at once.

Mr. ERVIN. Does the Senator from Texas recall, during the Eisenhower administration, that there was an agreement, not embodied in a treaty, between Russia and the United States, for a moratorium on testing nuclear weapons; that the United States kept that agreement and did not make any preparations to test nuclear weapons, and then Russia put an end to the agreement, and immediately thereafter exploded the biggest nuclear weapon ever exploded in the history of the world up to that time?

Mr. TOWER. That is correct.

Mr. ERVIN. Does the Senator feel that we can have any confidence in the benevolence of the politburo, as long as Russia maintains imprisoned behind the Iron Curtain the people of Poland, the people of Czechoslovakia, the people of East Germany, the people of Rumania, and the people of Bulgaria?

Mr. TOWER. I certainly am less than sanguine about them. I trust the Senator was here the other day, and heard the Senator from Washington (Mr. Jackson) present his very fine paper, just going through the traits and personalities of the present Soviet hierarchy. They are Stalinist to the core.

Mr. ERVIN. Will the Senator from Texas accept my assurance that I have just finished reading a book by a French journalist who was for many years in Moscow, whose name was Michel Tatu, in which he states that the only reason Khrushchev took the missiles out of Cuba was because the United States possessed overwhelming superiority in intercontinental ballistic missiles?

Mr. TOWER. Yes, I accept the Senator's assurance.

Mr. ERVIN. I ask the Senator further if he will accept the assurance of the Senator from North Carolina that the Senator from North Carolina has just read a book dealing with Russia by a man with a Russian name, in which he says that the men who control Russia at this time are so secure in possession of the power of rule over that nation that there is no reasonable hope that Russia's attitude will be susceptible of being changed at any time in the foreseeable future, by either evolution or revolution within Russia.

Mr. TOWER. I do accept that assurance, and I concur.

Mr. ERVIN. I thank the Senator.

Mr. STENNIS. Mr. President, will the Senator yield to me?

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Mr. TOWER. I yield to the Senator from Mississippi.

Mr. STENNIS. Mr. President, I very definitely thank the Senator. I know the Senator has made an outstanding contribution to this subject, which is quite involved.

The Senator made an outstanding contribution. I commend highly the reading of his speech, no matter which side of the subject a Senator may be.

It is a difficult matter, but the Senator has handled it splendidly, as he always does in a matter that he sets himself to give special attention to.

I shall wish later to make a few brief remarks about the provision and use of this money and how it might be applied to the amendment of the Senator from Kentucky, who has been called from the floor temporarily. I would rather bring the matter up when the Senator from Kentucky is present. However, for the time being, I refer Senators to page 25 of the committee report, where the money part of the ABM is set forth in great particularity. The supporting information came to the committee from the Department of the Army. And they are bound by it in a double way, because it is what they were justifying it on and what we included it in the bill on.

We have in round figures \$400 million particularly for research and development. However, referring now to page 25, the committal for the \$345.5 million is for one missile site radar at Grand Forks; one missile site radar data processor at Grand Forks; training equipment; advance procurement for one other perimeter acquisition radar and one other missile site radar at Malmstrom; and the relatively small sum of \$600,000 for leadtime missile parts.

For the actual hardware, the actual missile, only \$600,000 is included in the bill, and that is for a long leadtime item for the guidance system. That requires an unusual time.

I refer this now to the Senate for decision on the money. I will make some remarks later.

Again, I commend the distinguished Senator from Texas for a fine presentation.

Mrs. SMITH. Mr. President, will the Senator yield?

Mr. TOWER. I yield.

Mrs. SMITH. Mr. President, first I take this opportunity to thank the distinguished Senator from Texas for his very kind words to me as a member of the Armed Services Committee. The Senator has made a great contribution during the hearings in helping the committee bring to the Senate what I consider to be a good bill.

Mr. President, the Soviet Navy has in late years assumed new responsibilities far beyond its traditional ones of defending the seaward approaches to the U.S.S.R. and supporting the land forces. It has made great strides in developing forces to carry out these new missions. The impact of new roles and growing capabilities is demonstrated by the striking increase in naval operations beyond home waters and by the current expansion of the Russian submarine forces.

Past Soviet efforts to develop effective long-range seapower were deterred or deferred by economic conditions, purges, leadership changes, war and technological lag. In recent years, however, Soviet naval expansion has been relatively unencumbered by such problems. Today's Soviet naval programs bear witness to the capability and determination to create a significant sea-launched ballistic missile force and a formidable fleet to counter the U.S. Navy in peace and war anywhere in the world. Beyond this, the Soviets are building a modern navy with which to project a naval presence overseas in support of Soviet political objectives.

The Soviet submarine force consists of some 375 units, of which 65 are nuclear powered. The entire force, unlike that of the United States, is of post-World War II construction. It poses a triple-dimension threat, consisting of a rapidly expanding force of ballistic missile submarines, numerous torpedo attack boats, and significant numbers of submarines uniquely equipped with surface-to-surface cruise missiles. In the last 2 years a new class of ballistic missile submarine and several classes of attack submarines have become operational. The former is roughly comparable to our Polaris submarines, the latter represent improved general purpose designs.

Today, the Soviet surface navy consists of some 195 major combatants including a helicopter ship, nine guided missile cruisers, and 30 guided missile destroyers. The great majority of these ships are less than 15 years old.

Soviet warships are of excellent design and well armed. The highly publicized helicopter ship *Moskva* carries an imposing array of surface-to-air missiles, antisubmarine weapons, and new and sophisticated electronics, in addition to her ASW helicopters. A sister ship to the *Moskva*, the *Leningrad*, is expected to be operational soon. The new guided missile cruisers of the *Kresta* class carry an equally impressive combination of surface-to-surface and surface-to-air missiles as well as guns and antisubmarine weapons. A third example of advancing technology is the *Kashin*-class frigate. It boasts strong air defense and antisubmarine armament, and is the largest type of warship in the world powered solely by gas turbines, giving it a maximum speed of 35 knots.

The Soviet Navy is operating out of its home waters for longer periods, in greater numbers, and at greater distance than ever before. It is showing the flag in the Mediterranean, off both coasts of Africa, and elsewhere along the entire Indian Ocean littoral.

These developments are making the Soviet Navy a force of growing importance in our strategic calculations. Apart from the challenge it would pose in wartime, its growing capability to project Soviet power into distant areas is likely, if left uncountered, to have a profound effect on political developments in the emerging nations and uncommitted world.

Mr. President, during the hearings

there was an exchange of letters between the Senator from Washington (Mr. JACKSON) and Admiral Rickover which helped to a better understanding of what happened with respect to the nuclear submarines.

I ask unanimous consent that these two letters be printed in the RECORD at this point.

There being no objection, the letters were ordered to be printed in the RECORD, as follows:

U.S. SENATE,
COMMITTEE ON ARMED SERVICES,
Washington, D.C., June 5, 1969.

Vice Admiral H. G. RICKOVER,
Naval Ships Command, Department of the
Navy, Washington, D.C.

DEAR ADMIRAL RICKOVER: I have read your April 25, 1969 letter to Senator Pastore with great interest. As usual, you have reduced a complicated issue to a few basic questions.

There is one subject vital to this issue in which I know the American people will respect your judgment—nuclear submarines, and in particular, our Polaris submarines.

I would appreciate your assessment of the effectiveness of our Polaris forces after 1972 in light of the remarkable advances recently made by the Soviet Union in their submarine and anti-submarine capability. I am particularly interested in your views concerning the ability of our deployed Polaris submarines to survive a planned attack by Soviet anti-submarine forces in the mid-70's time frame.

I would hope your response can be written in such a way that the American people can have the benefit of your views.

Sincerely yours,
HENRY M. JACKSON,
U.S. Senator.

U.S. ATOMIC ENERGY COMMISSION,
Washington, D.C., June 12, 1969.

HON. HENRY M. JACKSON,
U.S. Senate
Washington, D.C.

DEAR SENATOR JACKSON: This is in response to your letter of June 5, 1969, asking for my views concerning the ability of our Polaris submarines to survive a planned attack by Soviet antisubmarine forces in the mid-1970's time frame.

Let me first say that based on the best evidence available, I believe that today our Polaris submarines are safe from a massive, neutralizing blow. Further, I am not aware of any valid information indicating that the Soviets possess a means to track and destroy our Polaris submarines while they are on station. However, there is no assurance that this situation will prevail for long.

There is, in fact, evidence that the Soviets are actively engaged in a determined effort to acquire the capability to neutralize or destroy our Polaris force. They have developed and they continue to develop faster and quieter submarines. They are experimenting in all phases of submarine and anti-submarine warfare—we are not. In fact, during the past year alone they have developed several new types of nuclear submarines; we have developed only one new type in ten years. It is clear that a major objective of their naval programs is to invalidate our own Polaris system.

Given the recent Soviet progress in undersea warfare and the sheer magnitude of their nuclear submarine program, the conclusion is inevitable that, unless we are willing to match their effort, they will surpass us in this field during the 1970's.

Of course, in the present era of rapid technological change accurate prediction of future military developments is difficult, if not impossible even for such a relatively short period as five to ten years. It is equally difficult to predict the outcome of future military

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engagements, since these are dependent on successful exploitation of the latest technological advancements. All we can do is learn what we can of the progress being made by other nations in the areas related to submarine and antisubmarine warfare and then to compare this with our own progress.

The Soviets now have by far the largest submarine force in the world—about 375 submarines, all built since World War II. We have 143, including 61 diesel submarines most of which are of World War II vintage. Thus, they have a net advantage of about 230 submarines. It is estimated that by the end of 1970 they will have a numerical lead even in nuclear submarines.

In the single year 1968, the Soviets put to sea a new type ballistic missile nuclear-powered submarine as well as several new types of nuclear attack submarines—a feat far exceeding anything we have ever done. It is estimated that by 1974 they will have added about 70 nuclear-powered submarines to their fleet, whereas we will add but 26—thus further increasing their numerical superiority. As for ballistic missile submarines, the Soviets have undertaken a vigorous building program to equal or surpass our Polaris fleet of 41. At least seven of their new Polaris-type submarines have been completed, and they now have the capability of turning out one a month. We have no Polaris submarines under construction or planned. We must assume that by the 1973-1974 time period they will be up to us.

To achieve this, the Soviets have greatly expanded and modernized their submarine building and repair facilities. Just one of their numerous submarine building yards has several times the area and facilities of all U.S. submarine yards combined. They use modern assembly line techniques under covered ways, permitting large-scale production, regardless of weather conditions.

The progress made by the Soviets over the past few years in nuclear submarine design, construction, and operation could only have been accomplished through the efforts of a large group of highly competent technical personnel. We must assume the talents and efforts of this group will continue to provide the Soviets with additional advances in nuclear submarines.

The superiority of a given weapon system is never static. The history of warfare is an ever-changing contest between weapon and counterweapon. Whenever man invents a new weapon, two things happen immediately. First, his potential adversaries start to develop a counterweapon. Second, improvements are made in the original weapon to make it even more effective. This was the case with the bow and arrow, gunpowder, battleships, airplanes, rockets, etc.

The battleship is a good example. In 1907 when the British *Dreadnought*, the world's first modern battleship put to sea it was hailed as "Invincible." It had armor plate thick enough to stop any naval shell then in existence. Soon afterwards other countries built their own battleships with large guns and heavy armor. The British then developed the destroyer to protect the battleship by firing torpedoes against opposing battleships. The other side, of course, soon had its own destroyers. The battleship then was given the capability of carrying airplanes to increase its range of visibility; this added the new element of air power to the battleship.

Although it became evident during World War I to farsighted officers like General Billy Mitchell that aircraft constituted a new and formidable weapon against the battleship, it nevertheless took a long time for those who had faith in the battleship to accept this and prepare against the danger. Even as in 1907 it was impossible to predict how long the battleship would remain "Invincible," so is it today impossible to predict how long the Polaris submarine will remain invulnerable.

As in the case of the battleship, the competition between the submarine and its foes has seasawed since the former proved its worth in World War I. As advances have been made in submarine design since World War I, progress has also been made in developing antisubmarine warfare.

Submarines have the protection of the ocean depths. When submerged they cannot be seen by the human eye or by radar. The only way we know at present to detect a submerged submarine is by the sound it makes. For years, groups of scientists and engineers have tried to make submarines quieter, while other groups have worked just as hard to develop more sensitive listening devices. This technological battle continues.

With the advent of nuclear propulsion, the submarine has been able to operate submerged at high speeds for long periods of time; this gave the nuclear submarine the edge. However, great strides are being made in the mobility of antisubmarine forces and in their capability to detect and destroy submarines. In fact, the nuclear attack submarine itself is now being used as an anti-submarine weapon.

We do not know, of course, how these developments will work under actual war conditions; nor do we know how effective our Polaris submarines would be in an encounter with an enemy antisubmarine force—be it air, surface, or subsurface—or how effective our own antisubmarine forces would be against the latest Soviet nuclear submarines.

The answer to your question concerning the survivability of our Polaris submarines in the mid-1970's depends on whether we can regain the advantage we had in the past. Will our progress in undersea warfare during the 1970's match that of the Soviet Union? Can we assume that our Polaris system will be the first weapon in history to remain invulnerable? The developments I have cited should caution us against making such an assumption.

As I pointed out in my April 25, 1969, letter to Senator Pastore (Page S4226 of the Congressional Record, April 29, 1969), the Soviet Union is embarked on a program which reveals a singular awareness of the importance of sea power and an unmistakable resolve to become the most powerful maritime force in the world. As a result of the Cuban missile crisis, the Soviet leadership resolved never again to be placed in a position where they would have to negotiate from weakness—in that case lack of strategic and naval superiority. They have publicly avowed their goal to become preeminent in sea power, and all evidence indicates they are proceeding with competent speed. This is especially true in their undersea warfare forces. They have openly stated that these are to be the major arm of their fleet.

To recapitulate: I believe that while today our Polaris fleet is safe from a planned attack by the Soviets, there is sufficient evidence concerning their progress in this field to cause doubt by the mid-1970's. We must increase our own efforts if we expect our Polaris fleet to remain the deterrent it now is.

Respectfully,

H. G. RICKOVER.

Mrs. SMITH. Mr. President, I also ask unanimous consent to have printed at this point in the RECORD a letter from Admiral Rickover to Senator PASTORE under date of April 25, 1969.

There being no objection, the letter was ordered to be printed in the RECORD, as follows:

APRIL 25, 1969.

DEAR SENATOR PASTORE: In your letter of April 15th, you asked me to give an estimate and an opinion as to where we are and where we are going and what needs to be done in a military way in these times of turmoil and

peril. There is, as you point out, a division of opinion among the American people regarding the necessity of reinforcing our military strength.

The first point I would like to make is that in judging between conflicting views on this matter, the deciding factor must be their relevance to the world as it is, not as we would wish it to be. Granted the hideousness of modern war, can we deduce therefrom that mankind is now wise enough to forgo recourse to arms? A look at history should put us on guard against those who claim that humanity has now reached a state where the possibility of armed aggression can be safely disregarded in formulating national policy.

I am reminded of the intense opposition to the Navy's 15-cruiser bill in 1929. It was argued by many that with the signing of the Kellogg Peace Pact the year before, it was no longer necessary to build new warships. And this in light of the lessons of World War I which erupted despite the various Hague Peace Treaties! These ships were of inestimable value in helping us win World War II. The war itself was prolonged because Congress—heeding the "merchants of death" argument—in 1939 prohibited shipment of war materials to Britain and France.

Then, too, weight must be given to the credentials of those propounding opposite views. Are they public servants charged with the awesome responsibility to secure our country against foreign conquest, or are they private individuals not accountable for the consequences of their opinions, who feel free to express their personal abhorrence of war and to agitate for a reduction of the financial burden military preparedness imposes on the taxpayer? Would the majority of the electorate accept their arguments that given our unmet domestic needs, we cannot afford an effective defense position vis-a-vis our potential adversaries? Or that war is so horrible that it is better to suffer defeat than to fight?

As for the high cost of preparedness, it is in fact no greater proportional to total U.S. output than 10 years ago—8.8% of total U.S. goods and services. Omitting the costs of the Vietnam War and allowing for inflation, our armed forces have less buying power today than a decade ago. In the Soviet Union, on the other hand—according to the Annual Report of the Congressional Subcommittee on Foreign Economic Policy issued last June—resources have been diverted from the farm sector to defense, where outlays rose dramatically in 1966-67, after remaining static since 1962. The Report talks about their new preoccupation with national security. And you must bear in mind that actual war costs absorb but a small portion of their expenditures while we are spending some two and a half billion dollars a month in Vietnam.

If history teaches anything it is surely that weakness invites attack; that it takes but one aggressor to plunge the world into war against the wishes of dozens of peace-loving nations if the former is militarily strong and the latter are not. Yet there are those who deprecate the need to maintain military supremacy or at least parity with the communist empires, on the grounds that other nations have accepted a decline from first to second or third rank and that we ourselves for most of our history were militarily a second-rate power yet secure enough within our borders. They forget that we then profited from the *Pax Britannica*, even as the former great powers of Europe who have lost their defense capability enjoy political freedom today only because we are strong enough to defend them and ready to do so. What it means to be weak and without American protection should be evident to all as we observe the tragic drama of Czechoslovakia "negotiating" with Russia the continuing subjugation of her people.

As a lawyer, you are familiar with Blackstone's statement that security of the person is the first, and liberty of the individual the second "absolute right inherent in every Englishman." Just so, the first right of every American is to be protected against foreign attack, and the first duty of government is to keep our nation alive. Given the world situation, this calls for maintenance of a defense capability which is adequate to discourage potential aggressors. Said President Nixon, in discussing the Cuban missile crisis, "It is essential to avoid putting an American President, either this President or the next President, in the position where the United States would be second rather than first or at least equal to any potential enemy. . . . I do not want to see an American President in the future, in the event of any crisis, have his diplomatic credibility be so impaired because the United States was in a second-class or inferior position. We saw what it meant to the Soviets when they were second. I don't want that position to be the United States' in the event of a future diplomatic crisis."

There can surely be no doubt that the overwhelming majority of the American people are opposed to relinquishment of our deterrent capability, recognizing full well that there will then be no one left to prevent the takeover by communist power. Whether one takes the optimistic view that a permanent East-West detente can be negotiated, or the pessimistic view that ultimately we shall have to fight for our liberties, this nation has no future if it allows itself to be out-matched militarily.

To turn now to specific matters currently in dispute. There is the ABM system which is under heavy fire on grounds that it (a) will escalate the arms race and (b) will not work. It should be stressed that the Soviets have had their own version of the ABM to several years without inducing us to expand our military power. Just as the Soviet ABM version has not added to the Soviet threat, so our own ABM would not add to ours. The Russians have been singularly silent in this respect; the outcry has come mostly from those in this country who habitually apply a double standard when adjudging military developments in the U.S. and the U.S.S.R. One must ask how can our defensive capability be considered provocative, while theirs is not? Is there not something deeply disturbing when one observes scientists, formerly holding responsible positions in government, advocate policies directly contrary to those they supported when in office? It must not be forgotten that many of our most prestigious scientists were bitterly opposed to development of the H-bomb. Where would we be today had not the Congressional Joint Committee on Atomic Energy and President Truman—who had the responsibility for the safety of the U.S.—disregarded their advice?

As for the assertion that the ABM cannot be made to work, I must disagree. If there is one lesson I have learned in the many years I have devoted to the development of nuclear propulsion plants, it is that, given the soundness of a theoretical concept, it can, with drive and imaginative engineering be made to work.

Contrariwise, for a theoretical concept to be translated into reality, it must be worked on Research alone—no matter how prolonged—will not do it. The very act of developing the concept through detailed engineering work produces improvements in the original concept—improvements which would have been neither obvious nor possible without such actual engineering work.

The Soviets are just as adept in research and development as we are. They have amply proved this by their progress in space, in missiles, in aviation, in military equipment, in nuclear submarines. They know full well from their own experience that with research alone—without development engineering—

our ABM system or any other system would not be meaningful and could be discounted. For this reason we must guard against those claiming that we can limit ourselves to research—that research alone will suffice.

You also ask me to comment on what needs to be done in these times of turmoil and peril. As I am more familiar with the threat posed by the Soviets to our naval power, I would like to confine myself to this area, and specifically to submarines. But what I say here is valid for our land, sea, and air power as well.

The Soviet Union is embarked on a program which reveals a singular awareness of the importance of sea power and an unmistakable resolve to become the most powerful maritime force in the world. They demonstrate a thorough understanding of the basic elements of sea power: knowledge of the seas, a strong modern merchant marine, and a powerful new Navy. They are surging forward with a naval and maritime program that is a technological marvel.

At the end of World War II, the Soviet Union had a fleet of 200 diesel-powered submarines. They then embarked on a massive building program, producing over 550 new submarines through 1968, at least 65 of which are nuclear-powered. During the same period, the United States built 99 submarines, 82 of them nuclear-powered. The Soviets have scrapped or given away all their World War II submarines as well as some built since. They now have a new submarine force of about 375; we have 143, which includes 61 diesel submarines most of which are of World War II vintage. Thus the Soviets have a net advantage of about 230 submarines. It is estimated that by the end of 1970 they will have a numerical lead in nuclear submarines.

To achieve this the Soviets greatly expanded and modernized their submarine building facilities. Just one of their numerous submarine building yards has several times the area and facilities of all U.S. submarine yards. They use modern assembly-line techniques under covered ways, permitting large-scale production regardless of weather conditions.

In the single year 1968, the Soviets put to sea a new type ballistic missile submarine as well as several new types of nuclear attack submarines—a feat far exceeding anything we have ever done. In looking to the future, it is estimated that by 1974 they will add about 70 nuclear-powered submarines to their fleet, whereas we will add but 26—further increasing their numerical superiority. In the case of the ballistic missile submarine the Soviets have undertaken a vigorous building program to surpass our Polaris fleet of 41. They have completed seven of the new Polaris-type submarines, and have the capability to turn out one a month. We have no Polaris submarines under construction or planned. We must assume that by the 1973-74 time period they will be up to us.

Numerical superiority, however, does not tell the whole story. Weapon systems, speed, depth, detection devices, quietness of operation, and crew performance all make a significant contribution to the effectiveness of a submarine force. From what we have been able to learn during the past year, the Soviets have attained equality in a number of these characteristics and a superiority in some.

In order to achieve the results so far attained in all areas of modern technology the Soviets had to develop their most important resource—technical and scientific personnel. The Soviet educational program enjoys highest national priority. The statistics on the total numbers of Soviet degree graduates are extremely impressive. The U.S. National Science Foundation data indicates that in 1966 alone, 168,000 engineers were graduated; the U.S., on the other hand, produced but 36,000. With specific application to the Navy, the

Leningrad Shipbuilding Institute, just one naval institute of several, had over 7,000 students in 1966 studying naval architecture and marine engineering. I doubt we had over 400 enrolled in these subjects in all U.S. colleges.

While we cannot specifically count the number of Soviet scientists and engineers devoted to naval work, it is apparent that they have created a broad technological base. They have committed extensive resources to support development of their naval forces. The steady build-up of the Soviet submarine Navy from an ineffective coastal defense force at the end of World War II to the world's largest undersea navy today deserves admiration; also it should deeply worry every American. By the end of this year we face the prospect of losing the superiority in nuclear submarines we have held for many years. The threat posed by their submarine force—with their new ballistic and cruise missile launchers and new attack types, is formidable. If more sophisticated types are added in the near future, as is likely considering their large number of designers and their extensive facilities, the threat will rapidly increase.

The Soviets have frequently announced their intent to be the pre-eminent world power. Why do we not believe them? Hitler in Mein Kampf plainly announced his intent to dominate the world. We did not believe him either—until it was nearly too late. Admiral Gorshkov, Commander in Chief of the Soviet Navy, said recently: "The flag of the Soviet Navy now flies proudly over the oceans of the world. Sooner or later, the U.S. will have to understand that it no longer has mastery of the seas." And just a few days ago the Russians announced a projected 50% increase in the size of their merchant fleet. These facts should be weighed when assessing the judgment of those who argue for a reduction of American military power while the Soviet military power is rapidly expanding.

The bearer of bad news is always punished. In ancient times, he might be put to death. Today he becomes "controversial" and unpopular. But if there is one subject on which the American people must know the truth, however unpalatable, it is our military position vis-a-vis the Soviets. I believe no one can better inform them than members of the Congress—who have such close ties to their constituents.

I suggest that by keeping secret our knowledge of Soviet strength at this time we may lose more than by confiding the truth of the danger we face to the American people.

Respectfully,

H. G. RICKOVER.

Mrs. SMITH. Mr. President, whether one likes Admiral Rickover or not, in his assessment of our Navy during the years, he has never been found wrong.

Mr. TOWER. There is some information that has been prepared by the staff of the Armed Services Committee relevant to the deployment sites. I think it should go into the RECORD at this point.

Two sites do provide a more realistic test bed than we plan to provide at Kwajalein. Two major test objectives can be accomplished.

First, we can test the Phase 1 complex under realistic conditions of military operators and 24-hour per day operation. This will provide experience with the problems of installation and early operation that cannot be obtained in a research environment.

Second, we will be able to check the operation of a two-site, four-radar network with its inter-computer communications and its command and control ties to higher headquarters. We can verify proper operation of such important system features as control of PAR tracking load (one missile, or satel-

lite, will usually be seen by more than one PAR), the ability of one PAR to look behind a simulated black-out region to assist an adjacent PAR, and the transfer of targets from a PAR at one site to an MSR at another site.

Phase 1 operation will provide invaluable experience and knowledge.

Mr. President, I think the arguments against the amendment offered by the Senator from Kentucky are overwhelming. As I see it, the only real argument is that we should delay a political decision to deploy. But this is not solely a political decision; it is a military decision, as well. It is said that we should delay in the hope that to do so might produce the right kind of climate in which we could sit down and have successful disarmament negotiations with the Soviets; in the hope that perhaps their attitude has changed.

Again, I think this is a dangerous assumption on which to base an argument. We have been accused of basing our argument on assumption—the assumption that the Soviets will develop and deploy an SS-9; that they are expanding their ABM system. But we assume these things on the basis of valid experience and the continuing intensification of technology, both military and strategic, by the Soviet Union. Therefore, I think they are on much more solid ground.

Mr. JAVITS. Mr. President, before the Senator yields the floor, will he yield to me?

Mr. TOWER. I yield to the Senator from New York.

Mr. JAVITS. I heard with great interest—to interrupt him—the Senator's statement about "unilateral disarmament" and good faith, or at least some moral argument concerning the Russians. Does the Senator think that the result of any negotiations is necessarily limited to what the United States and the Russian negotiators may come in with, once they start with prepared briefs? Does he feel that that is what we have to be limited to? Or does the Senator feel that it may very well be possible to negotiate either much broader or perhaps much more limited agreements, depending on the practical situation in the world and how the negotiations develop?

May I give the Senator this example? Suppose we really had a completely effective ABM that could knock out as many Russian missiles as they sent over here. Would the Senator feel that there was any hope of any negotiations at all? Or would he think the U.S.S.R. would believe it must first catch up with us before they could negotiate?

Mr. TOWER. The Russians are already catching up with us and, I think, will eventually surpass us. As a matter of fact, they are ahead of us in many fields. I do not think that the Soviets arming themselves is a matter of a reaction to what the United States does. Remember that we demobilized after World War II, but the Soviet Union did not. I think the Russians know that we have no imperialistic designs on them; that we are not going to initiate a war against them.

After all, we could have fought a preemptive war against them and could

have destroyed them in the late forties—and they know that—and we were sorely provoked at that time, but failed to do it.

So far as negotiations are concerned, I hope we can begin to negotiate, and negotiate in good faith. But I do not think we are going to be in a position to negotiate if they get into a position of military superiority. The President thinks this, and he has had as many confrontations with the Soviets as has anyone else.

I think it would be well to talk about a wide range of things, and the discussions would not have to be bilateral. Other countries might be brought in, countries which have nuclear potential or which actually have nuclear weapons.

I do not oppose the idea of negotiations.

Mr. JAVITS. We are not talking about opposition to negotiations. The Senator was talking about unilateral disarmament, a label which I find is used to throw up a big smokescreen in connection with this issue. Can the Senator tell me if he believes anyone speaking in support of the Cooper-Hart amendment, has indicated in his argument that he wants unilateral disarmament?

Mr. TOWER. I do not think any Member of the Senate believes there will be unilateral disarmament. The Senator from Colorado (Mr. DOMINICK) referred to his mail. I said:

Yes, unfortunately there are people in this country who think we should disarm unilaterally, and that the rest of the world will bring moral suasion on the Soviet Union to do likewise.

But I do not think that any Member of the Senate, anyone who has the sophistication of a U.S. Senator, believes that. However, there are many people who do, and they write letters.

Mr. JAVITS. I have one other question. If we pursue the doctrine that the only time the United States can safely negotiate is when we have the edge—when we have nuclear "superiority," as he calls it—is it not logical to suppose that they think the same way about their security and that we simply cannot then come to an agreement? Both sides cannot enjoy "superiority." But, both sides can have nuclear "sufficiency," as President Nixon has so wisely suggested. Most objective strategic experts believe that both the United States and the U.S.S.R. do have a "sufficiency" of nuclear power to insure their security under present conditions. That is why the prevailing situation is such a logically compelling stopping point in the nuclear arms race.

Mr. TOWER. I am not prepared to think that the Soviets think the same about us that we think about them. I think they are a little smarter than that.

Mr. JAVITS. I respectfully submit that we certainly cannot assume in negotiations with the Russians that they have a fine, high-minded view of our motives, while our view of their motives is that they are trying to subvert the world, and prepare for a preemptive war attack capability on us.

Mr. TOWER. I do not believe the United States constitutes an obvious military threat to the Soviet Union. I believe

that the Soviet Union believes the United States constitutes a threat to their expansionist opportunities or goals.

Mr. JAVITS. If that is the illusion under which our negotiators go to negotiate, believing that the Russians are going to accept a freezing into permanence of a U.S. military advantage or "superiority," because they trust our motives, and they know they should realize that we distrust theirs—I do not think that we are going to get anywhere.

Mr. TOWER. Maybe we would not get anywhere. I do not think we will get anywhere as long as the Soviets are bent on expanding their influence in the world. They are moving into the Mediterranean. Does the Senator believe we should take our 6th Fleet out of the Mediterranean?

Mr. JAVITS. I certainly do not. At the same time, I certainly must contemplate that if their system is better than ours, their people more productive, their handling more competitive, they will get more influence in the world.

Mr. TOWER. They are not better than us. They are a dictatorship, and they channel their resources into armaments, and more cheaply, too.

Mr. JAVITS. The more than 3 billion in the world are not going to take the word of the Senator from Texas on that. Maybe the 200 million Americans will, but the more than 2 billion people in the world will not. That is what we are engaged in—competitive demonstration of whose system works better. It is something which must be demonstrated and not just claimed.

Mr. TOWER. I do not think that is relevant to this discussion.

Mr. JAVITS. I think it is very relevant because people like me feel we are under some real compulsion to do things to produce a nuclear arms agreement without endangering our security.

I think people who are arguing the case as the Senator has—and he is a gifted and able man or I would not be discussing the matter with him—are laboring under the assumption that this really cannot happen; that really and basically we cannot come to any agreement with the Soviet Union at all. This is really at the nub of the argument and that is why I rose when the Senator brought me to my feet with his remarks about world trade and unilateral disarmament.

I think the essence of the consideration the Senator gives us is that we must always have a built-in military advantage or we might get taken. This means we can never make a deal since the Russians are not going to make a deal. They are not going to trust their security to some one else's high motives and good intentions—just as we would not accept that approach.

The most we can hope for is that there will be a time when we are roughly in balance so we can reach some kind of agreement. At this point we are roughly in balance; we both enjoy sufficiency and there is no sense in both sides spending billions to try to reach an emperal weapons advantage over the other—which neither side will accept.

Mr. TOWER. I argue for superiority because I believe we should have it. The

Senator thinks we are more likely to have a settlement. One of the things I am concerned about is how we know when we have reached parity; or do we wake up some morning and find ourselves in an inferior position?

Mr. JAVITS. Mr. President, will the Senator yield for one further point?

Mr. TOWER. I yield.

Mr. JAVITS. I would like to have our argument presented. That is why we argue only for a delay in deployment. That is why we are not arguing for junking the ABM system, because we are aware of that uncertainty. But we believe, based on the case introduced at this moment, that given a little opportunity to use it in the negotiating process, in the eyes of the Russians and in our eyes we are reasonably in balance with respect to second-strike, assured-destruction capability. What we are arguing against is moving to the next plateau until we have exhausted the opportunity now presented to negotiate a limitations agreement.

Mr. TOWER. The view of the experts is that we would lose valuable leadtime if we faced any delay toward deployment at this moment. Beyond that, it is a slap or would be interpreted as a slap at the administration, which asked for this authority. It is, in a way, trying to gut the ABM provision. I do not see why this is necessary to achieve the full R. & D. and testing and evaluation of this thing. According to the experts, we can do it better if we have these things deployed at the site.

Really, the basic argument is: Should we make the political decision to deploy? I do not entertain the same views that the Senator from New York does, and he does not entertain the same views that I do.

Mr. JAVITS. Mr. President, will the Senator yield to me briefly?

Mr. TOWER. I yield.

Mr. JAVITS. Speaking about the administration, is it not fair to say those of us who are on my side of the issue, if we are right and the administration can achieve an armaments limitation breakthrough, would have had a far more monumental success, a great historic success, unbelievable in its size, for President Nixon, than if he succeeds in getting Safeguard by two or three votes, as the Senator from Vermont said yesterday. Therefore, I ask, Who is really trying to make this administration successful? Should we not test that before we say that the people on my side would harm the administration if we were successful. I respectfully submit that if I can be here in the Senate under a Republican President when he achieves an agreement which will freeze nuclear armaments where it is, that alone would make his place in history infinitely more hallowed than if he succeeds to get through this provision to deploy the Safeguard system in the two places mentioned.

Mr. TOWER. If that occurs, I will be the first one to congratulate the Senator and call him a prophet.

Mr. JAVITS. I thank the Senator.

Mr. TOWER. But I do not think it will happen.

Mr. JAVITS. We do not know until we try.

Mr. YOUNG of North Dakota. Mr. President, I commend the Senator from Texas for the excellent speech he has made on the ABM. There is a lot of good food for thought in his speech.

I note that the Senator mentioned that only \$759 million of the amount contained in the bill is for the ABM program.

Only a year ago this same body approved more than twice as much money for an ABM program.

The world situation has worsened, I think, during this year's time. Certainly Russia has gained tremendously in military strength over what they were a year ago. On a parity basis, we have lost ground militarily to the Russians during the last year.

Mr. President, I am somewhat reluctant to speak in behalf of the ABM system as North Dakota would be one of the two States where the first ABM's would be deployed. I hesitate because some may think that I am speaking only because of some benefits that would accrue to North Dakota.

We do have some opposition to the deployment of an ABM installation in North Dakota, but I believe the vast majority of the people support President Nixon on this issue. There is practically no opposition among the people where this site would be located in North Dakota. Most of them are farmers and smalltown businessmen.

They are accepting the decision to locate the ABM site in North Dakota just as they did in the case of the Minuteman. North Dakota has 300 Minuteman missiles with their nuclear warheads—along with two SAC bases with their B-52's and their nuclear bombs.

Not all communities would accept such a huge number of powerful nuclear bombs and warheads to be located in their midst. Our people do feel now that they are entitled to some protection from a possible enemy attack against these Minuteman missiles and SAC airbases. They believe the ABM would give them at least some protection.

Most of our newspapers support the ABM. Mr. President, I ask unanimous consent to have editorials from our three largest newspapers on this subject printed in the RECORD as a part of my remarks—the Fargo Forum, the Minot Daily News, and the Grand Forks Herald. I concur in the position they take.

There being no objection, the editorials were ordered to be printed in the RECORD, as follows:

[From the Minot (N. Dak.) Daily News,
Mar. 31, 1969]

MISSILE DEFENSE IS NEEDED

A lot of dust is being kicked in the air in the nation about establishment of an anti-ballistic missile system, now known as Safeguard.

The Minot and Grand Forks areas have good reason to be interested in what is going on.

While the current proposal is to establish the missiles in the Grand Forks area, assurance is given they would provide protection for the Minot territory.

It has been of concern to us for a long time that the military complex in the Minot vicin-

ity—Minot Air Force Base and the 150 Minuteman missiles—is without adequate missile defense.

It would seem to us that an enemy would think in terms of trying to knock out such retaliatory forces as now exist here.

Outside of fighter aircraft based at Minot Air Force Base, which would be effective against a bombing raid, we now are virtually armless so far as defense is concerned.

Everything in the book is being thrown by opponents at the ABM proposal. Scientists in large numbers, as well as shallow thinking do-gooders, have gotten into the act. Who are they to decide whether we're going to be clobbered?

Those of us old enough to remember can recall without great difficulty we had blabbermouths hopping around the country, prior to World War II, screaming against preparedness. The trouble with some people is they think they are experts on everything except what counts—treachery.

Until and unless, in good faith and demonstration, any potential enemy of this nation proves itself to be willing to slow down the arms race, it is good sense to protect ourselves.

[From the Fargo (N. Dak.) Forum, June 27,
1969]

NORTH DAKOTA HAS GOOD REASON TO BACK
ABM SYSTEM

(By John D. Paulson)

Trying to pass judgment on whether the United States should proceed with the construction and deployment of an anti-ballistic missile system is no easy matter for an editor, a member of Congress, or an average citizen. This is particularly true in North Dakota, which has been selected as one of the states in which an ABM installation will be deployed in the first phase of President Richard M. Nixon's proposed Safeguard ABM system.

With 350 underground silos holding Minuteman Intercontinental Missiles tipped with nuclear warheads already located here, North Dakota wasn't particularly concerned when President Nixon proposed that one of the ABM installations go into this state. But since then the residents have been the target of an intensive propaganda campaign both pro and con. If a person tries to figure out his personal attitude on some basis other than whether he is for or against President Nixon, the answer doesn't come easily.

Shortly after President Nixon outlined his proposed Safeguard system, North Dakota gained nationwide notoriety. On a trip to Washington, to a gathering of newspaper editors, I was almost invariably asked what I thought or what North Dakotans thought about President Nixon trying to install a battery of nuclear-tipped missiles in our state to knock down enemy missiles from somewhere overseas.

When I replied that the state already had a full arsenal of nuclear-tipped ICBM's, and probably most residents were not averse to the fact that the nation was now going to try to put out of action any ICBM's aimed in our direction, the inquisitive all of a sudden stopped their joshing and started to ask questions about our familiarity with the nation's nuclear retaliatory armament.

Those who were opposed to the ABM system apparently started out with the idea that they were using scare tactics on the residents of a state slated for ABM installations, but they had nowhere to go when they realized that North Dakota had already accepted its role as the location of a large portion of the nation's nuclear armament.

Of course, probably a good many North Dakotans didn't and still don't realize the huge amount of explosive power that is kept under wraps in the 350 underground silos stretched across the northern half of the state from Minnesota to Montana.

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At a banquet at the same newspaper convention, I had the opportunity of sitting at the same table with James Webb, who resigned early this year as director of the National Aeronautics and Space Administration. Most of his conversation, of course, was about the forthcoming Apollo trips to the moon, and the moon landing. He was most enthusiastic about America's capability and performance in space exploration, and the unlimited challenges that lie ahead of us after the moon landing. I had a chance to ask him his views about President Nixon's ABM decision.

He declared he most certainly approved the construction and deployment of an ABM system, but not for the reasons the President stressed. This construction phase is simply a continuation of the research and development on what the nation has already spent \$5 billion, not necessarily a needed defense against Russia. We would never be reaching for the moon if we hadn't started our space explorations one step at a time, with the Mercury and Gemini space flights, he explained. Completed research indicates, he said, that we have the potential to knock down an incoming ICBM, but "you won't know whether you can really do it in time of need until you put all the components together."

In considering the pros and cons of the ABM issue, you mentally have to put yourself into a world you can hardly believe exists. But the plain facts are that we are already in one of the strangest—and most dangerous—worlds ever conceived.

In Europe, U.S. travelers are surprised and shocked when they come to the border of an Iron Curtain country, such as Czechoslovakia, and are met by soldiers with drawn guns and bayonets, instead of a welcoming customs and immigration official.

We in America think we are far removed from such a military gunpoint at our heads every time we move from one state to another. Unfortunately, almost every American citizen goes about his every day tasks under the "gunpoint" of a Russian intercontinental missile. According to United States intelligence, Russia has—or will have—1,000 ICBMs aimed at every population center, every industrial center and every major military target in the United States. Now President Nixon suggests that instead of being aimed at the centers, they are being aimed at the ICBM retaliatory missiles planted in their silos in North Dakota, Montana and other areas which are within range of Russian territory. In return, the U.S. has a thousand missiles aimed at Russia in Minuteman silos and another 500-600 missiles at sea being carried by Polaris submarines ready to retaliate against any nuclear attack.

So the nuclear threat is with us each and every day, and the assumption is that neither nation would dare to push the button which would send an ICBM on its way for fear of the retaliation that the target nation could inflict by answering with its own ICBM forces.

The ABM, if it worked 100 per cent perfectly, presumably would stop any Russian missiles launched at us, whether a few or many. If the ABMs stopped a Russian attack, at least it would give this nation a choice of responses instead of the only single response now available—instant retaliation. And if the ABMs fail to work, then there would still be time to send off our Minuteman missiles on their message of total destruction.

Here is where the mind bogs down: No one can foresee the circumstances under which either nation will press the button that would start nuclear warfare. Certainly, it seems, Russians would be smart enough not to send missiles on a destructive mission towards the U.S. if they were readily identifiable as coming from Russia. We would be in a position to retaliate before being knocked to our knees.

But the day of ready availability of nuclear weapons is not far away. There could be the day when the Russians or Red China or North Vietnam or some dissident Arab nation would become convinced that the United States needed a lesson. Then it might find a way to launch a few ICBMs from a ship at sea, from an uninhabited island, from the direction of Cuba or South America. How would the United States use its ICBMs then? They are all aimed at Russia. If Washington or New York were hit by a missile coming from a ship at sea just the other side of Cuba, would we answer with an automatic reflex by pushing the button which sends a fleet of destructive missiles at Russia?

Would we be better off if we had an ABM system which would have a good chance of knocking these missiles out of the air, no matter which direction they came from?

We in North Dakota and nearby Minnesota have reason to believe that we are even more of a target than other areas in the United States. It seems that once we take a realistic look at the type of world in which we live, we would be much better off to proceed with the development of a system which could detect and stop an incoming nuclear-tipped missile.

When we can send Apollo spaceships to the moon and back, when we can contemplate landing men on the moon within the next month, and bringing about their safe return, there is no reason to doubt but what our scientists can devise a system which would provide protection against incoming ICBMs.

Until the time comes that we can convince Russia and any other nation which might have ICBMs that all such missiles should be scrapped, then it seems that we would be unwise not to proceed with the development of a defense that could protect us against accidental or intentional firing.

We all hope that the nuclear warfare never develops, but until there is a guarantee that no nation will launch such a missile, then the development of an ABM system seems a reasonable course for America to follow.

It is not an issue on which a member of Congress can vote "maybe." He has to say yes or no on the appropriations and the authority asked by President Nixon. We can't have continued research without deployment. If we are on the bullseye of a Russian ICBM target, that is all the more reason for North Dakotans to support the Safeguard system.

[From the Grand Forks (N. Dak.) Herald, June 28, 1969]

ABM HELD NEEDED

The Fargo Forum, which early in the Safeguard controversy seemed to be leaning toward a position against the deployment of an anti-ballistic missile system, now has come to the conclusion a start is needed on ABM deployment.

The Forum Friday devoted its entire editorial page to the subject. It gave space to the arguments of both proponents and opponents of Safeguard, including Sen. Milton R. Young and Rep. Mark Andrews who favor the Safeguard program and Sen. Quentin N. Burdick and Gov. William L. Guy who oppose it.

It concludes, however, that "After a thorough study into the claims and counter-claims about the anti-ballistic missile system, The Forum regretfully comes to the conclusion that work on the anti-ballistic missile system should continue, but always with a proviso that it will stop whenever an effective arms control treaty with other nuclear power nations—Russia, China, France or any new member of the power elite—becomes the law of the world, backed up by international inspection and control."

In this position, the Grand Forks Herald agrees. It has said repeatedly that conditions

in the world today require that the United States provide whatever defensive weapons are available for the protection of this country. It would rather use defense than be in the constant position of having to rely on the threat of destroying the world to keep the peace.

As the Forum says, the question now before the Congress is simply this: "Shall the United States spend \$800 million to \$900 million in 1969-70 to continue development and start deployment of an anti-ballistic missile system intended to give us whatever protection is possible against the 1,000 missiles already in place in Russia and aimed at this nation, or shall we sit naked to an aggressive nuclear attack to which our only reply would be complete destruction of the offending nation with our own ICBMs?"

Mr. YOUNG of North Dakota. Mr. President, I concur in the position taken by these editorials.

Mr. DOMINICK. Mr. President, will the Senator yield?

Mr. TOWER. I yield.

Mr. DOMINICK. Mr. President, the Senator from Texas has done a very fine job in trying further to delineate what we are trying to do in the committee report on the ABM.

In connection with what the distinguished Senator from North Dakota just finished saying, I think it might be of some interest to note that my State has recently conducted a poll among the people, an independent poll, in which three questions were asked.

The first question was:

Do you think it is possible to build a defensive system against enemy missiles?

The answer was:

55 percent, yes; 29.5 percent, no; and 15 percent, do not know.

The next question was:

Do you think the U.S. should have some sort of ABM defense?

The answer was:

Yes, 80.8 percent; no, 10.6 percent; and no opinion, 8.5 percent.

That is pretty low in view of the complexity of the issue, it seems to me. Nevertheless, this is the way it came out in an in-depth survey.

The third question was:

President Nixon has come out for a limited system called the Safeguard System, which is supposed to protect our ability to strike back at an attacker. Do you think Congress should approve this system?

The answer was:

Yes, 72; no, 12.5 percent; depends, 6.5 percent; and no opinion, 9 percent.

I bring out these figures because I think they are of interest in view of the fact that, in my State at least, of the letters coming to me, 10 to 1 are opposed to the ABM system. It would indicate to me that a relatively small group of people, compared to our population, are really pushing the anti-ABM idea.

I think, therefore, that the colloquy on this particular policy is of interest, indicating that perhaps there is far more popular support for the ABM system than anyone has any idea of.

I thank the Senator.

Mr. TOWER. Mr. President, a number of people in this country feel that if the United States will unilaterally disarm, the rest of the world will bring

moral pressure on the Soviets to do likewise. I cannot recall any time in history when the Soviet Union has responded to moral pressure from anywhere.

I do not expect them to change their ways in the future.

Mr. President, I yield the floor.

THE SAFEGUARD SYSTEM

Mr. MANSFIELD. Mr. President, one of the country's finest newspapers, the Denver Post, wrote a very detailed analysis on June 15, 1969, of the Safeguard ABM system, listing the arguments both for and against. On the same day that this article presenting the case for and against appeared, there appeared a very penetrating editorial concluding that the Safeguard should be delayed and that we should press for arms control talks.

I ask unanimous consent that the article concerning the Safeguard ABM as well as the editorial that appeared in the Denver Post on June 15, 1969, be inserted in the RECORD at this point.

There being no objection, the article and editorial were ordered to be printed in the RECORD, as follows:

GREAT DEBATE: IS "SAFEGUARD" ABM SYSTEM REQUIRED FOR UNITED STATES?

(By Leverett Chapin)

The big Antibalistic Missile debate of 1969 is nearing a climax. The Nixon administration, through such spokesmen as Secretary of Defense Melvin R. Laird, has jarred the country by contending that Russia for the first time is building a missile arsenal powerful enough to devastate the United States without fear of reprisal.

Laird and others believe the Russian buildup is intended to give that country a "first strike capability," meaning so much missile power that the Russians would no longer be deterred from making an attack on us for fear of the damage we could do them in return, even after being hit first.

This interpretation of Russian intentions, if correct, would mark a new dangerous period in Soviet-United States relations.

The administration sees this new threat as requiring a start by this country on a multibillion-dollar Antibalistic Missile (ABM) system, called "Safeguard," to protect our Minuteman missiles in silos and our big bomber bases from a Russian first strike.

It argues that to be sure that Russia doesn't decide some time in the future to try to destroy us it is necessary to preserve our deterrent—our "second strike" ability—by deploying an ABM system capable of knocking out incoming missiles before they reached their targets.

The administration sees the mid-1970s as the time when this new danger will develop and it wants to make a start on the ABM system now with an appropriation by the present Congress of approximately \$800 million. It says that if we start now the first two Safeguard installations won't be completed until 1973.

With the debate near fever heat, the Defense Department just last Wednesday sought to clinch its case by releasing a "white paper" on the Russian nuclear building. It disclosed some previously classified information such as that the Soviets are testing an ABM missile which could loiter in the atmosphere where it would be in position to destroy an incoming missile.

It also disclosed that an effort to give greater protection to our own missiles by putting them in hard rock silos has encountered difficulties and is in an early stage of consideration.

OPPOSITION LINEUP

Arrayed against the administration are many senators—more than 40, according to most counts, most of them Democrats—and an impressive array of scientists and other "intellectual leaders."

They contend that:

Our nuclear missile force is superior to that of Russia now.

It will continue to be superior to that of the Russians in the mid-1970s or, at least, will be strong enough to provide an effective deterrent, even if we do not start an ABM system now.

Even without Safeguard we are not in danger of losing our deterrent unless Russia gains a 2 to 1 superiority in missiles over us, enough to be able to target two of their missiles for each one of our missile sites. Russia cannot gain such superiority within the foreseeable future.

An ABM system probably wouldn't work effectively.

To deploy an ABM system would escalate the arms race, further militarize a world already bristling with weapons, add to international tensions, use up money more urgently needed for domestic programs in our strife-torn country.

A start on an ABM system would hurt the chances for an arms limitation agreement with the Russians because the Soviets would not negotiate if they thought they were any weaker in any phase of nuclear warfare than we are.

A golden opportunity for arms limitation talks now exists because the United States and Russia possess effective deterrents but an ABM system would upset the delicate balance of nuclear stability.

These are the main pros and cons of the big debate.

Adding heat to the controversy are the disillusionments many senators and others feel with efforts to reach military solutions for international problems—as in Vietnam.

With military expenditures in this country already at the \$80 billion level, there is a widespread feeling that defense costs are out-of-hand, that the "military-industrial" complex really runs the country, that Congress has lost control of the budget because every time science devises a new weapon, no matter how expensive, an irresistible urge to go ahead and build it develops.

ISSUE OF WASTE

The disclosure of vast waste in defense expenditures has added to resistance to the launching of the ABM program.

Opponents of ABM see the present controversy as a crucial test of whether the country—and the world—will continue to build up vast armaments or whether a new era of negotiation between countries is possible.

Usually when the Defense Department asks for a new weapon, Congress grants the request with little question. ABM, however, has stirred the first full-scale debate on a new weapon in many years.

Tempers are short. When President Nixon, speaking at the U.S. Air Force Academy at Colorado Springs recently, warned about "new isolationists" who would have this country disarm unilaterally, many of the Senate opponents of ABM construed his remarks as referring to them and reacted strongly.

Senator J. W. Fulbright, D-Ark., who has been critical not only of the Vietnam war but of military expenditures in general, has accused the Defense Department of using "fear tactics" to "sell" the ABM to Congress.

He and others have said the claim that Russia will out-gun us by the mid-1970s is like the phony fears of a "bomber gap" in the 1950s and a "missile gap" in the early 1960s.

Secretary Laird sees a new Russian missile, the SS9, which, he says, is capable of carrying warheads of 25 megaton yields (equiva-

lent to 25 million tons of TNT), as the tipoff to the intention of the Russians to develop an offensive force which could devastate this country without fear that we could retaliate effectively.

STRENGTH COMPARED

Experts on both sides are pretty well agreed that at this time the United States has 1,000 Minuteman missiles and about 50 Titan II missiles, all in hardened silos, while the Russians have 600 SS-11 missiles (similar to the Minuteman), about 230 of the new powerful and accurate SS9 missiles and a few earlier model missiles.

However, Laird claims the Russians are increasing their SS9 force so rapidly that by the end of this year the Russians will for the first time have more Intercontinental Ballistic Missiles (IBMs), either in place or being built, than the United States has.

In addition the United States has 656 missiles on 41 submarines although perhaps not more than 30 of the submarines would be in service at any one time, the others being in port for maintenance.

By contrast, Russia, according to testimony given before the Senate subcommittee on disarmament, may have about half a dozen nuclear submarines and has the capacity to build more at the rate of seven a year.

As far as intercontinental bombers are concerned, the United States has approximately 650, capable of carrying four nuclear weapons each, while Russia has about 150.

In the light of these comparable strengths, where does the new threat to our security arise?

Secretary Laird has declared that the great accuracy of the new Russian SS9, plus the fact that it can carry a large warhead, has forced him to conclude that the SS9 is intended primarily to destroy our ICBM missiles in their silos, thus making it impossible for us to reply with a devastating attack if the Russians should strike first.

PROTECTION ISSUE

Therefore, he wants the Safeguard ABM system, primarily for the protection of our missiles, or as he puts it, our "deterrent."

If our ICBMs were destroyed in their silos, our nuclear submarine fleet by itself would not constitute an adequate deterrent, Laird says.

His testimony on this point has been accompanied by vague hints that the Russians are working on antisubmarine warfare tactics which might render our missile fleet of little effective value.

Laird has refused to say, except in closed committee sessions, what these tactics involve although newspapers have reported the threat, or supposed threat, to our nuclear submarines is a so-called Russian SSN attack submarine, said to be very speedy.

Laird's hints have irritated a number of senators, including Sen. Stuart Symington, D-Mo., former secretary of the Air Force.

He and others claim that Laird's downgrading of our submarine deterrent is without foundation in solid evidence, that our nuclear submarines are the greatest potential weapons ever devised and that Laird has revealed such hitherto secret information, about the SSN and the Soviet loiter ABM missile, as would help the case for the Safeguard ABM system while continuing to keep under classification information which would show ABMs are unnecessary.

Senator Symington and others have suggested that a simple way to save our land-based missiles from destruction, without Safeguard, would be to fire them as soon as an enemy missile attack is detected by warning radar.

The Defense Department's answer is that a plan to make such an automatic response to an incoming missile sighting would resemble a "doomsday machine" defense sys-

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tem and would leave the President with no alternative to try to ride out a first attack by relying on Safeguard if it appeared best to him to do so.

RUSSIAN EXPERIMENT

Our nuclear bomber force, according to Laird and others, is threatened by the fact that Russia is experimenting with a Fractional Orbit Bombardment System (FOBS).

FOBS missiles would come in on low trajectories which would make it impossible to detect them until they were near their targets. Also, FOBS missiles could be sent around the world over the South Pole, a direction from which we have no warning system as yet.

The Safeguard ABM system, if fully developed as the Defense Department has conceived it, would provide some protection for seven U.S. bomber bases and for U.S. command headquarters in Washington as well as protection for our Minuteman and Titan II missiles.

Arguments over classified information have enlivened the debate from the first. Some senators have hinted that the Central Intelligence Agency (CIA) does not wholly agree with the appraisal of the Russian threat that Laird has made.

In one committee meeting, for example, there was a remark that the CIA does not believe the SS9 warhead is nearly as large as the 25 megaton figure provided by Laird. There have been hints of other disagreements on intelligence appraisals.

To Sen. Albert Gore, D-Tenn., it is inconceivable that Russia by the mid-1970s could hope to knock out our entire deterrent of ICBMs, submarine missiles and heavy bombers, mainly the B52s, in a single coordinated attack which would render this country helpless to retaliate effectively.

GORE CRITICAL

Gore was particularly critical because the early Laird-Defense Department estimates of future U.S. and Russian missile power did not take into account the fact that both countries might soon have multiple independently targetable reentry vehicles (MIRVs).

MIRV is a scheme to fit each nuclear missile, whether fired from land or under the sea, with several warheads, each of which could be aimed at a different target. Apparently in response to Gore's criticism, the new Defense Department white paper says Russia now has the capability to put MIRVs on its missiles.

The Tennessee senator figures that by using MIRVs this country can have 8,766 warheads by 1974—5,120 of them on submarines, 3,000 on ICBMs and 646 on bombers—as compared with 5,150 MIRV warheads for Russia—500 of them on submarines, 4,500 on ICBMs and 150 on bombers.

Since only 250 warheads would have to be delivered by either side to devastate the 50 largest cities of the other side, Senate Gore sees no possibility that we will lose our deterrent even if the Safeguard ABM system is not built.

Of course, if the Defense Department is right and our submarines could be rendered helpless, Russia, even using Gore's figures, would have more warheads than the United States in the 1970s.

Whether it would have enough more to knock out all U.S. forces before this country could reply to a first strike by the Russians is the big issue upon which judgments differ.

"OVERKILL" CLAIM

Senator Gore contends we now have enough warheads to fire 48 at each of Russia's 50 largest cities, a vast "overkill" potential since even one missile would be enough to devastate a large population. He says Russia could now fire 22 missiles at each of the 50 largest U.S. cities, also an overkill potential.

What is Safeguard, how would it work and how did it come about?

Fourteen years ago, back in 1955, the Army let a contract to the Bell Telephone Laboratories to determine if it would be feasible to develop a missile system which would destroy enemy missiles before they reached their targets.

This first effort, known as Nike-Zeus, was likened to an effort to hit a bullet with a bullet to render it harmless.

Nike-Zeus developed into the Nike-X and research and development work continued year-by-year until the total cost of such work has now reached \$4 billion.

Presidents Eisenhower and Kennedy both decided against the installation of an ABM system although some promising progress had been made. In 1966 Congress voted \$167.9 million to begin acquiring an ABM system although the money had not been requested and was not spent by the administration of President Johnson, who was hopeful of getting an arms limitation agreement with the Russians.

In September 1967, Defense Secretary Robert S. McNamara announced a decision to install a "thin" ABM system, primarily to protect U.S. cities from the kind of light missile attack Red China might be able to make in the 1970s.

ADVANTAGES CITED

It would be hopeless to try to protect cities from the kind of massive attack the Soviet Union could make, McNamara said, but the thin ABM would provide some protection for our Minuteman missiles, even from a Russian assault.

Another advantage of the system, he said, was that it would provide protection from an accidental firing of one or a few missiles from the Russians.

McNamara expressed confidence that our ability to strike back would be the best protection against Russian action to start a nuclear war but he thought the Chinese might not act rationally and might, for the sake of making a first strike against this country, risk the kind of devastating retaliation we could throw back at them.

The kind of system McNamara wanted became known as "Sentinel."

Many persons were never convinced that the primary mission of Sentinel was to guard against a Chinese attack. They thought its main purpose was to give cities some protection, however light, from a possible Russian assault, and thus reduce casualties.

They believed the talk about a Chinese threat was intended to allay any fears that Russia might have that we could so protect our cities that we could, if we wished to do so, make a first strike against the Soviet Union at some time in the future.

Difficulties for Sentinel arose when residents of Boston, Seattle and other cities protested that the presence of the system would make them prime targets in the event of a nuclear war.

HURRIED REAPPRAISAL

When the Nixon administration came in, Secretary Laird, Deputy Secretary of Defense David Packard and others made a hurried reappraisal of the Sentinel system.

They changed its name to Safeguard. They decided the possible threat from China had not developed as rapidly as expected so protection of cities from a light attack was no longer the main need.

The primary need, they decided, was to protect our land based ICBMs from the new threat of the highly accurate Russian SS9, hence the ABM missiles themselves could be grouped around Minuteman silos and bomber bases, rather than around cities.

Such a configuration would still provide some protection for cities from a light Chinese attack, if necessary, and it could still protect against any accidental missile firings from either Russia or China.

Administration spokesmen said the Safeguard system would be less likely than the Johnson administration's Sentinel system to provoke the Russians into an effort to escalate the arms race.

They argued that a system designed to protect our missiles—our deterrent—would constitute no new threat to which the Russians would feel they should react. On the other hand, they insist, a Sentinel system, designed to give thin protection to cities from a small nuclear attack, would make the Kremlin think we intended to thicken the system later so that we could make a first strike against Russia without fear that our cities would be ravaged in retaliation.

Here the arguments get somewhat abstruse. Critics of Safeguard say it would provide some of the thin protection for cities that Sentinel was designed to provide so Safeguard would be just as likely as Sentinel to provoke the Russians to greater arms efforts.

SHIFT IN EMPHASIS

The shift in emphasis from protecting the cities to protecting missile sites looks to some critics of Safeguard like an effort to find some possible justification for installing an ABM system which is not needed.

They characterize the whole scheme as "an ABM system in search of a mission."

Secretary Laird insists, however, that the change in mission—from protecting cities to protecting missile sites—is fully justified by new developments, the failure of the Chinese to develop weapons as rapidly as expected and the speedup in the Russian deployment of SS9 missiles.

Safeguard and Sentinel, before it, have been described by scientists as the most complex weapons system ever undertaken any place.

Because of the complexity, the Nixon administration proposes to go ahead with Safeguard on a piecemeal basis, testing and possibly making changes as circumstances dictate.

As a starter, the administration wants to install Safeguard at only two sites, one at Malmstrom Air Force Base, Great Falls, Mont., and one at Grand Forks, N. Dak.

These two would be designed to protect about 300 of the 1,000 Minuteman missiles in the U.S. arsenal. The \$800 million being sought from Congress in the new budget for Safeguard includes money to start on these two installations and also money to acquire sites for 10 additional installations in other parts of the country, including one at Warren Air Force Base, Wyo.

Each Safeguard installation would have two radar systems, two missile systems and a computer.

RADAR DETECTION

One of the radars, known as perimeter acquisition radar (PAR), would be able to detect high-flying incoming missiles at a distance of 1,000 miles or about 10 minutes before they reached their targets.

The components of PAR are now being tested and, according to Deputy Defense Secretary Packard, should have good ability to distinguish between missiles and other objects in space, although it could not distinguish between a dummy missile and one carrying a live warhead.

Information from PAR would be fed into a computer and also into a smaller radar, known as a missile site radar (MSR). The PAR installation would be large, requiring a building 200 feet square and 130 feet high.

The MSR would be smaller, requiring a building 100 feet square and 40 feet above ground, thus the MSR could be "hardened" for protection more readily than the PAR.

If it was decided to respond to a PAR warning that a missile was on the way, the MSR would guide a Spartan missile to intercept the incoming missile. Spartan would

have a nuclear warhead which could destroy the enemy missile with Xrays if it exploded in the near vicinity of its target.

The interception would be made in space, outside the earth's atmosphere.

Spartan, according to Packard, would have a range of 300 or 400 miles so it could protect a wide area. Efforts to develop an even better Spartan are under way.

If Spartan failed to stop an incoming missile, Sprint missiles would be guided by computers and the MSR to destroy it in the atmosphere, nearer to earth.

SPRINT SPEEDY

Sprint has been described as a "very fast" weapon with a range of 20 to 30 miles. Its destructive force would consist of neutralization radiation rather than Xrays.

Steven Weinberg, professor of physics at Massachusetts Institute of Technology and one of the scientists opposed to installing an ABM system at this time, estimates the average incoming missile from space would be within range of Sprint for only 6 seconds so half-trigger response and highly accurate guidance would be necessary.

Under the Safeguard concept, Spartan would provide an area defense over most of the country against a light missile attack if all 12 installations are deployed.

The present administration agrees with previous estimates that an effective defense against a massive missile attack on cities is impossible.

Sprint would provide only what is known as a "terminal" defense for the missile sites or air bases where they would be located.

The number of Spartan and Sprint missiles planned for each site is classified information but experts outside of government have guessed each site might have 70 Spartan and 300 Sprints.

The radars, missiles and computers used for Safeguard would be generally the same as those planned by the Johnson administration for the Sentinel system, but the radars would be provided with more "faces" so they could detect missiles coming in from directions not covered by the earlier plan.

Secretary Laird has expressed confidence that Safeguard will perform the task assigned to it—the protection of enough missiles to leave this country with an adequate deterrent force even if we were attacked first by Russia.

CLASSIFIED ESTIMATES

The Defense Department earlier this year furnished senators classified estimates on how many of our missiles would survive such an attack if Safeguard were fully deployed.

Senator Symington claimed that the difference between the number of our missiles which would survive with and without Safeguard was so small that Safeguard would be voted down in Congress if the Defense Department estimates could be made public.

It may have been in response to Symington that the new Defense Department white paper includes a hitherto classified statement by Laird that if the Russians expand their SS-9 force to 420 missiles, each equipped with MIRV's, they could under optimum conditions destroy 95 per cent of our Minuteman missiles, leaving us with only 50.

Jerome B. Wiesner, provost of Massachusetts Institute of Technology and a member of the President's Science Advisory Committee, has made an estimate of his own on missile survival.

He believes that if the Russians attain an SS-9 force of 500 missiles (more than double their present force), each equipped with three warheads, and if they would fire them all at U.S. missiles and control centers, 270 of our missiles, a respectable retaliatory force, would survive even without a Safeguard system.

Under the same conditions, if we had Safe-

guard at two sites, one in Montana and the other in North Dakota, he estimates 350 missiles would survive, only 80 more than if we had no Safeguard.

He concludes Safeguard would accomplish little for the money spent.

Deputy Defense Secretary Packard has said the first two Safeguard installations would cost \$2.1 billion, exclusive of the research cost that has already gone into ABM, exclusive of the cost of warheads for the Spartan and Sprint missiles, and exclusive of cost of manning and operating the two systems once they are installed.

COST FIGURES

If Safeguard is installed at 12 sites, the cost, exclusive of the items already mentioned, would be \$6.6 billion and if extra installations were made in Hawaii and Alaska, bringing the total number to 14, the cost would be \$7 billion, Packard testified in March.

The debate has been full of claims that weapons always cost far more than the Defense Department estimates and that once started Safeguard could run into many billions, perhaps \$60 billion if it were decided later to thicken the system with more missiles and other equipment.

In its white paper, the Defense Department was more explicit on expected costs than it had been earlier. It said the cost of a full system, 12 sites in the continental United States and sites in Alaska and Hawaii, would be \$11.8 billion, including warheads, research and testing.

Both Laird and Packard contend that while our defense expenditures are high we are spending only about one-fourth as much as Russia is spending when the relative wealth of the two countries is considered.

They point out that Russia has an ABM system.

Several years ago Russia began installing what appeared to be a warning system, called Tallinn, across the northern part of the country. It now is believed that Tallinn has no ABM capabilities but an ABM system, known as Galosh, has been partially deployed around Moscow.

It was expected in Washington that Galosh eventually would have some 120 missiles but estimates now say work on Galosh has slowed with about 70 missiles in place. Some experts believe the slowdown may have resulted from a realization that Galosh would be obsolete in a short time.

The Defense Department white paper discloses that Russia is testing a loiter ABM missile could explain why work on Galosh has slowed pending the outcome of these tests.

A battle of books has developed during the ABM debate.

Sen. Edward M. Kennedy, D-Mass., one of the leading foes of deployment of Safeguard, although he would continue with ABM research to try to develop a better system, asked one group of scientific experts to prepare a book, just published, showing faults of the proposed system.

SCIENTISTS DIVIDED

Another publication, urging the approval of Safeguard, has appeared under the sponsorship of the American Security Council, which includes such noted scientists as Dr. Willard F. Libby, Nobel laureate of the University of California at Los Angeles; Dr. William J. Thaler of Georgetown University, and Dr. Edward Teller, "father" of the H-bomb.

Anti-Safeguard scientists have hit hard at its reliability. Among their claims are these:

Safeguard would be vulnerable because its radars would be "soft" targets, difficult to harden and protect.

The Russians are capable of developing sophisticated penetration aids which would render Safeguard ineffective.

These aids would include radar jamming, the use of "chaff" (multitudes of fine wires released in space) which would confuse defensive radars and enable live warheads to get through, the use of nuclear explosions to black out radar reception for as long as 10 minutes at a time and the use of a large number of other devices.

By adding more missiles with multiple warheads, the Russians could exhaust all our Spartans and Sprints and then launch their main attack, the cost of such tactics being less to them than the cost of Safeguard to us.

All the components of Safeguard cannot be tested under actual combat conditions until it will be too late to correct any "bugs" which may develop.

Each Safeguard computer would have to be very large—equivalent to 100 ordinary business-size computers—so the possibility of computer malfunctions would be considerable.

While the PAR radar system is supposed to be able to keep track of 100 incoming objects at a time, it would not be difficult for the Soviets to send in far more MIRVs than that.

For these and other reasons, Senator Kennedy has said Safeguard "may never work at all."

CHEAPER?

Some opponents of Safeguard contend it would be cheaper to add more missiles of our own, so more of them would survive in the event of a Soviet first strike, than it would be to install Safeguard.

Some take the position that any real defense against a nuclear attack is impossible because a country determined to do us great damage could sneak portable nuclear time bombs into our cities or could set off nuclear explosions near our shores to cause tidal waves which would wreck port cities.

The big hope of most anti-Safeguard senators is that refusal to vote the \$800 million to make a start on the ABM system would prod the administration into seeking an arms limitation agreement with Russia.

President Johnson sought such negotiations with Moscow and the Kremlin reacted favorably. Immediately after that, however, Russian troops marched into Czechoslovakia and Johnson thought it would be inappropriate to open new talks just as the Russians were acting more aggressively.

In his Senate testimony, Secretary Laird indicated that because of Czechoslovakia we still cannot get into arms limitation negotiations at this time.

Senators who want arms limitations point out that Russia now seems more willing to get into such talks than at any time in the past.

They fear that if this opportunity is lost and Safeguard is launched the arms race will be off again on a new lap and the danger of a worldwide nuclear holocaust will be increased.

To which the Nixon administration replies: Safeguard would be purely defensive. In spite of what critics say it would give a good measure of protection.

It would constitute no offensive danger to the Soviet Union and, therefore, would not provoke an extension of the arms race.

It is necessary to guard our missile deterrent from the new danger of the SS9 Soviet missile. Failure to provide Safeguard would constitute a gamble with national security.

Unless we provide such protection Russia for the first time will have a first strike capability against the United States by the mid-1970s. Russia is advancing more rapidly than previously supposed to attain such capability.

We can afford it because it would cost only about \$1 1/2 billion a year until completed.

So go the arguments. The nation listens and hopes Washington will have the wisdom to choose the right course.

OUR BEST JUDGMENT: DELAY SAFEGUARD, PRESS ARMS AGREEMENT EFFORTS

(Issue: There are too many unanswered questions to warrant a quick start on proposed ABM system.)

After considering pro and con arguments over the proposed Safeguard antiballistic missile system which the Nixon administration has asked Congress to approve, this newspaper has revised its thinking somewhat and now believes there should be a delay for more study and research.

(The arguments are explored by Associate Editor Leverett Chapin elsewhere in today's Perspective section.)

We keep recalling that less than two years ago the nation was told by the Johnson administration that we had to have a similar ABM system to protect our cities from the kind of "light" nuclear attack that Red China would be capable of making within a very few years.

Now we are told the danger from Red China is not developing as rapidly as previously expected—but that we still need an ABM system, not primarily to protect our cities but to protect our own missile sites because Russia is suddenly developing new and frightening potentials for nuclear warfare.

Secretary of Defense Laird has been busy spreading the word on Capitol Hill that Russia is becoming a nuclear colossus; that by the end of the year it will have more missiles in place or being built than we have; that Russia must be intending to develop a force so powerful that it could attack this country first without fear of retaliation because our missiles would be knocked out; that a new, highly accurate Russian weapon, the SS9 missile, is particularly dangerous; that Russia is testing an advanced ABM missile of its own, and that new developments in antisubmarine warfare may wipe out the big advantage this country now has in nuclear submarines.

All this is reminiscent of the "bomber gap" which we were told existed in the 1950s but later proved to be a myth and the "missile gap" which frightened the country in the early 1960s, unnecessarily.

It is the business of the Defense Department to take a gloomy view of our military strength as compared with that of the Soviet Union.

Past experience, however, has made us gun-shy of the kind of dire predictions and projections that Secretary Laird has been using.

If the need for ABM protection against the Red Chinese can fade into mist in less than two years, can we have any assurance that the awful prospects seen by Secretary Laird are any more substantial?

Must the country react with new defense projects costing billions of dollars every time intelligence estimates in the Department of Defense raise visions of new dangers?

The new administration had been in office only about seven weeks when President Nixon announced it had discovered the need for the Safeguard system to protect our missiles from the new Soviet menace.

That was fast work. Whether the need is real or imagined depends to some extent on the interpretation of data available to military intelligence of what Russia is doing.

The administration has interpreted the data one way just as the previous administration interpreted data on Red China to show the need for an ABM system.

Should billions be spent on the basis of quick judgments?

The Russians started an ABM system around Moscow, called Galosh, some time ago but now appear to have stopped, supposedly because it might be obsolete when finished in the light of new Russian ABM tests.

The administration wants to start deploying the Safeguard system even before tests on the component parts of the system have been completed to determine if they will work.

One part of the system would be a Spartan missile which could hopefully destroy an incoming missile with X rays above our atmosphere. The administration admits research is being carried forward on a "better" Spartan. In other words, it is not satisfied with a major part of the Safeguard system yet it wants to go ahead deploying the system.

After some prodding the administration has admitted Safeguard, as now contemplated, would cost about \$11 billion. If past experiences on defense cost estimates show anything, they show the total bill could run much higher.

The system is described as a thin area defense system because all experts now agree there can be no really effective defense against a massive nuclear assault.

But we can foresee the probability that if a thin system is deployed there will be pressures to thicken it, at the cost of more billions, as time goes on. The arms race would be escalated, we anticipate.

At this time there are too many unanswered questions to warrant a quick start on Safeguard. For example:

Would Safeguard really protect our missiles? Is the system too complex to function? Could it be rendered ineffective by the use by the enemy of "chaff" and other penetration devices on their missiles?

Could Safeguard be overwhelmed if the enemy sent more missiles than Safeguard's radar could spot and track? Will the use of multiple warheads on enemy missiles, a likely development for the near future, make it relatively easy to thwart Safeguard? Will it be possible to protect our missiles by placing them in hard rock silos, a subject just now being explored?

Would Safeguard merely spur the Russians to greater efforts to develop new nuclear threats? Would the development of fractional orbital missiles—missiles coming in on low trajectories—render Safeguard helpless? Will the supposed threat to our nuclear submarines actually develop or will we find countermeasures to assure our under-sea weapons from destruction?

The answers to these and many more questions are not known. More answers are necessary before a new multibillion-dollar commitment for a Safeguard system is made.

Perhaps the President should submit the matter of nuclear defense to a "neutral" board of experts for re-evaluation while additional research is carried on to find out if Safeguard is feasible.

Secretary Laird has said that if we do not have Safeguard we will have to increase the number of our missiles to assure that more of them would survive if Russia should attack this country first and unexpectedly.

Some opponents of Safeguard claim it would be cheaper and better to have more missiles. That is a fitting subject for study.

Secretary Laird has said Safeguard must be approved now because it will be 1973 before we can install the first two Safeguard bases and the middle of the 1970s before the entire system could be deployed.

We doubt that the need for a quick start is as pressing as the secretary says. We now have 1,000 Minuteman missiles, 50 Titan II missiles, more than 600 missiles on submarines and we have a force of 500 B52 bombers capable of delivering nuclear weapons.

That is enough force to wipe out Russia several times over and it is inconceivable that it can be rendered harmless by any new devices the Soviets may be able to perfect and deploy in less than 10 years.

A delay in the authorization of Safeguard, we believe, would spur the administration to try to make an arms limitation agreement with Russia. In the long run the only hope for ending the arms race must lie in such negotiations.

If the nuclear arms race continues the world will be in increasing danger of incineration. That is why we believe a delay in the deployment of Safeguard—another nuclear weapon—is advisable and that all-out efforts be made to reach arms agreements, before it is too late.

SENATORS LIVE ALMOST 6 YEARS LESS THAN AVERAGE AMERICAN MALE

Mr. PELL. Mr. President, recently I read a study of the longevity of U.S. Senators and found it depressing, in that it showed our life expectancy as of the date we took office is 5.9 years less than that of the average American male of the same age.

There are other nuggets of information which I thought might be of interest to my colleagues and, accordingly, ask unanimous consent to have printed in the RECORD at this point, "Longevity of U.S. Senators" from the Statistical Bulletin, May 1969.

There being no objection, the article was ordered to be printed in the RECORD, as follows:

LONGEVITY OF U.S. SENATORS

Senate: literally a council of elders, from the Latin *senex*: elder. In this century United States Senators have indeed been more of a council of elders than those who served in the first 56 Congresses, but the life expectancy of those in office since 1930 has fallen significantly short of that for white males in the general population. During the 69 years that elapsed between the outbreak of the Civil War and 1930, the longevity of United States Senators closely approximated that of white males in the general population.

This conclusion is drawn from a study of the longevity of 1,619 men elected or appointed to the United States Senate from the time of the First Congress of the United States in 1789 through the First Session of the Ninetieth Congress to the end of 1966. During this 178-year period, 1,416 Senators died, 223 of them (about 16 percent) reportedly passed on while in office; four deaths were due to assassination, three resulted from duels, and one occurred in a Civil War battle. The nine women Senators who served during this period are not included in the study.

Expectations of life for the deceased Senators at the time of their first taking office were calculated on the basis of special cohort mortality tables for the white male population of the United States. Such tables, prepared in the Statistical Bureau of the Metropolitan Life Insurance Company, trace the changing longevity over the calendar years following each Senator's accession to office. For white men born prior to 1840, it was assumed that mortality rates in the United States conformed substantially to those shown in the Wigglesworth Table and English Life Table No. 2. From 1840 on the mortality rates assumed were those developed by P. H. Jacobson in his paper "Cohort Survival for Generations Since 1840" (*Milbank Memorial Fund Quarterly*, July 1964) but with modifications designed to reflect the fact that since about 1955 the death rates of white males in the United States have shown virtually no change.

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AUTHORIZATION OF APPROPRIATIONS FOR FISCAL YEAR 1970 FOR MILITARY PROCUREMENT, RESEARCH AND DEVELOPMENT, AND FOR THE CONSTRUCTION OF MISSILE TEST FACILITIES AT KWAJALEIN MISSILE RANGE, AND RESERVE COMPONENT STRENGTH

The PRESIDING OFFICER (Mr. HUGHES in the chair). The hour of 1 o'clock having arrived, the Chair lays before the Senate the unfinished business, which will be stated.

The ASSISTANT LEGISLATIVE CLERK. A bill (S. 2546) to authorize appropriations during the fiscal year 1970 for procurement of aircraft, missiles, naval vessels, and tracked combat vehicles, and research, development, test, and evaluation for the Armed Forces, and to authorize the construction of test facilities at Kwajalein Missile Range, and to prescribe the authorized personnel strength of the Selected Reserve of each reserve component of the Armed Forces, and for other purposes.

The Senate proceeded to consider the bill.

The PRESIDING OFFICER. Pursuant to the previous order, the Chair recognizes the Senator from Nevada.

Mr. CANNON. Mr. President, I ask unanimous consent that I be permitted to suggest the absence of a quorum, without losing my right to the floor.

The PRESIDING OFFICER. Without objection, it is so ordered.

The clerk will call the roll.

The assignment legislative clerk proceeded to call the roll.

Mr. CANNON. Mr. President, I ask unanimous consent that the order for the quorum call be rescinded.

The PRESIDING OFFICER. Without objection, it is so ordered.

Mr. CANNON. Mr. President, Senator STENNIS on February 28, 1969, appointed me chairman of a special ad hoc Subcommittee on Tactical Air Power of the Armed Services Committee.

Other Members appointed to serve on this subcommittee were Senators SYMINGTON, YOUNG, THURMOND, TOWER, and GOLDWATER.

Senator STENNIS requested that we conduct as searching an inquiry as possible into the request of the military for billions of dollars pertaining to the tactical aircraft of all three services. Specifically, Senator STENNIS requested that we examine the new fighter programs—namely, the Air Force F-15 and the Navy F-14. In addition, he requested that we examine the F-111 program and the many types of tactical air-to-ground missiles that are an important part of our tactical aircraft.

I was pleased and honored to serve as chairman of the Tactical Air Power Subcommittee. We spent many days in receiving extensive briefings from the military. The purpose of these briefings, of course, was to become thoroughly familiar with the intended operational mission of the weapons systems involved their performance characteristics; whether they are on schedule; the magnitude of the costs involved; and other related matters. In particular, it was our purpose to determine the justifica-

tion for initiating or continuing the many programs that fall within the sphere of tactical aviation.

I want to say at the outset that tactical aircraft and the related missiles associated with such aircraft is a very broad area and encompasses many types of individual aircraft and missiles.

I believe it would be well to dwell briefly on an explanation of what is meant by tactical aircraft so that the Senators may have an appreciation of the type of military equipment that I am talking about.

The primary objective of tactical air forces is to assist our ground forces in fighting nonnuclear wars. They achieve this objective by performing three essential missions:

First. Air superiority: The most important mission for tactical air forces is to defend our land forces from attack by enemy air forces. This is done by possessing a superior air-to-air capability over any enemy air force. It is oftentimes referred to as a "dogfight" capability.

Second. Close air support: Tactical aircraft provide firepower in support of our land forces by inflicting casualties and damage on enemy troops and equipment immediately adjacent to our ground forces.

Third. Interdiction missions: Tactical aircraft are used to restrict and impede the enemy's movement of men and materiel. This is done by striking road and rail networks behind the lines, transportation points, supply depots, air bases, and so forth.

It is important to be aware of the fact that the design requirement for an air superiority aircraft are largely dissimilar from aircraft performing the latter two missions, which are air-to-ground missions. The requirement for air-to-air combat dictates that the aircraft be light, fast, highly maneuverable, and so forth. The requirement for carrying a large number of bombs over long distances on air-to-ground missions generally dictates that these aircraft are heavier, slower, and less maneuverable. As a consequence, these aircraft cannot compete in successful air-to-air combat with enemy dogfighters. To survive, they must operate in what is known as a "permissive air environment."

I will discuss later in my speech the vital need for a new fighter. Before doing so, I would like to mention the specific weapons systems that the Tactical Air Power Subcommittee reviewed; some of the pertinent facts concerning these weapons systems; the recommendations that we made to the full Armed Services Committee; and the final action taken by the Armed Services Committee in respect to our recommendations.

The programs reviewed by the Tactical Air Power subcommittee were: The RF-111, a reconnaissance version of the F-111 aircraft; the light intratheater transport—LIT; the AGM X-3 air-to-ground missile; the Cheyenne helicopter; the F-111 aircraft programs; the AX tactical aircraft; the A-7 tactical aircraft; the A-37 tactical aircraft; the Harrier, a new V/STOL aircraft; the Tow antitank missile; the Condor air-to-ground tactical missile; the Maverick air-to-ground

tactical missile; the F-15 new Air Force fighter; the F-14 new Navy fighter; and the A-6 tactical aircraft.

I would now like to discuss very briefly each of these programs for which the services requested very substantial funds in the fiscal year 1970 authorization bill, and the actions taken by the Tactical Air Power Subcommittee.

First. The RF-111: The RF-111 is a reconnaissance version of the F-111 currently being produced for the Air Force. The Air Force requested \$15 million to initiate R. & D. However, our investigation revealed that the total cost for the program would amount to \$821 million. The purpose of the RF-111 was to perform the reconnaissance role for tactical Air Force.

We determined that the Air Force already has purchased 481 RF-4C's; a substantial quantity of RF-101's; the very effective SR-71's, and also has available other reconnaissance equipment. Therefore, it was our recommendation that the justification for this program lacked sufficient merit in that the value to be realized for this large expenditure was not justified.

It was the feeling of the Tactical Air Power Subcommittee, Mr. President, that this was one of the better illustrations of the proper role that the Congress can play with reference to military programs. Although the request for this year was relatively small, namely, \$15 million, and therefore not nearly as substantial as many other on-going programs, we felt that one of the vital roles we could play was to "nip in the bud" programs of questionable justification before our investment became large. After programs have been underway for several years and the investment in Government funds is high, it is extremely difficult to cancel them. After all, to do so would result in the almost complete loss of our previous investment, with no visible return to our defense establishment through increased readiness. This type of decision is all the more difficult where the remaining funds needed to complete are relatively small when compared with large prior expenditures. That is why the Tactical Air Power Subcommittee concentrated particularly had on those programs that the military desired to initiate this year but whose ultimate expenditure over future years would amount to billions of dollars.

The full Armed Services Committee agreed with our recommendation to delete the \$15 million requested to initiate R. & D. for the F-111. Denying the initiation of this program will result in a total savings to the Government of at least \$821 million.

Second. LIT—Light intratheater transport—was a proposed by the Air Force to develop a new tactical airlift aircraft to replace the C-123 and the C-130 aircraft in the mid 1970's. It was to be a tilt-wing, turbo-prop aircraft. The request by the Air Force was small, namely only \$1 million for R. & D.

The Tactical Air Power Subcommittee recommended that funds for this aircraft be denied, and the full committee agreed with our recommendation. The reason for our action was twofold:

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First, the C-130 has done an excellent job in meeting this mission requirement in Vietnam and the Department of Defense indicated that, if necessary, it could continue to rely on this aircraft in the 1970's.

Second, the tilt-wing concept of aircraft appeared to our committee to be questionable technologically. Well over \$100 million was spent to build five XC-142 tilt-wing aircraft. Four of the five crashed. Further, Air Force testimony indicated that the fate of nearly every V/STOL aircraft we have built has been the same—they have crashed. Therefore, although the funds request was small, we denied the request. It is extremely important to note that the total cost of this program would have been \$437 million as a minimum for R. & D. alone. No production costs were available, but it is thoroughly reasonable to conclude that the total cost for this program would have exceeded \$1 billion once production costs were included.

Third. The AGM X-3 is a new tactical air-to-ground, standoff missile. The Air Force requested \$3 million to initiate R. & D. The committee denied the request for \$3 million, and the full Armed Services Committee supported our recommendation.

The primary reason for our denial of the fund request was the fact that all three services currently have a large family of air-to-ground missiles either in being or in R. & D., including the Tow, Walleye, Bullup, Maverick, Condor, Shrike, Standard Arm, and so forth.

The Tactical Air Power Subcommittee felt that before any new additional air-to-ground missile development work should be undertaken, that the Department of Defense should study thoroughly the entire family of air-to-ground tactical missiles for all three services. In addition, we felt that the Department of Defense should analyze all existing programs to determine if the requirements for each type is still valid and to insure the elimination of any duplication of military effort.

We did recognize that the AGMX-3 had some proposed performance characteristics that were different from our existing family of weapons. However, we were not persuaded that these few characteristics were sufficient to justify starting out on a program that would cost at least \$200 million for R. & D. alone. The Air Force had no cost information on how much it would cost to produce these missiles. The ultimate cost of this program unquestionably would exceed \$500 million, and therefore we felt that the ramifications of cancelling a \$3 million request for this item in fiscal year 1970 was significant indeed.

Fourth. The Cheyenne: The Cheyenne is a rigid rotor helicopter being developed by the Army for the close air support of its ground forces. They intended to buy 375 Cheyennes. As a matter of fact, 10 test aircraft have been produced, and one of them recently crashed. The program encountered serious technical difficulties. As a result, the Army recently decided to cancel the production contract with the Lockheed Aircraft Corp.

The Tactical Air Power Subcommittee took note of the Army's decision to cancel the contract, and subsequently the full Armed Services Committee eliminated the entire \$429 million contained in the Army's request for the Cheyenne program.

The Army desires to continue R. & D. on the Cheyenne aircraft. However, its request to continue R. & D. came after the Tactical Air Power Subcommittee had completed its deliberations. Therefore, all funds with respect to this aircraft had been eliminated.

I think it would be fair to say, however, that the Tactical Air Power Subcommittee would favor continuing the R. & D. at some reasonable level, because this aircraft represents a quantum jump in the state of the art. Also, it would not seem reasonable to merely junk the nine existing aircraft which we already have paid for. However, as I stated, the Army's revised request for funds was received too late to take action thereon, and all money for the Cheyenne was removed from the bill.

Fifth. The F-111: The F-111 aircraft is the Air Force version of the TFX. The original design mission for this aircraft was the low level delivery of nuclear bombs. In 1964 it was given an additional interdiction mission to deliver general purpose bombs. It is the only Air Force tactical aircraft fully capable of operating at night and in all weather conditions. The present program calls for the purchase of 550 operational aircraft. These aircraft will cost \$6.667 billion—\$1.569 billion for R. & D. and \$5.089 billion for production. The average unit cost is \$12.5 million each, including R. & D., compared with the original estimated cost of \$3.4 million each, made in November 1963.

The subcommittee of course examined in some detail the reasons for the substantial increase in costs. They are as follows: A reduction in the overall program from 1,388 to 550 aircraft; a reduced production rate; many configuration changes to the aircraft; the purchase of different models; drastic inflation during the past 4 years; and contractual under-estimation of cost.

The subcommittee deliberated at considerable length relative to this program. It concluded that the request of the Air Force for \$800.2 million, including \$73 million for R. & D., \$71.4 million for overruns, and \$655.8 million for 68 aircraft, was justified. We were persuaded by the fact that it is the only aircraft that can perform tactical missions at night and in all weather, and has the longest range of any other tactical aircraft. This is an extremely important role for tactical aircraft to perform.

Quite obviously we cannot dictate visual or good weather during periods of conflict with an enemy. We must have an aircraft that can perform at night and in bad weather. No one regrets the cost increases more than I do.

There is one special area relative to the F-111 that the subcommittee also analyzed in detail. That is the rather well publicized Mark II avionics for the F-111D model. The F-111A is equipped

with the Mark I avionics, costing about \$400,000 each.

Mr. GORE. Mr. President, will the Senator from Nevada yield at that point?

Mr. CANNON. I would prefer, if the Senator would not mind, to go through my entire statement and then I will submit to questions on all parts of it.

Mr. GORE. I do not quite understand the term "avionics." I wonder would the Senator explain that to me?

Mr. CANNON. Avionics consist of the sophisticated electronic gear in the aircraft which permits it to carry out its navigational mission, its bombing mission, and so forth. It makes it possible to go to a preselected point and to get there with pinpoint accuracy in the performance of the mission and to return. That is generally referred to in the term of "avionics."

Mr. GORE. I thank the Senator.

Mr. CANNON. Mr. President, it was decided by the Department of Defense to purchase a new Mark II avionics for the F-111D in order to give it the accuracy required to drop conventional bombs. It was estimated to cost \$750,000 per aircraft. The present cost is about \$2 million per aircraft. We registered our vital concern relative to the cost of the Mark II system with the Air Force. Subsequently, the Air Force stated that it intended only to buy those Mark II's which already are under contract and for which funds already have been previously appropriated. Therefore, it was our feeling that approximately \$85 million could be removed from the fiscal year 1970 authorization request for this aircraft, or that additional F-111's could be purchased with this money. The Air Force felt that only about \$60 million could be saved by not purchasing new additional Mark II avionics sets.

The final action taken by the Armed Services Committee was to direct the Air Force to not purchase any additional Mark II sets with fiscal year 1970 funds and to take this money and purchase additional F-111 aircraft therewith.

The Air Force presently is determining the amount of money that can be applied to additional F-111 aircraft procurement and also what type of modified avionics system will subsequently be installed on the remaining F-111D aircraft.

I would like to add that the cost figures that I have mentioned previously refer only to the F-111 A/E/D. We did not analyze the FB-111 program, which is a strategic bomber version of the F-111 and which involves an additional \$1 billion.

I also should point out that the spare parts cost for the F-111 tactical fighter aircraft is now estimated at \$52.7 million. The total estimated cost of the 550 F-111 tactical fighter, including spare parts, will be \$7.2 billion.

Sixth. AX: The AX is a new tactical aircraft proposed by the Air Force to supply close air support for Army ground forces. The Air Force requests \$12 million to initiate research and development this year. The Tactical Air Power Subcommittee recommended, and the Armed Services Committee approved, this request.

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During our briefings it was apparent that the Cheyenne helicopter and the AX aircraft were clearly competitive for the same mission. It was clear to the members that we definitely would not support both of these programs because we felt that both of them were not justified. However, when the Army cancelled the Cheyenne helicopter program and after independently reviewing the proposed AX program, we recommended that funds for it be authorized.

It is quite clear that today and in the near future there is a distinct requirement for aircraft specifically designed for the close air support mission. Today in Vietnam we are using multipurpose aircraft such as the A-6, A-7, A-37, F-100, and even the F-4 to perform this role in addition to Army helicopter gun ships. The Air Force states that it will use existing technology and anticipates that the aircraft can be developed quickly and without substantial difficulty. The total research and development costs are estimated at \$137 million which appears high. The total estimated production costs, including spare parts and support equipment, will be \$1.33 billion. Therefore, the total program cost estimate is \$1.467 billion. This is a substantial sum as the members know and, if the program is pursued to completion, will buy slightly less than 1,000 aircraft.

The Air Force estimates that this aircraft can be purchased for approximately \$1.2 to \$1.3 million each.

We have today no specialized aircraft to perform this role. It was the opinion of the subcommittee that we should have such an aircraft for the 1970's. We felt that during the past few years we have concentrated too much on the "multipurpose" aircraft which has degraded our aircraft in the performance of their primary mission. It is just not possible to build one aircraft to perform several missions. Too many compromises are built into the aircraft and, furthermore, numerous additional costs are involved.

Seventh. A-7: The A-7 is a single-seat, single-engine tactical aircraft developed by the Navy for both close air support and interdiction missions. Both the Navy and the Air Force are purchasing this aircraft. The Air Force requested \$348.2 million to purchase 128 aircraft, and \$26.5 million for long-lead items. The Navy requested 27 aircraft to cost \$99.6 million, and \$4.4 million for long-lead items.

It was clear from Air Force testimony that they are not enthusiastic about the A-7 aircraft. It was clear, further, that former civilian officials in the Department of Defense had been very enthusiastic about this aircraft because it was supposed to be economical. Originally, it was to cost slightly over \$1.2 million. Its present cost approximates \$3 million which is comparable to the present cost of the F-4 fighter aircraft. It is clear that the F-4 is our only air superiority-type aircraft. The Chief of Staff of the Air Force testified that the F-4 could perform the close air support and interdiction missions almost as well, if not as well, as the A-7. Therefore, in view of the Air Force's complete lack of enthusiasm for this aircraft, the subcommittee

removed all A-7 funds from the Air Force fiscal year 1970 request, amounting to \$374.7 million. We authorized the Air Force to buy 120 F-4 aircraft for the \$348.2 million and to use the \$26.5 million for long-lead items for the F-4.

The Air Force has already received funds for 74 A-7 aircraft. However, very few of them have been delivered. Most of them are in the very early stages of production. As a result, we denied the Navy's request for 27 aircraft, costing \$99.6 million and the \$4.4 million for long-lead items. We requested the Department of Defense to make the necessary budgetary and other arrangements to permit the Navy to receive out of the previously funded Air Force money the equivalent number of A-7's which would have been procured under the Navy's request in this bill.

The committee, of course, had nothing against the A-7 aircraft. However, its prime mission is to deliver heavy bomb loads over long distances. It does require a permissive air environment in which to operate because it cannot conduct an effective air battle with an enemy fighter. We therefore agreed with the Air Force position that our national defense would be better served by purchasing the F-4 rather than the A-7. Also most importantly we believe that additional costs incurred, if any, would be nominal indeed.

Subsequent to the testimony by the Chief of Staff of the Air Force the committee eliminated all A-7 procurement and recommended purchase of F-4 aircraft instead. I should add that the Chief of Staff of the Air Force called on me yesterday to furnish information recently developed by the Air Force.

The information indicates that after a new reappraisal, for various reasons, including financial, the Air Force prefers to continue purchasing A-7's. I have not had time to completely evaluate this most recent Air Force information nor to discuss it with other members of the subcommittee and am not prepared to make any other recommendation. I firmly support the committee's position.

Eight. A-37: The A-37 is a tactical aircraft being purchased by the Air Force for the close air support role. It is a modified T-37-B which is a twin jet trainer aircraft. The Congress has already authorized funds for several squadrons which are to be turned over to the Vietnamese Air Force. The \$38.5 million that the Air Force requested in fiscal year 1970 for 96 A-37-B's were for active Air Force units. However, deliveries of these aircraft would not commence until late 1970. More important, their use in the active Air Force is planned to be confined to Southeast Asia because of their relatively limited capabilities. Upon termination of the war in South Vietnam they are to be turned over to the Air National Guard. The Tactical Air Power Subcommittee, with the subsequent concurrence of the full Armed Services Committee, reduced the request of the Air Force from 96 to 36 A-37's. We felt that introducing large numbers of these limited capable aircraft into the inventory was not justified. Therefore, the Air Force request was reduced by \$22.5 million from \$38.5 million to \$16 million.

Ninth. Harrier: The Harrier is a V/STOL aircraft developed by Hawker-Siddeley in England which the Marine Corps desires to purchase. It requested \$57.6 million for 12 aircraft. The Tactical Air Power Subcommittee reviewed this program in considerable detail. One of the very attractive features of this program is the fact that it will require no research and development funds. The aircraft has already been developed. The Marine Corps will conduct extensive operational tests with the 12 aircraft. They persuaded us of the merit of this program because of the aircraft's ability to operate from small helicopter-type landing pads whether these pads are on land or on board ship.

Another persuasive factor relative to this request is that the Marine Corps gave up the purchase of 17 F-4's for a comparable amount of money. Therefore, additional Government funds were not involved.

The Tactical Air Power Subcommittee felt that, inasmuch as the military has never had any V/STOL operational aircraft, this program should be pursued to determine once and for all the military advantages of this type of aircraft. All previous V/STOL aircraft were R. & D. prototypes.

We were concerned about the balance-of-payments aspects. The Marine Corps assured us that it had studied this aspect thoroughly and made the necessary arrangements so the balance-of-payments impact would be negligible, if any.

Tenth. Tow: The Tow is a wire-guided antitank missile. It also has capability against hard targets. The Army requested \$2.1 million for research and development and \$156 million for procurement. The subcommittee was impressed with the capabilities of this missile, which can be used on the ground and was also planned to be installed on the ill-fated Cheyenne helicopter.

The subcommittee did feel that the Army was building up too rapidly the quantities of these missiles to be purchased. Therefore, we recommended, and the Armed Services Committee concurred, a reduction of \$14 million from the procurement request; namely, from \$156 to \$142 million.

This is another in the large family of tactical missiles launched both from the air and from the ground which we felt the military might well be buying excessive types and quantities. Therefore, I am herewith requesting that the military completely review this family of weapons.

Eleventh. Condor: The Condor is an air-to-ground tactical missile being developed by the Navy. The Navy requested \$12.9 million to continue research and development. This program is over 1 year behind schedule because of technical difficulties. We were extremely concerned about this schedule slippage and whether or not this missile will be a successful addition to our military arsenal. We did not feel it wise to deny the \$12.9 million which would in effect cancel the program, inasmuch as we have already invested over \$100 million. The current estimate is that total research and development will cost \$15 million.

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If significant progress is not made this year on this program then I would certainly recommend a searching reappraisal next year, and specifically before we authorize any production funds for this missile.

Twelfth. **Maverick:** The Maverick is the new air-to-ground tactical missile being developed by the Air Force to kill enemy tanks and small fixed targets. The Air Force requested \$39.6 million to continue research and development in fiscal year 1970. The Tactical Air Power Subcommittee and the full Armed Services Committee approved continuation of this program. Three primary reasons for the Maverick are that, first, it can attack at lower altitudes and has a better range-speed capability; second, being a smaller weapon, more missiles per aircraft can be carried, and third, being a smaller weapon, it is less expensive.

The total research and development program is estimated at \$142.8 million, of which \$70 million has been authorized in prior years. The total production cost is estimated at \$306 million. Our concern is not with the Maverick but the principle that the services purchase fewer types of air-to-ground missiles. This is an additional missile in the family of air-to-ground missiles. I am herewith requesting the Department of Defense to analyze it thoroughly to see if there is any duplication with other programs. This program is on schedule and therefore we authorized funds for it to continue in research and development.

Thirteenth. **A-6:** The A-6 is a tactical aircraft developed for the Navy. It is the Navy's only night, all-weather capable aircraft. They requested \$62.5 million for 12 aircraft. It has proven itself in many combat sorties over North Vietnam. The Navy requested 12 aircraft for attrition; namely, to replace forecast losses. We were impressed with its combat performance and authorized the aircraft.

Mr. President, because of their importance, I left the following programs until last: The Air Force's F-15 and the Navy's F-14. The F-15 is a new air-to-air superiority fighter to be developed for the Air Force. It is to be operational by 1975 and will replace the F-4. The Air Force's request was for \$175 million to initiate research and development in fiscal year 1970. The total program will cost an estimated \$5.14 billion, including \$1.080 billion for research and development and \$4.060 billion for production, spares, and ground support equipment. The estimated unit cost is \$10 million per aircraft.

The F-14 is a new air superiority fighter being developed for the Navy. It also must perform the Fleet Air Defense mission, that was intended to be performed by the F-111B. The F-14A will use the P-12 engine and the Phoenix missile developed for the F-111B. The F-14B will incorporate a new advanced technology engine which will also be the same basic engine to be used on the Air Force F-15. The F-14C will have new avionics. It is to be a variable sweep-wing aircraft with a two-man crew. The Navy requested \$464 million; namely,

\$225 million for research and development, and \$239 million for procurement, including six aircraft. The total estimated cost for the F-14 program including all three models will be \$6.4 billion, including \$1.3 billion for research and development and \$5.1 billion for production cost to purchase 463 aircraft. The cost per aircraft including research and development is estimated at \$15 million.

Mr. President, I would now like to discuss why, in my opinion, it is so critical that the United States pursue the development of these two aircraft and why we need to commence these programs this year when economic considerations are so important. To be able to fight a successful conventional war it is essential that we have an air superiority aircraft that can dominate the battlefield. This requires an aircraft that can meet and defeat any enemy aircraft in air-to-air battle. This in turn permits our other tactical aircraft to support our ground forces by bombing enemy troops, supply lines, etc. Without an air superiority fighter capable of protecting all of our other tactical aircraft which require a "permissive" air environment we would be faced with a very dangerous situation.

The only aircraft in our inventory today with an acceptable air-to-air combat capability is the F-4. This aircraft has proven to be an excellent weapon system. However, it is critically important to recognize that its technology dates back to 1955. In an age of rapidly advancing technological achievements, it is not only questionable but doubtful that it could cope successfully with potential adversary aircraft in the mid-1970's.

The most likely enemy air superiority aircraft threat today is the MIG-21. Extensive testimony by the Preparedness Investigating Subcommittee last year established that the F-4 was at least equal in performance to the MIG-21 at normal fighting altitudes. Our best military experts state that today, therefore, there is relative equality between the F-4 and the MIG-21.

We are then faced with several important issues: What has the Soviet Union done recently and what will it do in the future with respect to fighter aircraft development? Most importantly, what air-to-air fighter capability will the Soviets possess by the mid-1970's? Can the United States continue to rely upon the F-4 in the mid-1970's? The answer provided by all recognized experts is that the F-4 will be technologically outmoded by the mid-1970's and, therefore, we cannot rely upon the F-4 to achieve or maintain supremacy in air-to-air combat with a potential enemy.

The informed experts agree that an aircraft designed on a technology of the 1955 time frame will be totally inadequate to cope with the highly sophisticated aircraft of potential enemies in the mid-1970's. As the Preparedness Investigating Subcommittee's report unanimously concluded in October 1968:

We have grave concern over the ability of the United States to establish and maintain control of the air during the 1970's.

It is well recognized that if the air space is controlled, then the battle area

and surrounding terrain is controlled. If the air space is not controlled, especially against a first-class air power, then tactical aircraft designed for air-to-ground roles will be relatively ineffective in the performance of their missions. Even modern aircraft designed for air-to-ground roles require a "permissive" air environment, that is, no heavy enemy fighter opposition, if they are to carry out their mission with success.

The committee is compelled to point out that for the last few years the United States has concentrated on the development of "multipurpose" missions, including air-to-air combat and air-to-ground missions. The requirements for an aircraft to be capable of performing "multipurpose" missions unquestionably compromises an aircraft in the performance of its primary mission, irrespective of the nature of its primary mission. It is the committee's judgment that we now concentrate on the development of the fighter aircraft specially configured and confined to the "air superiority" role. We have long neglected undertaking a new program in this area, relying exclusively on the capability of the F-4.

Now let us examine in unclassified form the development by the Soviet Union to improve on the MIG-21 which we already stated is equal in fighting performance to our F-4.

The Soviets since 1955 have flown 18 new models of modern-type aircraft. Obviously, not all of these different models will go into production or become operational. However, it does afford the Soviets with a wide selection of high performance flying prototypes from which it can select the very best for production.

Seven of the 18 new models were seen for the first time by the free world at the July 1967 Moscow airshow. It was at this show that we first saw the Foxbat, the present holder of the world's speed record. Intelligence sources estimated that at least three of the new fighters seen for the first time at that airshow are currently in or will go to production.

It is a well established fact that during the past decade the Soviet Union has introduced at least one new type operational fighter every 2 years. A total of six, with 11 models; namely, five models of the Mig-21 Fishbed; two models of the Fishpot, one model each of the Fitter, Firebar, Fiddler, and the Flagon.

It is also well established that the Soviet Union has concentrated its development and production efforts on tactical aircraft specifically oriented for the air superiority role. In general, this means it concentrates on aircraft that are light, fast, and highly maneuverable.

In contrast, with Soviet emphasis on producing many types of aircraft devoted to control of the air, the United States has developed and is relying completely on only one air superiority weapon system—the F-4.

It is fundamental to conclude that the new Soviet aircraft flown in 1967 by the Soviets are and will be superior to the Mig-21. Further, when they become operational they will be superior to the F-4. After all, a nation with its eyes on the future and on what potential adversaries

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may do will not develop new weapon systems that are inferior to existing models.

It is important to note that all seven types of tactical aircraft flown by the Soviet Union at its July 1967 airshow were designed before 1964. It is extremely reasonable to assume that the Soviets since the airshow have continued its design efforts to improve upon the impressive aircraft flown at the 1967 airshow. It is also reasonable to assume that new and improved types are now being flown or are in advanced stages of development. The U.S.S.R. does not make frequent announcements of its progress in aircraft or other military fields of endeavor.

I earnestly believe that the high level of effort being undertaken by the Soviets during the past few years and a conservative assessment of its future activities dictates that the United States must, of necessity, seriously concern itself today with the development of new air superiority fighter aircraft.

A modern fighter takes several years to develop and produce. This is an inevitable and inescapable fact. Therefore, even though it is decided to approve and fund a new fighter today, it will be 1975 before it is operational. There is one exception to this rule: The F-14A will be operational at a substantially earlier date because it will use the existing engine and avionics technology developed for the F-111B program.

Mr. FULBRIGHT. Mr. President, will the Senator yield for a brief question at that point?

Mr. CANNON. I would prefer not to yield until I have completed my statement. Then I shall be happy to yield for questions on anything I have pointed out.

Mr. FULBRIGHT. Very well. I did not know which the Senator preferred.

Mr. CANNON. It is important to point out that the United States and its free world allies have approximate numerical parity in tactical aircraft with the Soviet Union and other Communist aligned nations.

People also will ask the logical question: Why do we need both the F-14 and the F-15?

I would like to state that the F-15 will be developed by the Air Force for the sole mission of achieving a maximum air-to-air capability. As such it will be light, fast, and highly maneuverable. Most importantly, it would not be able to operate from an aircraft carrier. If it were given this assignment, it would of necessity have to be structurally substantially heavier and it would be compromised in other respects in order to have the necessary operating characteristics required by the Navy. The F-15 will also have only a single pilot and will have the minimum avionics necessary to perform its mission.

The F-14 Navy fighter of necessity must be designed structurally to operate from a carrier. Anyone who has witnessed carrier landings and catapult launchings will recognize the structural integrity requirements for such an aircraft. Also, most importantly, the operating environment of carrier task forces requires that the F-14 must perform the fleet air defense mission. This requires

that it be able to fly long distances and to loiter for substantial periods to protect the carrier against incoming enemy bombers, fighter aircraft, missiles, and so forth. It also requires a more sophisticated avionics system to detect incoming enemy aircraft.

The F-14 will fill the role of the canceled F-111B in performing the fleet air defense mission and the F-14B will replace the F-4 fighter aircraft in the air superiority role in the mid-1970's. The Navy has limited space aboard its carriers. Therefore, it must design its fighter aircraft to perform multiple missions. The threat it faces includes not only attacks from bombers and missiles but from highly maneuverable fighters as well. The Navy must defend against this multiple threat with limited numbers of fighters. Therefore, this forces their design to accommodate the multiple capabilities required. As a result, the Navy F-14 will be a larger aircraft with two crew members. It is unnecessary and would be very unwise to install these various requirements into the Air Force's F-15.

An important factor in developing both aircraft is that we will have two air superiority aircraft in case either program should run into unforeseen difficulties during research and development. Perhaps the most important factor is that each service will have an aircraft optimized for its own operational environment without compromise to the other. The F-111 is a classic example of compromise—neither the Navy nor the Air Force realized the performance goals which were originally envisioned for that aircraft.

It is also significant that the advanced technology engine presently under competitive development will be basically the same for both the F-14B and the F-15. A common engine makes sense but a common air frame does not.

In conclusion, Mr. President, with respect to the actions of the Tactical Airpower Subcommittee and the Armed Services Committee, I feel it is imperative to point out to the Members precisely what our national policy is. It is that our military forces are charged with the responsibility of being able to fight a war of indefinite duration in Asia—as we are currently doing in South Vietnam—and at the same time have the capability to wage a large-scale conventional NATO war for a stipulated period of time. The exact duration is classified. The responsibility of the Military Establishment is to insure that we have on hand sufficient military forces and hardware at all times to successfully carry out this very important responsibility. If we do not provide our military leaders with sufficient forces to meet our stated national policy objectives then I feel it essential that, first, our stated national policy objectives should be changed or, second, we should recognize that national policy objectives may exist which the military is incapable of carrying out. I feel, Mr. President, this is a most important principle which must be understood by all the Members of Congress. Reducing the Military Establishment in funds is a desirable objective but we must know what risk we will

run when we do so. I am not stating that the funds requested by the military are sacrosanct or justified, but I do feel they should be scrutinized most carefully before reductions are made. It was with this guiding principle in mind that the Tactical Airpower Subcommittee acted under the mandate from Senator STENNIS and did its very best to conduct a conscientious review of the military programs presented to it.

In summary, Mr. President, we reviewed 15 major programs in detail. We reduced the authorization request in the tactical area by \$588.5 million. I would like to emphasize that three of the programs that we refused the military permission to initiate R. & D.; namely, the RF-111, the Light Intratheater Transport, and the AGM X-3, that although only \$18 million was requested and denied for these three programs in fiscal year 1970, that the total cost of these three programs if they had been permitted to proceed to completion would have cost the Government over \$2.3 billion.

STATEMENT ON ADVANCED MANNED STRATEGIC AIRCRAFT

Mr. President, at this point I would like to make a short statement relative to the action taken by the Armed Services Committee on the AMSA—Advanced Manned Strategic Aircraft.

The budget, as revised by Secretary Laird and as approved by the committee, contains \$95.2 million in research and development funds for AMSA. If this is approved by the Congress, the fiscal year 1970 AMSA program will be \$100.2 million since an additional \$5 million is available from fiscal year 1969 funds.

The AMSA development which Secretary Laird approved in March 1969 would lead to an operational capability in the latter half of the 1970 decade. AMSA, in the opinion of the committee, will be badly needed at that time as a replacement for the aging B-52G and H models.

I should want to emphasize, however, that the approval of fiscal year 1970 budget request does not commit the United States either to full scale development or to production and deployment of AMSA. It does accelerate the engineering and development process. It does not provide funds for a full scale development contract.

I assure the Senate that the planned AMSA program includes a number of milestones at which the progress of the program can be assessed and decisions made as to whether the program should continue as planned. The Defense Department plans to use these reviews to take advantage of all technological advances up to that point and to reconsider our approach in the light of the updated information on the likely threat.

The basic reason for commencing the AMSA program is to maintain a flexible overall strategic force, taking account of any possible vulnerability of any part of our missile force, and thereby complicate Soviet defense plans by our progress toward a new bomber with improved penetration capability.

AMSA will contribute to the attainment of U.S. military and political objectives by the controlled application of

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offensive air power over the complete range of possible conflict situations, either conventional or nuclear.

Studies have shown that the most cost effective approach to maintaining our general war assured destruction and damage limiting capabilities in the face of Soviet advanced defenses is a mixed force of bombers and missiles. A mixed force insures against unexpected Soviet developments or tactics that might reduce the deterrent or war-fighting value of either bombers or missiles alone. A mixed force minimizes any relative Soviet advantage in a protracted but limited nuclear exchange.

In addition, a requirement for selective response and precision delivery may exist in either a nuclear or a nonnuclear conflict where constraints preclude the commitment of U.S. missile forces. Studies, including our experience in Vietnam, have demonstrated that large, high performance bombers can provide cost effective augmentation of our general purpose forces in nonnuclear conflicts.

Since AMSA is a completely new design, its physical characteristics can be tailored to assist in penetration. It is difficult now to determine just what will be done in this area, and how the actions will contribute to penetrability. However, the problem will be thoroughly investigated before the final design of AMSA is frozen for the purpose of insuring that the best trade-offs of survivability and penetration are made.

The committee has recommended that the entire amount in fiscal year 1970 for AMSA be approved and we hope that this will be sustained by the Senate.

Mr. STENNIS. Mr. President, will the Senator yield?

Mr. CANNON. I yield.

Mr. STENNIS. Mr. President, I commend not only the distinguished Senator from Nevada, but also the full committee for the splendid work he and the members of the committee have done since they started on the mission in about the middle of February. The Senator from Nevada has taken the lead in it, but every other committee member has made a very substantial contribution.

We have in this analysis of the work of the Senator one of the fine presentations of the year in the military field, a fine analysis, a fine summary, and, I think, sufficiently sound conclusions.

I wish there had been time—but the Senator did not have time—to have copies of the speech available in advance so that it could have been studied and followed by Senators as it was delivered. I will point out quite briefly a few of the items the Senator did go into.

First, on page 6 of the copy I have, the Senator analyzes the problem that goes with AGM X-3. The Senator makes recommendations in connection with that. Even though only \$3 million is involved now, it was a very fine piece of work the Senator did.

I refer now to page 25 of my copy, near the end of the speech, where the Senator points out that the actual operations of the committee on the bill reduced it by \$588 million. The potential costs of the programs would have been \$2.3 billion.

As a Member of the U.S. Senate, that is my idea of the way to get at a number of these expensive programs and nip them in the bud if they are not needed, if they are duplicative, or if they do not show prospect.

I want to have our feelings about the entire bill reflected here and show what has been done by all the committee members who have worked on the matter.

I not what the Senator said about the AMSA, and I know he made a contribution there, even though that was not a subject that the subcommittee had a chance to get into fully.

The Senator is, of course, eminently qualified to speak on that item, but the funds in the bill do not commit Congress to that bomber program beyond the research and development.

That is what the Senator has spelled out here as I understand it. Am I correct?

Mr. CANNON. The Senator is correct. Previously a letter from Secretary Foster to the Senator from Wisconsin (Mr. PROXMIER) was printed in the CONGRESSIONAL RECORD. That letter made the situation absolutely clear that this was no production program, that this did not authorize production and did not authorize contract definition.

Mr. STENNIS. I thank the Senator again and point out that the ranking minority member of the committee, the Senator from South Carolina (Mr. THURMOND), who served on the subcommittee, is going to seek the floor shortly.

Mr. President, the printed record released today of hearings on Intelligence and the ABM before the Senate Foreign Relations Committee has been cited by the chairman of the Senate Foreign Relations Committee as evidence there is disagreement between Secretary of Defense Laird and Director of the Central Intelligence Agency, Mr. Helms, in their assessment of the strategic threat which makes the ABM necessary.

The distinguished chairman of the Foreign Relations Committee maintains that the testimony now of record tends to establish a disagreement between the intelligence estimates of the Department of Defense and the CIA. I have not seen the testimony and therefore do not comment on it. However, after several press reports on the alleged disagreements appeared at the time I was preparing, as chairman of the Senate Armed Services Committee, for debate of the Defense authorization bill, it became clear to me that the Members of the Senate should have available for their consideration the assessment of the strategic threat and that we should know the extent of agreement or disagreement on the threat between the Department of Defense and the CIA.

For that reason, I wrote to Secretary Laird, asking him to state his definition of the threat and whether his definition and evaluation is concurred in by the CIA, particularly Mr. Helms. At the same time, I wrote to Director Helms, asking him to respond appropriately indicating his agreement or disagreement with Mr. Laird's response.

Both Secretary Laird and Mr. Helms have replied and both have made it clear there is no disagreement between them as to the strategic threat.

This makes it very clear to me and I hope to other Senators that there is no disagreement on this intelligence issue. I ask unanimous consent that my letters to Secretary Laird and Mr. Helms and their replies to me be placed in the RECORD at this point.

There being no objection, the letters were ordered to be printed in the RECORD, as follows:

JULY 3, 1969.

Hon. MELVIN R. LAIRD,
Secretary of Defense, The Pentagon, Washington, D.C.

DEAR MR. SECRETARY: In preparation for Senate debate on the Defense Department Authorization bill which will include authorization of funds for the Anti-ballistic Missile System, it is important that I know the assessment of the Intercontinental ballistic missile threat and the degree of agreement, or disagreement within the intelligence community.

Therefore, I would appreciate your immediately providing me with the following:

(a) Your definition and evaluation of the ICBM threat facing the United States from any and all nations.

(b) Whether your definition and evaluation is concurred in by the Central Intelligence Agency, particularly Mr. Richard Helms, Director, and if there is disagreement, to what extent and in what regard.

With best wishes, I am.

Sincerely yours,

JOHN STENNIS,
Chairman, Senate Armed Services Committee.

JULY 3, 1969.

Mr. RICHARD HELMS,
Director,
Central Intelligence Agency,
Washington, D.C.

DEAR MR. HELMS: The enclosed letter to Secretary of Defense Melvin Laird is self-explanatory.

I emphasize the necessity of having for the debate on the Defense Authorization Bill the assessment of the Intercontinental Ballistic Missile threat and whether or not there is disagreement within the intelligence community, particularly, as between the Department of Defense and the CIA.

Therefore, I would greatly appreciate if you would respond appropriately after consultation with Secretary Laird indicating your agreement or disagreement with any aspects of his response.

With every good wish, I am

Sincerely yours,

JOHN STENNIS,
Chairman,
Senate Armed Services Committee.

THE SECRETARY OF DEFENSE,
Washington, D.C., July 8, 1969.

Hon. JOHN C. STENNIS,
Chairman, Committee on Armed Service, U.S. Senate, Washington, D.C.

DEAR MR. CHAIRMAN: I am pleased to have this opportunity to respond to your letters of July 2nd and July 3rd. In your letter of the 2nd, you refer to certain newspaper accounts quoting members of the Foreign Relations Committee to the effect that I had changed my position concerning a potential first strike threat from the Soviet Union during the period of the mid-1970s. Let me first state categorically that my position on this matter has not changed. As a matter of fact my concern about the Soviet threat to our deterrent has been stated and restated before your Committee and every Committee of the Con-

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gress before which I have addressed this issue since assuming office on January 20th. In a letter to the Chairman of the Senate Foreign Relations Committee dated July 1, I addressed this question and restated once again the essentials of my position concerning this matter. I enclose a copy of my letter to the Chairman of the Foreign Relations Committee for your information.

In your letter of July 3rd, you asked for my definition and evaluation of the Intercontinental Ballistic Missile Threat facing the United States from any and all nations.

Since January 1969, there have been several new developments in the Soviet Strategic Forces, all tending to confirm the statements I made in my first appearance before your Committee concerning the threat to the national security of the U.S. in the mid-1970s. In summary, these developments are: continued deployment of the SS-9, SS-11 and SS-13; testing of the SS-9 with multiple re-entry vehicles; continued deployment of the Polaris-type submarine; continued efforts to improve anti-submarine warfare capabilities; and continued testing of the improved ABM.

During 1969, the deployment of the SS-9 has continued at about the same rate as in 1967 and 1968. If this rate of deployment is continued, the USSR could have about 400 SS-9 operational launchers deployed by the mid-1970s.

The Soviets now have well over 1200 ICBM launchers completed or under construction. This includes the older SS-7s and SS-8s as well as the SS-13s, SS-11s, and SS-9s. All of these will be operational before mid-1971.

Three tests of the SS-9 with multiple re-entry vehicles have taken place since March. These three tests were to the mid-Pacific covering a distance of 5,100 nautical miles. There is some difference of opinion in the intelligence community concerning the precise nature of these tests but all are agreed that the USSR has the capability to deploy hard target multiple independently-targeted re-entry vehicles by the mid-1970s.

At least eight or nine new Y-class Polaris-type 16 tube ballistic missile submarines have already been launched and several are believed to be operational. Continued deployment at the current rate will allow the USSR to match the U.S. Polaris fleet by the mid-1970s.

Testing of the improved Soviet ABM intercept continues.

In short, we believe the USSR has the capability of acquiring, by the mid-1970s; some 400 SS-9 ICBMs, multiple independently-targeted re-entry vehicles, SLBMs matching the U.S. Polaris fleet, ICBM re-targeting capability.

This capability would constitute a very grave threat to our Minuteman forces and our bomber forces in the mid-1970s. As a consequence, the deterrent to nuclear warfare would be eroded seriously.

Although the potential Chinese ICBM threat has slipped somewhat, it is estimated that a first generation ICBM could reach Initial Operational Capability by 1972. By 1975 operational ICBM launchers might fall somewhere between 10 and 25. During the 1970s, China could develop a significant production program in thermonuclear weapons and associated delivery systems and, consequently, would represent a considerable threat to U.S. bases and allies in Asia, and a growing threat to the continental United States.

If I may, Mr. Chairman, I would like to sum up for you my position with regard to the Soviet threat as it relates to the urgent need for approval of the Safeguard ABM proposal.

As a Defense planner, as well as a Cabinet officer and a member of the National Security Council, I have a special role in the use of intelligence provided by the intelligence community. It is my responsibility to propose policies and plans which will fulfill the

mission assigned to the Department of Defense, one aspect of which is to deter the Soviet Union from starting a nuclear war.

As a part of this responsibility, I must apply my own best judgment to the available intelligence to ensure that the President's policies and the mission of the Department of Defense are fulfilled. Consequently, I must consider not only what are the probabilities of future development and the state of current activities as expressed in the assessments of the intelligence community, but also the possibilities of future developments based on available current information.

That is why in my testimony before the Congress and in my public comments I have stressed the possible capabilities of the Soviet Union for the future in terms of relative strategic power. My discussion of Soviet capabilities has been derived by projecting to future years their demonstrated capabilities for production and deployment of strategic weapons and by making allowances for the rate of technological achievement.

It is my carefully considered judgment, in which all of my principal military and civilian advisors agree, that the Soviet Union could achieve, or reach a position where they believe they have achieved, a capability to gravely weaken our deterrent by the mid-1970s—if we do nothing now to offset it. This judgment is based upon the following conclusions:

1. The Soviet Union could acquire a capability to destroy virtually all of our Minuteman missiles. To be able to do so, in the present context they would need: (a) at least 420 SS-9s with three independently-targeted re-entry vehicles which have a capability of separating from one another by some relatively small number of miles; (b) each of these re-entry vehicles would have to have a warhead of approximately 5 megatons and a reasonably good accuracy; (c) the SS-9s would have to be retargetable; and (d) the range would have to be sufficient to reach all of the Minuteman silos.

2. The Soviet Union could acquire a capability to threaten severely the survival of our alert bombers. To do so in the present context they would need: (a) a force of about 15 Y-class (Polaris-type) submarines on station off our shores; and (b) the ability to launch the missiles on a depressed trajectory.

3. Although we confidently expect our Polaris/Poseidon submarines to remain highly survivable through the early to mid-1970s, we cannot preclude the possibility that the Soviet Union in the next few years may devise some weapon, techniques or tactic which could critically increase the vulnerability of those submarines. Nor can we preclude the possibility that the Soviet Union might deploy a more extensive and effective ABM defense which could intercept a significant portion of the residual warheads. In any event, I believe it would be far too risky to rely upon only one of the three major elements of our strategic retaliatory forces for our deterrent.

In summary, Mr. Chairman, it is entirely possible that the Soviet Union could achieve by the mid-1970s a capability to reduce, in a surprise attack, our surviving strategic offensive forces below the minimum level required for "Assured Destruction," and thus gravely weaken our deterrent. In my judgment, the overall strategic balance between the United States and the Soviet Union is much too close to run that risk. Therefore, something more must be done now to ensure a favorable strategic balance in the mid-1970s and beyond.

Short of achieving a workable agreement with the Soviet Union on the limitation of strategic armaments, which will take some time, we are convinced that the approval of Phase I of Safeguard would be the most prudent and economical course we could

pursue at this particular juncture. This action would place us in a position to move forward promptly not only with the defense of our Minuteman and bomber forces should the Soviet threat develop as I have described, but also with the defense of our population against the Chinese ICBM threat should that emerge during the next few years.

In your letter of July 3rd, you also asked whether the Director of Central Intelligence, Richard Helms, concurs in my formulation of the threat. I have furnished a copy of this letter to Director Helms and he assures me that he has no disagreement with the statements concerning the potential Soviet and Chinese Communist strategic capabilities, as seen from the intelligence point of view.

Sincerely,

MEL LAIRD.

CENTRAL INTELLIGENCE AGENCY,
Washington, D.C., July 8, 1969.

HON. JOHN STENNIS,
Chairman, Committee on Armed Services,
U.S. Senate, Washington, D.C.

DEAR MR. CHAIRMAN: In your letter of 3 July 1969 to Mr. Helms, you requested that he consult with Secretary Laird on Secretary Laird's response to your inquiry concerning the strategic threat to the United States.

Although Mr. Helms is presently out of town, he has read the text of Secretary Laird's reply. Mr. Helms wishes to assure you that he has no disagreement with the statements in Secretary Laird's letter to you of 8 July concerning the potential Soviet and Chinese Communist strategic capabilities, as seen from the intelligence point of view.

Sincerely,

R. E. CUSHMAN, Jr.,
Lieutenant General, USMC, Acting
Director.

Mr. TOWER. Mr. President will the Senator yield?

Mr. CANNON. Mr. President, the Senator from Tennessee previously asked me to yield.

Mr. FULBRIGHT. Mr. President, will the Senator yield?

Mr. GORE. Mr. President, I yield to the Senator from Arkansas.

The PRESIDING OFFICER. The Senator from Arkansas is recognized.

Mr. FULBRIGHT. Mr. President, I thank the Senator for yielding.

The Senator has made a very excellent speech. I congratulate him for it. I should like to ask him one or two questions for my own information.

What the Senator had to say about the long leadtime being necessary reminded me of an article which was published in the paper about a recent air show in Paris. It noted that the Swedes had a fighter called the "Begar." I think in English it means a thunderbolt.

It surprised me that this small country of 7½ million people had produced this particular aircraft which was perhaps the most modern, best, and newest model fighter in the air show. Did the Senator know about that?

Mr. CANNON. I did not happen to attend the air show this past year.

Mr. FULBRIGHT. The article was in the paper.

Mr. CANNON. However, I must say that the last time I did attend the air show, the Swedes exhibited what appeared to be a fine model. So I am satisfied that they are doing some work along that line.

Mr. FULBRIGHT. I was surprised that such a small country would be able

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to do this. These are rather expensive programs.

Mr. CANNON. They are. The Senator recalls that in my talk I covered the Harrier aircraft, which is produced by the British. The Marines are trying to get that aircraft.

I saw the aircraft perform in Washington a while ago. It was quite impressive. The Marines are anxious to purchase 12 of those aircraft so that they can experiment and find out if there is a use for that plane.

Mr. FULBRIGHT. I would think that would be an efficient way to do it, if I might offer a layman's point of view.

Mr. GOLDWATER. Mr. President, will the Senator yield?

Mr. CANNON. I yield.

Mr. GOLDWATER. Is it not true that the United States has some money in the development of the Harrier?

Mr. CANNON. Yes; the United States has. I will supply the exact figures a little later. It is either \$50 or \$100 million in the development of the Harrier, in the predecessor to the Harrier.

Mr. FULBRIGHT. It is sort of a joint venture.

Mr. CANNON. It was a model different from the Harrier itself, and it went principally into the engines. It was in a 1127 model. I will supply the details in a moment.

It was \$50 million. That was in the predecessor to the Harrier, which was being developed by the British. It was called the B-1127. Most of the \$50 million in this joint effort went into the research and development for engines that could be used for this type of program.

Mr. FULBRIGHT. Near the end of his speech, the Senator referred to something which interested me very much. I know that I do not know as much about it as I should. The first time it was called to my attention, it was part of the so-called posture statement of the former Secretary of Defense, Mr. McNamara.

If I understood the Senator correctly, he referred to what I supposed would be called the "mission" or the responsibility of the Military Establishment to fight a war, a full-fledged war, in Asia, and to be prepared to fight one in Europe and, if I recall correctly, to be prepared also to fight at least a smaller war or to take care of an uprising or insurgency in Latin America.

What I wish to ask the Senator is this: Does the Committee on Armed Services participate in making that kind of estimate of what our posture should be, or is that done strictly by the Secretary of Defense?

Mr. CANNON. That is a matter of national policy.

Mr. FULBRIGHT. Who determines it?

Mr. CANNON. Our committee does not participate in the determination of that national policy. It is presented to us as being a matter of national policy, and, therefore we try to implement the services requirements so that they can carry out their mission.

Mr. FULBRIGHT. I can understand that, if that is the policy and it is presented to the committee. Of course, I think the Senator is quite right. What

I was inquiring about was the origin of the policy. It seems to me that this is quite an ambitious policy to take upon our shoulders alone—this extensive commitment.

I am reminded of the refrain that the Senator from Missouri has made rather prominent in talking about over-commitment, with which I completely agree.

It strikes me that if this is the policy of the Government, it may be that we have commitments beyond a reasonable expectation of our capacity in view of our needs at home. I do not say this in any critical way, because I do not know who produces this policy, who starts this, whether it starts with the Secretary of Defense, whether it is a product of the National Security Agency, or just who formulates these contingencies we are expected to meet.

The way it was described to me—and I tried to understand it as best I could from this posture statement—is that, having adopted this policy, then we must assume, in order to plan, the worst possible contingency that could arise out of these three areas. That seems to present an almost unlimited demand.

Mr. CANNON. That is why I said we have either to change our national policy objectives, if we are not going to try to support them, or to proceed on the assumption that national policy objectives may exist which the military is incapable of carrying out.

Mr. FULBRIGHT. I agree with the Senator completely on what he has said. I raised this matter because he mentioned it, not because I am prepared to go into it too far. I raise the question to ask if this is perhaps one of the sources of the difficulty that confronts some of us. This national policy is very closely related to foreign policy. I understand that a discussion occurred in the Chamber yesterday, of which I was not aware until I read the RECORD, about the proper lines between foreign policy and armed services policy. This is an example, it seems to me, of how difficult it is to disentangle them.

If it is going to be our policy to defend the whole world or to be prepared to fight all over the world, or the three major areas, we are taking on a tremendous responsibility which I question whether we are quite capable of fulfilling. I would not want to put a requirement up to the military that is beyond its reasonable capacity to fulfill. When I say "reasonable," I mean in view of all the needs of the country at home.

I congratulate the Senator for bringing up that point. I think it is a very important point—it has never been expressed sufficiently in the past—as to what is the objective or what is the policy of the Government with regard to our military requirements.

Mr. GORE. Mr. President, will the Senator yield?

Mr. CANNON. I yield.

Mr. GORE. Mr. President, first, I should like to express satisfaction and gratitude to the chairman of the committee, the senior Senator from Mississippi, for his leadership in promoting subcommittee consideration and responsibility.

We have heard now two major efforts, informative speeches, as a result. Today I have listened intently to a very able and distinguished Senator speak on the aircraft program. I am impressed with the inadequacy of my knowledge, but I must acknowledge that I know far more than I did before the Senator from Nevada began, and I thank him. It was an able, informative address, of great service to the Senate and to many, many people who will read the RECORD.

Now, if the Senator will yield further, there are two matters of quandary on my part. I am sure he can be of assistance. I have heard with some concern the length of time during which our country has not developed a fighter plane. The Senator has referred to the F-4 as being equal to the Mig, but I seemed to detect some apprehension on his part when he said that its technology dated to 1955. Did I correctly understand the Senator?

Mr. CANNON. The Senator's understanding is correct.

Mr. GORE. The Senator did not state when the F-4 was first operational. Would he have that in mind?

Mr. CANNON. I think it was really 1959 when it first became operational.

Mr. GORE. So it has been 10 years in operation.

Mr. CANNON. The Senator is correct.

Mr. GORE. Do I correctly understand the Senator now to say that even 10 years later, we do not yet have on the drawing board what he would regard as a competent, competitive, air-to-air fighter?

Mr. CANNON. The Senator's understanding is correct. As an air superiority fighter, we have nothing on the drawing board insofar as, let us say, a contract definition or anything of this sort. We do have a number of contractors who, of course, are thinking along these lines, and some who perhaps have proposals ready to present. But we have not a real fighter on the drawing board and ready to go into production at this time.

Mr. GORE. I congratulate the Senator upon recommending that we undertake such an achievement.

As chairman of the subcommittee that is generally referred to as the Disarmament Subcommittee, I would like to suggest that disarmament, as such, seems to be a very distant goal. The goal, which may be within the grasp of Americans today and people of the world today, is a limitation of armaments. Even a limitation must flow, it seems to me, from a relative standoff position, a balanced position of strength—not necessarily a superiority of strength. I believe President Nixon expressed it differently later as a sufficiency of strength.

So with the long leadtime necessary, with the very unusual extended period in which we have not attempted to develop a superior air-to-air fighter, I am led to the conclusion to support wholeheartedly the conclusion of the committee. With that—

Mr. CANNON. Mr. President, if the Senator would permit me, I may have made one statement which would have misled him. When I said "air superiority

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fighters," I was talking about the Air Force. With respect to the F-14, the Navy version I mentioned, there is some procurement money in here for six models they want to go ahead.

The reason this airplane can come at an earlier date is for the reason that they would use on the first model of the F-14 the engines developed for the F-111B program, and the Phoenix missile which was developed for the F-111B.

The F-14A would come in at an earlier time than if it was starting from scratch now, but the F-14B later would incorporate a new engine to be developed and new avionics to give it capability.

Mr. GORE. I thank the Senator for that addendum and I appreciate it.

Now, the question I wish to propose is not one relating particularly to this matter, but one that I ask out of curiosity, searching for knowledge. I ask a question which has been asked of me many times by the people I have the honor in part to represent. I ask it of the Senator because I recognize him as one of the students and authorities on aviation in the Senate and in the country.

The question is: With all the tonnage which is reported to have been dropped by the Air Force on Vietnam, how can we explain the seemingly inadequate, if not minimal, results achieved? I do not wish to promote any argument about the war. I ask the question for information.

Mr. CANNON. I thank the Senator for his kind remarks.

Mr. STENNIS. Mr. President, may we have order in the Chamber? It is impossible to hear the Senator. He has a good voice and we are only 10 feet or 15 feet from him.

The PRESIDING OFFICER. The Senate will be in order.

Mr. CANNON. I would like to summarize briefly and say that when a service is shackled in trying to perform a job, and restrictions are placed on them, one can add bombs to bombs ad infinitum, and it will not get the job done unless they are permitted to do the job assigned to them.

That is an oversimplification, but, Mr. President, you can continue dropping bombs all over North Vietnam and South Vietnam from here to kingdom come, and it never will solve the problem if you are not going to permit them to attack the root of the problem.

Several Senators addressed the Chair.

Mr. CANNON. The Senator from Arizona had asked me to yield to him.

Mr. GOLDWATER. Mr. President, I congratulate the chairman of the subcommittee for having done an excellent job in presenting a subject not too well known by too many Members of this body.

Because the distinguished chairman of the Committee on Foreign Relations is in the Chamber and because he raised what I think is a question that is very much at the nub of this entire argument developing on the floor of the Senate—the argument about the ABM, MIRV, and the cost of military equipment—I would like, if I can, to have some answers or even proposed thoughts that might be of help to all of us.

When we talk about national policy I think I am correct in saying that our obligations around the world have some bearing. When we talk about the views of the military, I think these treaties and arrangements also have a bearing. Looking over a list of commitments we have under collective defense agreements I see we have the North Atlantic Treaty Organization with 15 different countries, the Rio Treaty with 22 countries, the CENTO Treaty, the SEATO Treaty with eight countries, the treaty with the Republic of Korea involving two countries, a treaty with the Republic of China involving two countries, the Philippine Treaty involving two countries, and the Japanese Treaty involving two countries.

The language in some of these treaties or agreements seems to me to be rather specific about our use of arms in going to the fulfillment of the arrangement or treaty. Others are rather ambiguous and limit us to a constitutional interpretation of what the need might be. I do not know whether this can be done or not but if it could be, I think it would be of great help to this body, the administration, and certainly the American people, in understanding just what we are talking about when we talk about our global commitments. I can recognize the policy we are operating under as an international policeman role, but we must remember we have some rather specific treaties which I interpret as calling upon us to do what we are doing in South Vietnam, even though that was not by treaty.

I am asking if it would be possible for the Committee on Foreign Relations to possibly reopen hearings—not hearings, but perhaps a study on these treaties, so that we might have some idea from the Committee on Foreign Relations on how far they think we have to go. I think if we could ever get that determination of how permanently we are committed to use arms, let us say, in country "X," then go through all of them, I think it would be a lot easier for us to stand on the floor of the Senate to argue.

Does the Senator from Arkansas have anything to report along that line?

Mr. SYMINGTON. Mr. President, who has the floor?

Mr. CANNON. I have the floor. I yield to the Senator from Arkansas.

Mr. FULBRIGHT. One of the first things we did in the beginning of this session was to review, along the line of the comment of the Senator from Arizona, all of our commitments. We have had some discussion of that. The Senator read the list of treaties and agreements accurately. There are varying degrees of responsibility under those treaties. I would rank NATO No. 1 in the sense that it is a flat declaration that an attack on one nation is regarded as an attack on all. That is not common. We go all the way down to some that are statements of good will which state in effect, "If you get into difficulty, we will consider it."

I do not wish to argue what SEATO means. It is ambiguous in that it has two classifications, one involves overt aggression and the other subversion. That

is another matter that comes up in another way.

But the Senator is quite correct. That is one reason I raised the question with the Senator from Nevada. This gets to the nub of the matter of our responsibilities. It is the responsibility of the Committee on Foreign Relations to review these commitments.

The Senator from Missouri is the chairman of a special subcommittee which will go into a study of some of the physical aspects of these commitments. His committee dealt with these Spanish bases which was a kind of extracurricular obligation, in my view, and I believe, of the Senator from Missouri's. We think there is a similar one in another country, which we will be studying. Our purpose is to do what the Senator from Arizona suggests—that we review all of our commitments, consider them, understand them, and at least try to make recommendations as to what limits might be applicable to them, because this open-ended approach we have had grew out of the war. I do not disavow my own responsibility for not having done it earlier. The Senate should have, including myself. But in any case better late than never for us to try to do that. I think that after we have had sufficient time to consider the report of the Senator from Missouri's subcommittee, the committee as a whole will consider and make recommendations along that line.

Mr. GOLDWATER. I am glad to hear the chairman say that. As I have studied this more and more, I am convinced that the size of our military outlays depends and will depend on just what we interpret our commitments to be. In other words, if we are called upon tomorrow to go to Europe to defend a country with whom we have a clear obligation to defend, it means one thing. If we have a way of renegotiating a treaty so that we can get other language, that would be something different. Then we can really go to work on this military budget. But until we have a really clearly defined, fenced-in idea of what our responsibilities are, I cannot see much hope of reducing military expenditures outside the end of the Vietnamese war.

I congratulate the Senator for having started these studies and hope that they can be finished and in readable form in the near future. It is something that the American people should know about.

I have found, in the years since I came here and traveled around the country, that when I mentioned mutual security agreements, the ears of my audience popped up because they had not heard of them, probably because we did not give them much publicity in the years that we were passing them. It will be good for the American people to know what our specific obligations are, and just what we as a body, and eventually the administration, feel about these commitments.

Mr. CANNON. Mr. President, before I yield to the distinguished Senator from Missouri, the Senator from Tennessee asked me when the F-4 became operational. I said that I thought it became operational in 1959. It actually flew first

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in 1958 and then became operational, with the Navy, in 1961.

Mr. GOLDWATER. If I may interject there, I remember when the Senator from Nevada and I went to Langley Field to fly the F-4 in 1959.

Mr. CANNON. The Senator is correct. Now, Mr. President, I am glad to yield to the Senator from Missouri.

Mr. SYMINGTON. Mr. President, as the ranking majority member of the distinguished Senator from Nevada's Subcommittee on Tactical Air Power, it has been my privilege to work with and for him on this report.

In the years since I came to the Senate I have never seen a more thorough and constructive job done in analyzing these various programs.

I am sure the people of his State are as proud of him as are those of us who worked with him during the long and careful hours of the subcommittee's preparation, work, and actual hearings that he has engaged in.

I do not agree with every conclusion, but especially because of the outstanding accomplishment, it is my privilege to support the report.

It is always a pleasure to congratulate one on a job well done. I did my best to be a regular attendant, and believe the information presented to the Senate on this subject today is the best analysis of tactical air power we have had to date.

I am impressed with the method and manner in which the able Senator developed the importance or unimportance of various proposed models, and was impressed also with the question asked by the Senator from Tennessee, in which he wondered why so much had been done in the way of airpower effort with so relatively little results.

Many know why that is. Shortly after we got into this war a great number of rules were laid down, and weapons systems were used in a manner for which they had never been designed.

I might make a contribution to this discussion by pointing out that, on good authority, it would appear, during the past 4 years, to the Vietnam theater, we have shipped more tonnage of materials than we did to Europe during the entire World War II, even though we have one-eighth of the number of troops in Vietnam that we had in Europe during that war.

Accordingly, I would hope that no one would judge the efficacy, or lack of efficacy, of airpower on the basis of the way air power has been handled under directions from higher authority to the Air Force and Navy.

I was also impressed with the questions asked by the distinguished Senator from Arkansas with respect to the Swedish plane. It is ironic that an American manufacturer now loses some planes in this recommended budget, because we have no V/STOL airplane, no STOL airplane, and no VTOL plane.

It is a fact, as the Senator from Arizona commented—and he is one of the true authorities in this body on air power—that the Soviets have three types of V/STOL airplanes, all above mach 2; that the French have a STOL airplane; that the British have a V/STOL air-

plane, that the Swedish have a V/STOL airplane; and that despite the fact we have spent many billions of dollars a year, all we have to show for that money are discussions and arguments. We get the arguments. These other countries, including Soviet Russia, get the hardware.

Commercially, we have arranged to put a STOL airstrip at LaGuardia Airport, so that we can accommodate foreign planes which come to this country, or foreign airplanes purchased by the military and civilians in this country for use in this country.

I am glad this point has been brought out.

In closing, let me again congratulate the Senator from Nevada. He has made a real contribution from the standpoint of how to spend, and how not to spend our defense appropriations.

Mr. CANNON. Mr. President, I want to thank the distinguished Senator from Missouri for his very complimentary remarks. Let me say again that all on the committee did a great job in working on this project and its problems. I appreciate it very much. We had a very able staff that did a tremendous amount of work and were responsible to a great extent for the very fine report we are able to present to the Senate. I want to thank them for their support.

Mr. STENNIS. Mr. President, if the Senator from Nevada will yield briefly—

Mr. CANNON. I yield.

Mr. STENNIS. I should like to comment on the matter of commitments. The question was raised here about what are our commitments and what is the Armed Services Committee trying to meet.

Certainly that is a timely question, a question well expressed by the Senator from Arizona. But that is an old subject. Whatever our policy, or whatever our

commitments are, they were not originated in the Armed Services Committee. Since I came to the Senate, various treaties and commitments have come before us but they came out of the Committee on Foreign Relations. That is where they should be sent. We have been concerned about this in the Armed Services Committee, as many Senators know, for several years.

We started into this matter of commitment and our ability to meet them—I think it was 2 years ago—but the war in Vietnam got worse, shortages there existed; so we turned to the problems of the war.

On pages 2200 and 2201 of the hearings is found a letter to me in response to my letter, with a list of all the nations with which we have defense treaties and other defense arrangements. I ask unanimous consent that those two pages be inserted in the Record at this point in my remarks, for the information of the Senate.

There being no objection, the letter was ordered to be printed in the Record, as follows:

HON. JOHN STENNIS,
Chairman, Committee on Armed Services,
U.S. Senate, Washington, D.C.

DEAR MR. CHAIRMAN: In response to your letter of April 14 requesting a simplified compilation of treaty commitments and other defense arrangements of the United States, the two enclosures to this letter have been prepared for your use.

The first enclosure is a tabular listing of the countries with whom the United States has entered into defense commitments pursuant to multilateral or bilateral treaties. The table also indicates, in addition, those countries with whom the United States has entered into Executive agreements or a general treaty containing defense assurances.

The second enclosure extracts the pertinent provisions of the treaties and Executive agreements relating to consultation and action in the event of armed attack.

Sincerely,

L. NIEDERLEHNER,
Acting General Counsel.

PARTIES TO DEFENSE TREATIES AND OTHER DEFENSE ARRANGEMENTS

Parties	Multilateral treaties				Bilateral treaties	Bilateral executive agreement or general treaty
	Rio	NATO	SEATO	Angus		
Argentina	X					
Australia						
Belgium		X	X	X		
Bolivia						
Brazil	X					
Canada	X					
Chile		X				
China	X					X
Colombia						
Costa Rica	X				X	
Cuba	X					
Denmark	X					
Dominican Republic		X				
Ecuador	X					X
El Salvador	X					
France	X					
Germany Federal Republic of		X	X			
Greece		X				
Guatemala		X				
Haiti	X					
Honduras	X					
Iceland	X					
Iran		X				X
Italy		X				X
Japan		X				
Korea					X	
Liberia					X	
Luxembourg						X
Mexico		X				
Netherlands, the	X	X				
New Zealand						
Nicaragua	X		X	X		
Norway		X				

Footnotes at end of table.

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PARTIES TO DEFENSE TREATIES AND OTHER DEFENSE ARRANGEMENTS—Continued

Parties	Multilateral treaties				Bilateral treaties	Bilateral executive agreements of general treaty
	Rio	NATO	SEATO	Anzus		
Pakistan.....			X			X
Panama.....	X					X
Paraguay.....	X					
Peru.....	X		X		X	
Philippines, the.....		X				
Portugal.....						X
Spain.....			X			
Thailand.....						X
Trinidad and Tobago.....	X					
Turkey.....		X				
United Kingdom.....		X	X			
Uruguay.....	1	X				
Venezuela.....	X					

¹ Cuba was excluded from participation in the Inter-American System by Resolution VII, 8th meeting of Foreign Ministers, Punta del Este, 1962.

Mr. STENNIS. Mr. President, I raised the point in my opening remarks on the bill, saying we had some kind of commitments, or defense agreements, with 46 nations, and so long as we had those we had to make some kind of attempt to be prepared to directly defend ourselves and to live up to our commitments. I said, further, as one Senator, that I would be perfectly willing to open the issue of our national commitments and debate it; I further said I would favor a review and a renegotiation of these commitments, if we could. I think we have learned a lot since the commitments were made. And I sincerely hope we have.

I know the Senator from Missouri (Mr. SYMINGTON) will do a good job in whatever he undertakes, but a great deal of the talk—not from him, but a great deal of the talk—is that there should be an investigation of our military. I am glad to get clear that we should really investigate the commitments, and try to bring that out, so that not just our committee or the Senate, but the whole Nation, will learn of it. The Senator from Missouri and I are in pretty much accord as to our being overcommitted as I see it.

I pointed out the other day that we have to do something, as I see it, when the shooting stops in Vietnam, with reference to the size of our military personnel. Personnel cost run into real money.

Up to now, we have been trying to prepare for two conventional wars. We already have one going on. Everybody knows where that is. The other war we are thinking about primarily would be in Western Europe. It seems to me we also have a policy to go where there is trouble in a little country wherever it may be. In view of all this, the committee has tried to arrive at a sound, effective minimum military program. This is the purpose of the items in the bill.

I do not want to frighten anyone as a result of what I said about preparing for two conventional wars, but that is what we are doing. It would take a higher power to know the possibilities of a nuclear war but that is, of course, a possibility.

I thank the Senator for yielding.

Mr. CANNON. I yield now to the Senator from Texas.

Mr. TOWER. I thank the Senator. I know the Senator has been on his feet

for a long time. I want to commend the Senator for the fine presentation he has made to the Senate and note that, in my opinion, it is the most thoroughgoing analysis of our tactical air power needs that I have heard in this body. I thank the Senator for making such a full presentation. I think it is extremely fortunate that the subcommittee was chaired by a man who has had long experience in the Air Force.

I have spent a great deal of time with combat pilots over the last few years. I spent time with them in Southeast Asia. I think they will be grateful to the Senator for recognizing what their problems are and what machines and weapons they need to do the job required of them.

I think the Senator has very accurately and completely reflected the mood and desire of the men who have to fight with those machines. That, I think, alone deserves a commendation.

The Senator from Tennessee made the point about our bombing not being very effective. I think it should be pointed out that we have had to operate under severe restrictions there. To begin with, we developed the system of bombing one section at a time, so the enemy knew what we were going to bomb next, and brought in the most sophisticated air defense equipment known.

The port of Haiphong was not interdicted. Ordinarily you hit the enemy where the biggest amount of his supplies are being brought, through whatever bottleneck there is. As a matter of fact, before the bombing moratorium, we were bombing the railroad from Kwangsi Province, China, into Hanoi, which brings in about 18,000 metric tons a month. You have to keep pounding something like that to keep it out of operation, because it is fairly easy to repair. But at the same time, Haiphong, where 150 or 160 metric tons a month were coming in, was off limits. So is it any wonder that we have not been as effective in the role of interdiction, as we could have been if these restrictions had not been put into effect? I think the Senator has done a good job of bringing that matter up. I think it should be re-emphasized.

When we talk about tactical aircraft, we are talking about five or six different kinds of aircraft. I think we made a mistake in supporting the concept of commonality in trying to develop the TFX, now the F-111. It was wrong. It could

not be done. So now we are alert to the damage that was done. The Russians are ahead of us in terms of air-to-air interceptors. We tried to put into the TFX an airplane that would be able to serve as close support for ground troops, one that would be an attack bomber, an air-to-air interceptor, one that could operate in two different roles off carrier decks. It just has not been done.

The Senator from Arkansas noted that the Swedes have developed a better interceptor than we have. What we have to understand is that the Swedes devote their entire resources to the development of defensive weapons.

They do not devote any of their resources to the development of strategic weapons. They can think purely in terms of defense of the homeland.

When you put all your eggs in one basket, you can do anything. If we decided to channel all of our research and development efforts into one area, we could develop the best of any one thing we wanted to in the world. We have the engineering and technological know-how, in this country, for doing everything from developing a better detergent to developing a better strategic weapon. Now is the time that we have to think in terms of priorities. I think the distinguished Senator from Nevada has underscored what the priorities in terms of tactical air support are, and I offer him my thanks.

Mr. THURMOND. Mr. President, I happen to have been the ranking member of the Cannon subcommittee on tactical air power, and I should like to join with other Senators in commending the distinguished Senator on the leadership he gave the subcommittee.

I feel that the report of this subcommittee will be of great value in years to come, and I feel that our Nation will benefit because the study was made.

Mr. CANNON. I thank the Senator from South Carolina.

Mr. President, I yield the floor.

The PRESIDING OFFICER. Pursuant to the previous order, the Senator from South Carolina (Mr. THURMOND) is recognized for 30 minutes.

Mr. THURMOND. Mr. President, I ask unanimous consent that I may yield to the distinguished Senator from Maine, without it being counted against my time.

The PRESIDING OFFICER. Without objection, it is so ordered.

Mrs. SMITH. Mr. President, I wish to commend the Senator from Nevada and his subcommittee members for the outstanding work they have performed. I commend them most highly.

I would also like to make a short statement on a matter related to this bill.

Mr. President, in connection with the debate on the military authorization bill now before us, I want to read into the Record an appeal delivered to my office yesterday indicating some of the activity of interns with a group that calls itself "PEACE."

Of particular interest in the appeal is the statement:

Weekly meetings to coordinate research and recruit intern help will also serve to foster those bourgeois needs of love, affection, human warmth and contact.

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I ask unanimous consent that the entire paper be placed in the body of the RECORD at this point.

There being no objection, the appeal was ordered to be printed in the RECORD, as follows:

PEOPLE ENGAGED IN AUGMENTING CONSTRUCTIVE EFFORTS

(1135 Bellview Road, McLean, Va., Telephone 759-2811)

Attention: INTERNS: United States cities burn. Vietnamese cities burn. Appalachian children die of malnutrition, and India is threatened with mass starvation. The U.S. national purpose appears confused: its human and material resources being wasted. Men and women of conscience ask, "Is there not an alternative?"

The DOD appropriation commits much national energy, skill and resources. It is therefore good sense that this expenditure be scrutinized and evaluated. Interns are invited, with the permission of their member, to learn about and contribute to the several inquiries into defense spending presently in progress. PEACE is intended to be voluntary and done on the intern's own time, unless the intern's member approves of the activity full time. Weekly meetings to coordinate research and recruit intern help will also serve to foster those bourgeois needs of love, affection, and human warmth and contact.

The first meeting will be Friday, July 11, 1969. Beer will be served. Dress informally. (Coed volleyball and softball will begin at 7:30). After the games, about 9:30, speakers will give short talks concerning the different areas which need more attention.

As an introduction to the project the following articles are suggested and people are encouraged to have read them by Friday:

(1) "The Economics of Military Procurement," *Report of the Subcommittee on Economy in Government of the Joint Economic Committee of Congress, May 1969*, (printing Number 29-493 O).

(2) Galbraith, John Kenneth, "How to control the Military" *Harper's, June 1969*. Reprint in *Cong. Rec. May 23, 1969*, p. S5477-S5483.

(3) Benson, Robert S., "How the Pentagon Can Save \$9 Billion," *Washington Monthly, March 1969*. Reprint *Cong. Rec. May 12, 1969*, p. S4886-S4889. (Ed. no: long and boring, but documents inefficiency outside of new weapons systems).

(4) Shoup, General, "The New American Militarism," *Atlantic, reprint Cong. Rec., March 26, 1969*, p. H2252.

(5) Newman, Barbara, "Can Budget Bureau Put Lid on Pentagon Spending," *Washingtonian, July 1969*.

Directions to 1135 Bellview Road, McLean, Va.:

1. Memorial Bridge to George Washington Pkwy.
 2. to Rt. 495 (G. Wash. Parkway splits, take left fork towards S. Va. and Dulles Airport)
 3. Take Exit 13 off of Rt. 495, to Rt. 193, Great Falls 1st Exit
 4. Turn right at stop sign at end of exit ramp onto 193 (also called Georgetown Pike)
 5. Go 2.3 miles to sign "Greenway", turn left onto Bellview
 6. Go to 1st intersection (Old Dominion Dr. and Bellview) continue on Bellview for exactly 1 mile, turn left onto drive (mailbox has name "White" on it, before left turn there is old dilapidated barn on the right.)
- Don't panic—traveling time from Washington: a mere 20 minutes.

Mr. THURMOND. Mr. President, it is long past time for dedicated Americans to speak up for our military. I know of no better time than now to challenge the critics who have been carrying on continuous and unjustified condemnation of

our military. Passage of the authorization bill as it has been submitted would reassure our military that our Nation stands behind them.

Mr. President, this bill has received a penetrating review by the Senate Armed Services Committee, under the outstanding leadership of our distinguished Committee Chairman, Senator STENNIS. The Committee has been fully cognizant of the costs for defense and the other needs of our country. We have already made substantial cuts in the bill. In fact some cuts, especially in research and development, were too severe, and I question the soundness of some reductions. Any further cuts in the authorization bill would be an unacceptable risk to our security.

Mr. President, the procurement of these major items and the maintenance of our reserve components represent the minimum essential for our Armed Forces. I speak in favor of this bill, and for our Defense Establishment. In my support, I think the time is propitious for answering the critics of our military who would slash the deterrence that has prevented nuclear war.

Our Armed Forces must have the united support of our Nation. Critics in Congress, the press and other elements of our society have been generally unjust in their charges. Condemnation of our so-called "military-industrial" complex will not solve our problems. Objective dialog, constructive criticism and peaceful dissent are healthy for our country. But continuous condemnation not founded on facts is a disservice to our military and harmful to our country.

Many critics blame our Defense Establishment for our social ills, a prolonged war, the Soviet buildup, and the conflicts throughout the world. It is time the critics recognize that the Communists, and not our military, are responsible for the confrontation we live in today. Even the liberal-minded Washington Post recently concluded a series of articles showing the present Soviet leadership was reaffirming the Stalinist line.

Many among the antimilitary and the militant left ignore the Communists' longstanding design for world domination. Let them forget, this is what caused the United States to rearm after practically disbanding the world's most powerful military force in 1946.

If the military and industry did not have team unity, including competent personnel with military experience in industry, then we could well be in World War III already. Those who would weaken this power of deterrence and undermine our military widen the unity gap.

Mr. President, in the face of the growing Soviet threat and their continuous provocative actions throughout the world, it is inconceivable that our Nation will not respond with the unity which has always marked our history in time of peril. Our national security depends on unity more than ever before. Those leaders and others who attack our Armed Forces and second-guess our commanders in the field are doing as much damage to the morale and discipline of our forces as the radical

groups who are mounting deliberate assaults on our military services.

No wonder our military commanders are beset by cases of mutiny, disobedience, racial strife, and desertion. Even a Federal judge ruled that an individual as a matter of "honest belief" can determine for himself when a limited war is "unjust" and refuse to serve. Such irrational judgment by a member of the Judiciary makes it difficult to define sedition.

The recent decision of the Supreme Court to have civilian courts instead of military courts prosecute servicemen for crimes not service-connected is questionable. It will jeopardize the control of discipline and downgrade military authority which is essential for our Armed Forces. Justice William O. Douglas' vicious attack on our military lawyers is not warranted. He characterized military courts as "singularly inept in dealing with nice subtleties of constitutional law in spirit and in practice." Military lawyers are well trained, and more familiar with the military implications than civilian lawyers.

This is another example of Justice Douglas undermining the military. His recent article entitled, "The Public Be Damned," in which he made a blistering attack on the Army Corps of Engineers, demonstrated his lack of propriety. After reading his article, one can make his own assessment as to whether or not Justice Douglas would be objective in any case before the Supreme Court involving the Corps of Engineers. These outside activities downgrade the dignity of the Supreme Court and demonstrate his susceptibility to prejudiced views and conflicts of interest.

Mr. President, the antiwar emotionalism is causing many people to lose their perspective. This continued onslaught on the military, which is fed fuel by many leaders, could seriously jeopardize discipline in our Armed Forces.

President Nixon responded to those who attack our Military Establishment. I support the views expressed in his recent commencement address at the Air Force Academy. His credo of nine points for the defenders of our Nation placed our Defense Establishment in the proper perspective.

I would like to quote the essence of President Nixon's nine points in his military creed. He said:

1. I believe that we must balance our need for survival as a nation with our need for survival as a people.
2. I believe that our defense establishment will remain the servant of our national policy of bringing about peace in this world, and that those in any way connected with the military must scrupulously avoid even the appearance of becoming the master of that policy.
3. I believe that every man in uniform is a citizen first and a serviceman second, and that we must resist any attempt to isolate or separate the defenders from the defended.
4. I believe that the basis for decisions on defense spending must be "what we need for our security" and not "what will this mean for business and employment."
5. I believe that moderation has a moral significance only in those who have another choice.
6. I believe that defense decisions must be made on the hard realities of the offensive

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capabilities of our adversaries and not on our fervent hopes about their intentions.

7. I believe we must take risks for peace—but calculated risks, not foolish risks.

8. I believe that America is not about to become a Garrison State, or a Welfare State, or a Police State—

9. And I believe this above all: That this Nation shall continue to be a source of world leadership and a source of freedom's strength, in creating a just world order that will bring an end to war.

I was also glad to note that President Nixon clarified what President Eisenhower really said about the military-industrial complex. President Eisenhower has been quoted out of context. When one reads the Eisenhower farewell address, I suggest that he gave a balanced assessment appropriate to the time, that placed the emphasis on the need for this complex in the face of the Soviet threat. I believe President Nixon's citation of General Eisenhower pointed out this balance when he said:

Our arms must be mighty, ready for instant action, so that no potential aggressor may be tempted to risk his own destruction.

Mr. President, it appears to be a popular pastime today to quote great Americans out of context in order to frighten the public or make political gain. Some critics rejoice in such exercises.

Some have already used President Nixon's Air Force Academy address out of context in a game of semantics. It has been alleged that President Nixon is trying to ignore the Senate in making a judgment on defense appropriations. This accusation is based on the President's statement that "the President of the United States is the man charged with making that judgment." His next sentence stated that "after a complete review of our foreign and defense policies, I have submitted requests to the Congress for military appropriations." His critics refused to note the latter sentence. It is this kind of political footwork that creates distrust and agitation in the American people.

Mr. President, while the Communists seek to move closer and closer to their objective of the annihilation of the capitalist system, many of our misguided and the New Left promote neo-isolationism, unilateral disarmament and dissolution of collective security alliances. If we had failed to stand firm in Berlin, Korea, Vietnam, and other areas, the Communists would have engulfed the rest of the world by now. America's presence overseas must be maintained in the face of the Soviet threat. However, I do agree that our scale of assistance to our allies should be reappraised and there should be more contribution from them. History refutes the view that weakness and unilateral disarmament is the road to peace.

Our Nation suffers because of those who have lost their patience and spirit. Some are willing to reduce our strength and would negotiate from fear in disregard of the catastrophes of history under such an appeasement approach. Now is not the time to grow weary and retreat in the face of minority dissension. It is time to reassert our firmness and national interests.

Mr. President, deeds, not words, are the only indicators of Soviet intentions.

I am not aware of any peaceful deeds of the Communists. On the contrary, they have never before been stronger, nor committed more aggressive acts than they have in the last 10 years. Yet, the stronger the United States has become, the more restraint and weakness we demonstrate to show our good faith. The Communists do not respect weakness. Nevertheless, we again have demonstrated our good faith and desire for peace by taking calculated risks in the bombing halt and troop withdrawal.

Mr. President, the antagonists of our Military Establishment in our country allege that our Nation is addicted to military intervention and chronic warfare. One only has to review the conflicts in the world to show the shallowness of this allegation. We have not been the world's policeman in the troubled areas of the Middle East, Czechoslovakia, Hungary, Africa, Malaysia, Indonesia, India, Pakistan, Laos, Algeria, and other areas. Yet, the Communists have been busy interventionists or aggressors in these areas. Critics rarely condemn the enormous amount of money, weapons, and military supplies that the Soviet Union and Red China pour into North Vietnam.

If we show weakness now, the Communists will certainly continue their aggression in Asia and Europe. This is not the time to renege on our military commitment overseas. Some politicians would have one believe that military strength or an arms race breeds war.

Mr. President, our military are accused of being too influential in foreign policy. They are accused of being responsible for stationing our forces in many foreign countries. They are accused of formulating national policy. These criticisms are totally unfounded and an injustice to our men and women in uniform.

The military have never been under greater civilian control than in recent years. Civilians formulate foreign policy, not the military.

Civilians, with congressional approval—not the military—determine our force structures, personnel strengths and procurement of weapons systems. Unfortunately, civilians have exercised too much control of the selection of weapons systems which were both wasteful and injurious to our security. The military do not choose the commitments around the world, but they execute the policies at the direction of the President. They execute them with courage, sacrifice, and at great risk and hardship.

Civilian mismanagement of the military has prolonged the war in Vietnam. Gradualism violates all military principles for victory. A no-win policy is disastrous and unknown in American history. I am confident we could have won the Vietnam war a long time ago if our effort had not been throttled by civilians. It is ridiculous that this war has been allowed to go on for over 7 years. In the early stages, it could have been resolved by our airpower and seapower within 60 days.

Mr. President, the role of the Armed Forces is service to our people and for their security. It is true that this security is costly, but the Kremlin has not been willing to accept any alternative. They have yet to accept serious arms

control proposals with on-site inspection which we have been earnestly and sincerely pursuing for many years. Consequently, the American people have recognized the growing Communist threat and demanded continued security. I hope that recent overtures for arms talks are in good faith.

I also agree with President Nixon that "the American Defense Establishment should never be a sacred cow, nor should the American military be anybody's scapegoat." Inefficiency and waste cannot be tolerated. I am confident also that there were some areas of the defense budget that could have been reduced, and this has been done.

Our Armed Services and Appropriations Committees have given the defense budget a comprehensive study with a view toward the elimination of low priority and nonessential weapons. There are always ways to improve efficiency, especially when managing the vast resources the size of the Defense Department with 4.8 million people and a \$77 billion budget. Excessive overcosts and contractual procedures are receiving a thorough examination. Our distinguished chairman of the Senate Armed Services Committee recently implemented new controls and procedures to insure that weapons and contracts receive continuous penetrating review.

It appears that there is an attempt to make Americans believe that the military are deliberately making short estimates and causing overruns for weapons systems. They are being unjustly blamed for inflation.

As Dean Acheson said:

I can't imagine anyone taking seriously the thought that military officers could be engaged in a conspiracy to waste funds of the United States.

General Wheeler said, he "has yet to meet his fellow conspirators."

Mr. President, the avalanche of criticism of our military today ignores the fact that this administration inherited some ineffective procedures and policies. The inefficiency, cost overruns, and waste that are being exposed by this administration can be credited to the previous administration and civilians in defense systems analysis who have been tagged as "computerized whiz kids." The Defense Department is already taking steps to eliminate waste and the procurement of unsatisfactory or low-priority weapons, such as the Cheyenne helicopter, the Manned Orbiting Laboratory, and phasing out of the FB-111 program.

In the past, weapons were put into production before they were fully developed. The Secretary of Defense is taking measures to eliminate such waste. I suspect, also, that a lot of the waste of the previous administration was the result of the civilian leadership being a "captive of a scientific-technological elite" which President Eisenhower also warned against. Billions of dollars worth of weapons and sophisticated electronic gadgetry have been produced in the past 10 years, but we have not produced a single supersonic air superiority tactical fighter aircraft to counter those already being produced by the Soviets.

Mr. President, the threat to this country is in the Kremlin—not the Pen-

tagon. The overwhelming assault on the military, the generals, the weapons systems, the Pentagon, the military-industrial complex, the draft, the conduct of the war, and the ROTC is primarily emotional hysteria. Distress over the tragic Vietnam war should not disillusion thoughtful Americans.

The verbal assault is aimed at our total military capability. Here is our security. Yet, many supposedly loyal American leaders place themselves in the same category with the violent demonstrators on the campus and elsewhere who protest these same security assets. It has been said by some philosophers that haters ultimately hate themselves and that protestors of violence ultimately become violent. I hope that this trend reverses in the face of the Soviet threat.

The free world has faced and must continue to face the hard reality of our times—that is, the growing economic and military power of the Soviets and that we shall continue to face it until the U.S.S.R. is convinced that the only recourse to prevent their own destruction is arms control and eventual disarmament.

The Kremlin is making an exhaustive effort to surpass America's strength.

The Soviets are seeking to dominate the oceans with expanding global sea power. They now have 375 submarines to our 142, and all their subs have been built since World War II, while 50 percent of ours are of World War II vintage.

Their capacity to produce nuclear subs of high speed and to produce subs of the U.S. *Polaris* type has been greatly increased. In fact, they have one submarine yard capable of building more submarines than all of the U.S. submarine yards put together.

The Soviets have also surpassed the United States in ICBM's. They have over 1,200 compared with our 1,054. The Russians have also developed a huge missile called the SS-9 capable of carrying heavy megatonnage, while the United States has no missiles of this type. Added to this picture is the fact the Soviets have around 700 intermediate range ballistic missiles to none for the United States. This entire situation becomes even more foreboding when we consider that they are continuing to build ICBM's and we have stopped our production.

In deliverable megatonnage the Soviets have a decided advantage over the United States, and here again our plans call for a decline in this area, while intelligence shows the Russians are increasing in this capability.

On comparative bomber strength, the Russians have 900, including some 200 heavy bombers, while the U.S. strength is only 549. Furthermore, they have developed and are flying a supersonic transport capable of bomber conversion, while we have none.

In the tactical air power area, the Soviets have flown 18 new air superiority aircraft since 1955, while we developed the F-4, which remains today as our only air-to-air plane. We are clearly behind in this critical area of maintaining control of the skies over our fighting men. While they were developing the Foxbat and Floger, we were struggling with the F-111, which is not a true air superiority fighter.

The Soviets are also testing a fractional orbital bombardment system and antispace weapons, while we have taken no action in these critical areas. Further, they deployed their ABM in 1962, 7 years ago.

We can be assured that they will bleed us as long as they can in Vietnam, and they will propose arms control talks so long as they might gain an advantage.

The Soviets are experts in the art of planned misinformation. While engaged in disarmament talks in 1957, the Kremlin announced the successful firing of an ICBM. So, why should we be trapped as some would have us do, by delaying the ABM and stopping our tests of MIRV? Military technology must not be stifled on the basis of hopeful diplomacy.

Mr. President, costs for security and waste on some weapons are one thing, but the other allegations tagged on for "overkill" of our military are something else again. This is unfair to the men and women in uniform. Such unjust accusations shatter esprit de corps and incentive. It disillusion the military. How can we expect loyalty and dedication when we fellow Americans ridicule our military?

We should never lose sight of the fact that the Soviets' increasing threat to the free world is the real cause. The Communists rejoice at our attacks on our military. It encourages their goal of world domination.

Some of our people seem to be seized by a fear psychosis. Assaults on the military now remind me of the early sixties in reverse. Then, rather than face the facts of life—the real threat—it was commonplace, beginning in 1961, to muzzle and censor the military. Now, as the facts of the real threat of Soviet military and economic power are spread before us, there are those who want to tuck tail and run.

It reminds me of what Rudyard Kipling said:

This is the time to fear . . . When he shows as seeking quarter, with paws like hands in prayer, that is the time of peril—the time of the Truce of the Bear.

As President Kennedy indicated:

We must never be lulled into believing that the Communist powers have yielded their ambition for world domination.

There are too many indulging in wishful thinking. When faced with realities or danger, too many are filled with nostalgia. Their answer is conciliatory accommodation. If we are that scared of the Soviets, then there is not much to stop them taking over the rest of the free world by the piecemeal method.

Mr. President, what has happened to dedication, determination, spirit, unity, duty, and country? This is the code by which the military lives. It would be good for our country if the irresponsible critics and violent protestors would take heed of this code. Ill-informed condemnation by the politically ambitious and others is not a substitute for intelligent and constructive criticism. It does serious damage to the foundations of our great institutions, organizations, and our security.

The military leaders have long since been denied the spirit for any decisive action. If the demoralization continues,

the spirit for victory may not be there when it is needed most for our survival.

Mr. President, so long as diplomacy continues to fail, our military is our only security. To continue to shatter the morale and spirit of our Armed Forces, especially when diplomacy fails, will guarantee that the free world will not survive.

Mr. President, in closing, I urge the Senate to pass this authorization bill without further reductions in order to protect the security of our country and our people.

Mrs. SMITH. Mr. President, will the Senator yield?

The PRESIDING OFFICER (Mr. CRANSTON in the chair). Does the Senator from South Carolina yield?

Mr. THURMOND. I yield.

Mrs. SMITH. Mr. President, I wish to express my personal appreciation for the defense of the military made by the distinguished senior Senator from South Carolina. He has rendered a great service by setting the Record straight.

Mr. THURMOND. Mr. President, I wish to thank the able and distinguished Senator from Maine, who is the ranking member on the minority side and who has done such a magnificent job in this position.

Mr. BROOKE. Mr. President, in my brief remarks yesterday at the conclusion of the very able speech by the ranking minority member of the Committee on Armed Services, the Senator from Maine (Mrs. SMITH), I expressed my gratitude, as a new member of that committee, for the remarkable openness and impartiality shown by the chairman and the other senior members of the committee. I wish to reiterate my appreciation at this point, and to express at the same time my very special gratitude to the able Senator from New Hampshire (Mr. MCINTYRE), chairman of the Subcommittee on Research and Development, on which I was privileged to serve. As a friend and fellow New Englander, Senator MCINTYRE has shown the greatest kindness and fullest cooperation to me and to my staff. For his aid and consideration I will always be thankful. Let me also say it was a great privilege for me to work with my other colleagues on that subcommittee—Senators YOUNG of Ohio, BYRD of Virginia, and MURPHY.

Ours was a most demanding and challenging task, Mr. President. None of us on the subcommittee are scientists, yet we had the responsibility for examining the proposed research, development, test and evaluation budget of more than \$8 billion. We heard testimony and attended briefings involving 20 major weapons systems, many of which are still little more than visions in the eyes of their creators. We spent many hours, in and out of committee, examining detailed reports, hypotheses, and predictions. We knew, as we proceeded with our difficult task, that our determinations could have a decisive effect upon our country's security and technological capability for many years to come.

Obviously a subcommittee which was formed on February 28 and submitted its report to the full committee only 4 months later could not investigate in great detail all the hundreds of items which the military is presently develop-

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ing. We had to draw a line, and draw it early. Consequently, as the chairman has observed, we looked for "soft spots"; or, more specifically, for duplication, overlap, or excessive cost overruns in the research and development stage. We also considered priorities, asking the basic questions: What kind of wars are we likely to be fighting 5 or 10 years from now when these weapons are actually operational? And what type of weapon is the enemy likely to rely on at that particular stage in our development?

Projections of this nature can never be perfect, but I believe the subcommittee was on solid ground in its efforts to delete overlapping systems development and to insist that the services not only work together in the research and development stage but plan for systems which will also work in conjunction once they are actually deployed.

Mr. President, I have no intention of going over again the ground covered by the distinguished chairman of the subcommittee in his statement delivered yesterday. The reductions in the various systems, the deletions which were made, the recommendations which accompany our report—all speak clearly for themselves. After the most careful deliberation we have concluded, and the full committee has upheld our view, that a total of \$1,042,000, or 12.7 percent, can reasonably be cut from the research and development budget without endangering—in the least—our national security or our progress on the technological advances necessary to sustain our defense. The savings in future years, resulting from consolidation of system research and reordering of our priorities, will run to many billions of dollars more.

I shall comment briefly, however, on a few of the major systems considered by the subcommittee.

Major reductions were made by the subcommittee in continental air defense. This is essentially an antibomber defense, and intelligence estimates played a heavy role in our deliberations. For one thing, the chances of a bomber attack upon the United States are remote, and become more so as we and our adversaries proceed with increasingly complex and reliable missile development. Second, it is significant that the Soviet Union has four times fewer bombers than the United States, and is not now building more.

For these reasons, it was decided that continental air defense would have low priority in terms of procurement in the years ahead, and, therefore, maximum consolidation and savings could be instituted at this stage. Thus, funds for the Navy E2A/C aircraft, a sea-based duplicate of the Air Force AWACS system, were deleted from the budget. Reductions were also made in the CONUS air defense interceptor, and funds for the Army's Sam-D missile were deleted in full from the budget.

In other areas, the subcommittee has recommended a deletion of \$8 million for chemical and biological weapons research, thus supporting an overall committee reduction of \$16 million for this extremely controversial program. The subcommittee, recognizing the problems

which have occurred and the heavy cost overrun which has been encountered in the development of the main battle tank, has reduced research and development funds for that program by \$14.9 million, and has ordered a reorientation of the program as well.

The subcommittee also recommended that funds for the Army heavy-lift helicopter be deleted from the budget. This is an example of the application of our judgment that there was no need for both the Army and the Navy to be working on the same type of aircraft. Since the Navy is likely to have more use for such a vehicle in the future, it was decided that a considerable amount could be saved if the Navy alone were assigned responsibility for this program.

Deletion of funds for the Manned Orbiting Laboratory represents another considerable saving, both in the present budget and in years to come. Testimony collected by the subcommittee led us to the conclusion that most, if not all, of the functions planned for the MOL could be performed as effectively, and certainly at far less cost, by an unmanned satellite.

Finally, I should like to mention a number of recommendations made by the subcommittee with regard to research by the Department of Defense in the social and behavioral sciences. I believe that the military has a clear and definite reason for authorizing studies of the physical and psychological capabilities of the men in the military, their training needs, and the optimum designs for weapons systems so that they may be operated with a minimum of stress.

But I have long believed that such areas as foreign environments and policy planning studies should fall more within the purview of other branches of our Government. It caused me great distress, for example, to learn that the Department of State has an annual budget of only \$100,000 for contingency policy planning, while the budget for comparable work in the Department of Defense totals \$36 million. For this reason, I was pleased to see the subcommittee impose a 12-percent reduction in funds for research in these areas and recommend in its report that more of these efforts be turned over to the Department of State, the Arms Control and Disarmament Agency, and the National Science Foundation. I commend this step, and urge Senators who have responsibility for the budgets of these other agencies to take note of this recommendation.

I conclude, Mr. President, by pointing out that the work of the Research and Development Subcommittee does not stop with the passage of this authorization of individual proposed weapons must broaden and deepen our investigation of individual proposed weapons systems, and remain as current as humanly possible on technological problems and advances. We must work to insure that the recommendations contained in this report are carried out, that "comparability" in weapons development is enforced wherever possible, that clear priorities are established and carefully observed.

Again, let me say that it has been a

great privilege and a great learning experience for me to be able to work with the members of the Committee on Armed Services and its informed and competent staff. I thank my colleagues, especially the chairman, and look forward to many more years of this association.

Mr. RUSSELL. Mr. President, I suggest the absence of a quorum.

The PRESIDING OFFICER. The clerk will call the roll.

The assistant legislative clerk proceeded to call the roll.

Mr. RUSSELL. Mr. President, I ask unanimous consent that the order for the quorum call be rescinded.

The PRESIDING OFFICER. Without objection, it is so ordered.

ORDER FOR RECOGNITION OF SENATOR TOWER TOMORROW

Mr. MANSFIELD. Mr. President, I ask unanimous consent that, at the conclusion of the period for the transaction of routine morning business tomorrow, the distinguished Senator from Texas (Mr. Tower) be recognized.

The PRESIDING OFFICER. Without objection, it is so ordered.

ABM

 AUTHORIZATION OF APPROPRIATIONS FOR FISCAL YEAR 1970 FOR MILITARY PROCUREMENT, RESEARCH AND DEVELOPMENT, AND FOR THE CONSTRUCTION OF MISSILE TEST FACILITIES AT KWAJALEIN MISSILE RANGE, AND RESERVE COMPONENT STRENGTH

The Senate resumed the consideration of the bill (S. 2546) to authorize appropriations during the fiscal year 1970 for procurement of aircraft, missiles, naval vessels, and tracked combat vehicles, and research, development, test, and evaluation for the Armed Forces, and to authorize the construction of test facilities at Kwajalein Missile Range, and to prescribe the authorized personnel strength of the Selected Reserve of each Reserve component of the Armed Forces, and for other purposes.

AMENDMENT NO. 69

Mr. McINTYRE. Mr. President, I send to the desk an amendment to S. 2546 which would insert a new title dealing with the Safeguard-ABM system and ask that it be printed.

Mr. President, in order that this amendment will be readily available to Senators, I also ask unanimous consent that it be printed in full at this point in the RECORD.

The PRESIDING OFFICER. The amendment will be received and printed, and will lie on the table; and, without objection, the amendment will be printed in the RECORD.

The amendment (No. 69) is as follows:

AMENDMENT No. 69

On page 5, at the end of line 6 insert the following new title:

"TITLE IV—SAFEGUARD ANTIBALLISTIC MISSILE SYSTEM

"Sec. 401. (a) In the case of funds authorized under this Act for the Safeguard

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Antiballistic Missile System, such funds may be used only for—

"(1) Research, development, testing, and evaluation of the System's radars, computers, and related electronic equipment.

"(2) Pre-production expenses of the Sprint and Spartan missiles and the production of such missiles for research, development, evaluation, and testing.

"(b) The equipment described in clause (1) of subsection (a) may not be installed at any proposed ABM site, except at or near Grand Forks Air Force Base, North Dakota, and Malmstrom Air Force Base, Montana.

"(c) None of the funds appropriated pursuant to this or any other Act may be expended for the acquisition of land, not now owned by the United States, or the use of land owned by the United States, for the construction or installation of any ABM facilities at any proposed ABM site, except at or near Grand Forks Air Force Base, North Dakota, and Malmstrom Air Force Base, Montana.

"(d) None of the funds appropriated pursuant to this or any other Act may be expended for the procurement, installation, or deployment of any operational missile as a part of any antiballistic missile system, nor for the construction of any silos or other launch facilities for any operational missile as a part of any antiballistic missile system."

On page 5, line 7, strike out "Title IV" and insert in lieu thereof "Title V."

On page 5, line 8, strike out "Sec. 401" and insert in lieu thereof "Sec. 501."

Mr. MCINTYRE. Mr. President, I ask unanimous consent that my supplemental views appearing on pages 66 and 67 of the report of the Committee on Armed Services be printed in the RECORD.

There being no objection, the supplemental views were ordered to be printed in the RECORD, as follows:

SUPPLEMENTAL VIEWS OF MR. MCINTYRE

I did not vote in the committee when it considered Safeguard-ABM. I do not believe that a "yea" or "nay" answer for or against Safeguard-ABM is adequate. I believe that an alternative to Safeguard-ABM is the proper answer.

I had the chance to discuss my alternative during the committee action on Safeguard-ABM but I did not call for formal consideration and a vote at that time. Rather, I prefer that this proposal be considered on the floor of the Senate when the authorization bill is being voted upon.

The alternative proposal which I am offering to Safeguard-ABM would—

(1) Authorize a concentrated developmental testing program of the radar, computer, and related electronic components of the Safeguard system at the North Dakota and Montana locations suggested by the President.

(2) Authorize production engineering and continued developmental testing of the system's missiles.

(3) Preclude the deployment or production of operational Sprints or Spartans, the construction of missile launch facilities, and the acquisition of land at other than the two locations.

(4) Require full congressional review and approval before any such deployment or production of weapons, silo construction, or further land acquisition.

A concentrated developmental testing program with a clear expression of congressional desire to withhold the deployment of more nuclear weapons would lose nothing and gain much.

This alternative will retain the option to deploy substantially on the President's schedule if Congress decides next year to authorize full deployment.

There would be a delay of only 4 to 5 months in the completion of the Grand Forks

site, none at Malmstrom site, and only 1½ months in the testing of the integration of the two systems.

There would be a gain of another year's intelligence information to try to clarify the current projections about the possible threat of a Soviet first strike.

The current disagreement between the CIA and DOD underlines how difficult it is to make long-range intelligence projections with confidence and precision.

As Secretary Laird has pointed out: "Our intelligence projections over the next 2 or 3 years are reasonably firm. But when we project 5 or 6 years ahead we are getting into an area of considerable uncertainty. * * * Our national intelligence projections for the mid-1970's involve a large measure of judgment rather than hard evidence."

The alternative I am proposing would give us another year's "hard evidence" to inform our final decision about full deployment. If the Soviets are not trying to develop a first strike, their buildup should begin to level off. If they are, it will persist, perhaps even accelerate.

If future intelligence information clearly demonstrates the Soviet intention and ability to develop a first strike capability, the concentrated testing program I am proposing would have retained our option of meeting a threat to our Minuteman with Safeguard. If the Soviet threat of a first strike does not materialize, we can decide with confidence and a sense of security not to deploy Safeguard.

By withholding the decision to deploy more nuclear weapons, and by meeting the long leadtime problem of Safeguard, a concentrated testing program, neither gives the Soviets reason to increase their arms nor lets our own guard down.

The alternative I am proposing would concentrate on the most difficult technical problems in the system. Dr. John Foster, head of DOD Research and Development, as well as most informed and responsible critics, have emphasized the difficulty in developing a reliable computer program, integrating this complex system of radars and computers, and relying on uniformed personnel. This testing program would enable us to concentrate on these problems, work out the bugs, make any necessary improvements, and raise our confidence in the system.

The alternative I am proposing would also help strategic arms limitations talks.

A decision now to deploy more nuclear weapons—even if defensive—would complicate strategic arms limitation talks. If there is a beginning of the construction of missile silos, as requested in the Safeguard proposal, the Soviets could misinterpret this activity as the beginning of a dramatic expansion of offensive weapons. Even if they accept statements that the silos would be filled with purely defensive missiles, they could use the intent to deploy more nuclear weapons as an excuse to deploy more of theirs.

On the other hand a concentrated developmental testing program which retains the option to deploy Safeguard substantially on schedule gives the Soviets a realistic incentive to enter into effective SALT talks. The knowledge on their part that to overcome Safeguard, if deployed, would require an expensive addition to their strategic arms, should help to dissuade them from trying to develop a first strike capability and should motivate them to proceed with SALT talks. It was this kind of realism that enabled us to negotiate a nuclear nonproliferation treaty and a test ban agreement.

Finally, the alternative I am proposing would symbolize our Nation's desire to turn the corner on the arms race and to affirm a fresh set of national priorities. In fiscal year 1970 there would be a saving of at least \$15 million in construction funds for missile silos alone. But the long-range savings due to improvements in the system or an even-

tual decision not to deploy could well be dramatic.

In sum, the alternative I am proposing would not intensify the arms race; it would help us secure an effective arms limitation agreement; it would seek to answer the hardest questions about the system's workability; it would symbolize our turning the corner on defense spending; and it would preserve the ability to meet in time any clear Soviet threat to the strategic balance in the 1970's.

And above all it strikes a balance in the consideration of the twin problems of achieving national safety and a secure peace.

THOMAS J. MCINTYRE.

Mr. AIKEN. Mr. President, I wish to commend the Senator from New Hampshire (Mr. MCINTYRE) for offering his amendment to the legislation which is now pending.

I also wish to commend the Senator from Kentucky (Mr. COOPER) and the Senator from Michigan (Mr. HART) for proposing their amendment yesterday.

While these two amendments differ in some degree, they represent a determination on the part of their sponsors for a workable modification of the ABM proposal.

It has been obvious for sometime that authority for the Defense Department to proceed with the development of an unlimited ABM system could not be approved by this Senate.

In fact, without modification I would have had to vote "No" on this proposal.

It is, however, imperative that in the world as it is today the security of the United States be firmly maintained and that our defenses, including our deterrent and retaliatory powers, be kept up to date.

The issue before us is not whether we should agree with those who contend that the United States should set an example to the world through unilateral disarmament or those who apparently hold that the solution to international differences can best be solved by the dropping of bombs.

While the Polaris submarine has undoubtedly been our greatest deterrent to a widespread war, yet we should not regard the matter before us as an issue between the Polaris and other branches of our Defense Department.

Above all else, the situation with which we are confronted calls for the exercise of common sense, fairness, and clarity.

As I have indicated, we should not grant authority for the deployment or permanent installation of ABM missiles at this session of Congress, but neither should we retard the research which would be essential to the ultimate installation of ABM missiles should circumstances prove such a course to be advisable.

I am particularly interested in research as it pertains to the improvement of our presently inadequate radar systems—and, I might add, our sonar systems as well.

A special reason for perfecting our radar system is the fact that within the next decade or so, supersonic air transportation between the continents will become an accomplished fact and the same radar which would be used to detect oncoming enemy missiles would also be

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used for the civilian economic requirements of the future.

The moon flight shot scheduled for July 16 is another reason for the need to develop more sophisticated tracking devices which can be used for civilian purposes as well as military, not that our present tracking system to the moon is not excellent but it must be perfect before outerspace travel can be extended to greater distances.

It is rather ironic that much of the civilian economic progress of mankind has come about as a result of war or preparation for possible war.

We have paid an exceptionally high and unnecessary price for this progress, but until mankind learns to govern itself and keep its passions under control, it is unlikely that we will be able to digress from this course which has persisted over the centuries.

Therefore, it is essential that the legislation now before us be modified to prohibit the permanent installation or deployment of ABM missiles but not to such an extent that it impairs the security of the Nation or impedes the economic progress upon which our future depends.

It has been said repeatedly that legislation authorizing an ABM program is needed to strengthen the hands of the President at the upcoming meeting with Russia.

May I point out, however, that if the United States enters into a conference with Russia looking to control of armament and aimed at developing a less tense relationship between the two countries, that even though the legislation as written could be approved by as many as 51 or 52 votes in the Senate, which I doubt, we would be in an extremely weak bargaining position.

I believe it is absolutely necessary for President Nixon to have a much larger number of votes of the Senate supporting him when we enter into such a conference.

The pending legislation relating to the ABM must be modified to the extent that strong approval of the Senate will be obtained.

Again I wish to commend the Senator from New Hampshire and the Senator from Kentucky for recognizing this situation, and I express the hope and belief that before this debate is ended, a mutual and satisfactory common ground will be reached.

Mr. MANSFIELD. Mr. President, will the Senator from Vermont yield?

Mr. AIKEN. I yield.

Mr. MANSFIELD. Mr. President, I commend the distinguished senior Senator from Vermont, the ranking Republican in this body, for the thoughtful speech which he has just made.

As I stated to the distinguished Senator from Maine (Mrs. SMITH) yesterday, those of our colleagues who come from New England do not waste words. They get to the point quickly. The Senator has indicated that the amendment offered by the distinguished Senator from New Hampshire, as well as the amendment offered on yesterday by the distinguished Senator from Kentucky (Mr. COOPER) and the Senator from Michigan

(Mr. HART) are steps in the right direction, if not necessarily the right answer.

The Senator also has indicated that authority for the Defense Department to proceed with the development of an unlimited ABM system could not be approved by the Senate.

This is an indication of the closeness of the vote, under present circumstances, which may well accrue if the matter is faced up to without a sizable change in the proposal.

The Senator indicates:

In fact, without modification I would have had to vote no on the proposal.

That, in relation to his approval, in a sense, of the offer of the two amendments referred to, indicates that the Senator has an open mind and is not prepared, even as yet, to commit himself. As a matter of fact, it might well be that the determination of this issue could be decided by the distinguished Senator from Vermont, who now has the floor.

As the Senator has said:

It is, however, imperative that in the world as it is today the security of the United States be firmly maintained and that our defenses, including our deterrent and retaliatory powers, be kept up to date.

With that statement, I agree.

Then the Senator goes on to say:

The issue before us is not whether we should agree with those who contend that the United States should set an example to the world through unilateral disarmament or those who apparently hold that the solution to international differences can best be solved by the dropping of bombs.

I agree wholeheartedly because both of these positions, in my opinion, represent not logic and reason, but, rather, emotion farfetched.

That is the only part of this debate which has disturbed me, when those of us who have raised questions about the ABM—some of us, at least—have been charged with advocating unilateral disarmament.

Fortunately, I know of no Senator who has advocated that this matter of international differences can be solved by the dropping of bombs.

The Senator from Vermont also said:

Above all else, the situation with which we are confronted calls for the exercise of common sense, fairness, and clarity.

That is absolutely correct. That is what the Senator from Vermont is trying to inject into this debate. He said further:

As I have indicated, we should not grant authority for the deployment or permanent installation of ABM missiles at this session of Congress, but neither should we retard the research which would be essential to the ultimate installation of ABM missiles should circumstances prove such a course to be advisable.

That is correct. Then the Senator said:

I am particularly interested in research as it pertains to the improvement of our presently inadequate radar systems.

I am, too. But there is a grave question about the softness or vulnerability of the radar system which is proposed to be installed at missile sites, especially in Montana and North Dakota. I should

think, as a suggestion, that perhaps it would be possible to achieve the same results if testing were to be carried on at such missile sites as Kwajalein, which has been in operation for some time, if my information is correct, and at Eniwetok, which I understand, is 500 or 600 miles from Kwajalein—in other words, approximately the same distance as between Grand Forks, N. Dak., and Malmstrom, Mont.

Furthermore, there would be no indication that something was being attempted which might prove to be a steppingstone, a nose under the tent, or a foot in the door to the building of a complete ABM system, not only at those two sites, and not only as to computerized Sprints and Spartans, but the same being applied to the other 10 missile sites that are underway.

What the Senator from Vermont has said indicates, of course, that he has given this subject a great deal of thought. Different views may exist among us, but I do not question the integrity or the patriotism of any Member of this body, whether he be for or against the system. Whether or not one is against it is, of course, a matter of judgment, which all of us must face up to. The President has faced up to his responsibility and has rendered a judgment. We have to face up to our responsibility and render a judgment, as well.

The Senator from Vermont also said—and I am getting close to the end of this interpolation:

It has been said repeatedly that legislation authorizing an ABM program is needed to strengthen the hands of the President at the upcoming meeting with Russia.

That is a doubtful thesis. No one can read the minds of the Russians. No one really knows what the effect will be of a system of this kind being built. It might be beneficial; it might be harmful. It is a doubtful thesis.

The Senator from Vermont also said:

May I point out, however, that if the United States enters into a conference with Russia looking to the control of armament and aimed at developing a less tense relationship between the two countries, even though the legislation as written could be approved by as many as 51 or 52 votes in the Senate—

Which I doubt—we would be in an extremely weak bargaining position.

The Senator is correct. I join him in his remarks because the situation is one which cannot be avoided now. It must be faced up to in some manner or in some form.

When the Senator, in his last paragraph, after commending the Senator from New Hampshire and the Senator from Kentucky, expresses "the hope and belief that before this debate has ended, a mutual and satisfactory common ground will be reached," I join him, but I emphasize the importance of achieving an objective of this sort.

As has happened so often in my years in the Senate, the distinguished Senator from Vermont has rendered a service to all of us, regardless of our position. I hope that in the light of his remarks, we will do a little reevaluating and rethinking. I congratulate him for a fine speech.

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Mr. AIKEN. Let me thank the Senator from Montana for his analysis of the remarks which I have just made. I am willing to confess that the remarks pertaining to the radar installations were put in there for the purpose of pointing out what is possibly the only issue which will require a better understanding among Members of the Senate. This is one thing which will have to be worked out and reconciled before we can get a large vote for the bill, or for the ABM part of the Defense authorization bill, in the Senate.

I believe it is essential, not perhaps so much for the purpose of trading the ABM with the Russians, but indicating to the Russians that the Congress, or at least the Senate, is behind the President in his efforts to achieve a limitation of armaments as well as better relations between the two countries. I think the size of the vote on the amendment which will finally be produced—and I do not think any of the sponsors or introducers of the two amendments already before the Senate can claim perfection—will carry great weight in the disarmament conferences when they take place, which we understand will probably be sometime next month.

I yield now to the Senator from New Hampshire (Mr. McINTYRE). I commend the Senator again for presenting the amendment he has submitted.

Mr. McINTYRE. Mr. President, I thank the Senator for yielding to me. I also want to thank him for the kind and judicious remarks he had made about the amendment I have just offered. It is rewarding indeed to one who has participated in the Armed Services Committee hearings and who has studied this subject, as I am sure every Member of this body has, to have those remarks from the distinguished and great Senator from New England—if I may put him in that category right now. I thank the Senator.

Mr. FULBRIGHT. Mr. President, will the Senator yield?

Mr. AIKEN. I yield.

Mr. FULBRIGHT. Mr. President, I want to join the Senator from Montana in commending the Senator from Vermont for his statement. I think he has analyzed the question extremely well. I think it is very beneficial to this debate and will put it in a perspective which makes it much more understandable to the public at large. I congratulate the Senator for rendering a real service to this debate.

Mr. AIKEN. I thank the Senator.

Mr. GORE. Mr. President, will the Senator yield?

Mr. AIKEN. I yield.

Mr. GORE. The able senior Senator from Vermont has on today, as on many other occasions, rendered a notable service. The spirit of accommodation which he says is needed in the national interest, prevails, in my view, in the Senate.

Perhaps I can be permitted to say that, as chairman of the Disarmament Subcommittee which held extensive hearings on the subject of the ABM, hearing witnesses both pro and con, some 6 weeks ago I called an unpublicized executive session of the subcommittee. So far as I know, there has been no publicity about it. For 3 hours members of the commit-

tee, in an absolutely nonpartisan, bipartisan spirit, discussed the responsibility of Senators in this context.

We came to the conclusion, rightly or wrongly, that deployment of the antiballistic missile system could be every detrimental—might be even disastrous—to the coming conference. In any event, whether we were right or wrong, we reached the conclusion that we could not compromise on deployment; but with the coming of the conference, at which time, we had been assured then, the administration was nearing the end of its negotiating position and would soon indicate a readiness to go to conference, we considered, as I said, the responsibility of Senators in this regard.

Around the table, a spirit of accommodation was unanimously expressed. So with the approval of the group then present—again unanimously—I designated two members to convey to President Nixon the attitude of the members of the subcommittee.

I think that spirit of accommodation still prevails. I think it prevailed when, late last Monday afternoon, the pending bill was made the business of the Senate and debate began. But, because this spirit of accommodation had not met with reciprocity, it became necessary to join issue for a showdown battle, if necessary.

I say, in all sincerity, I doubt if that a showdown battle on this issue would be in the President's interest, would be in the national interest, or that it would be in the interest of the Senate. But, as the Senator from Montana has said, reciprocity, accommodation, and compromise is a two-way street. The able senior Senator from Vermont has now stepped right into the middle of the street and is beckoning in both directions.

I join the Senator from Montana in again expressing appreciation to him and in expressing a willingness to cooperate with him to the extent of full research and development.

Mr. AIKEN. I hope the Senator from Tennessee realizes there is an island in the middle of that street.

Mr. GORE. If we need to build some traffic protection for the Senator, I am willing to do that, too.

Mr. AIKEN. Otherwise, it might be a precarious position.

Mr. President, I yield to the Senator from Missouri.

Mr. SYMINGTON. Mr. President, it has been my privilege to know the distinguished Senator from Vermont for a good many years, and I have served with him on two committees over a period of years.

The more you know the Senator, the more you respect him. It would not be possible not to like him. This afternoon, once again he has shown that he is a great Senator, a wise and able statesman.

Because of the nature of this debate, and its import with respect to the future of these United States, I hope with all my heart that my colleagues on both sides of the aisle will give full respect to the thoughts this wise man has presented us today.

Mr. AIKEN. Mr. President, I would not be human if I did not appreciate the re-

marks of the Senator from Missouri. But let me say, finally, that my fondest hope is that the Members of the Senate will agree upon a modification of the ABM for research and development work as well as enable us to get a very large percentage of the Members of the Senate to vote in favor of it, because the President must have that backing for the upcoming arms talks.

I would not interpret our vote this year to be in support of an ABM deployment next year, the year after, or the year after that, or whenever it might come about, as much as I would an indication that we are behind the President in his efforts to secure better relationships with other countries of the world. I am particularly thinking of Russia with whom continuous competition and arms rivalry is turning out to be a very expensive affair for all of us.

Mr. DOMINICK. Mr. President, I have reviewed the speech, or the "release when given" comments of the Senator from Vermont. I am sorry I was not here when he presented them. I should like to make just a few comments on those, and then comment upon the amendment of the Senator from New Hampshire (Mr. McINTYRE), which I think is particularly important.

The Senator from Vermont, for whom I have great admiration and respect, has said, on his opening page:

It has been obvious for some time that authority for the Defense Department to proceed with the development of an unlimited ABM system could not be approved by this Senate.

Then he goes on to say:

In fact, without modification I would have had to vote no on the proposal.

Mr. President, it is not my understanding that either the committee or the President have advocated the development of an unlimited ABM system. As a matter of fact, it is quite limited, and the President, in his speech endorsing this proposal, very carefully stated that he was reserving the option, during the process of negotiations, to be able to halt whatever was going on at any time that he felt so inclined, and that by going forward now with procurement of certain items, we still retained our option to stop deployment while at the same time we were perfecting the ability of all the components to work together, in the event that they were needed.

Mr. AIKEN. Mr. President, will the Senator yield?

Mr. DOMINICK. I am happy to yield to the Senator from Vermont.

Mr. AIKEN. I simply wanted to observe that I would interpret any authorization for deployment of the missiles to be the ultimate objective, so far as unlimited development went, because once we started deploying them, there would be no end to the procedure. Some of the witnesses have testified that the ABM proposal as written into the bill was a good start, indicating that they expected to go on from there, and on and on, until nobody knows what the end would be.

It might be limited, but from the witnesses I heard, it sounded very much as if they viewed it as a start toward an unlimited program.

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Mr. DOMINICK. With all due respect to the Senator from Vermont, I think he is probably reading more into this than the committee is, at least more than they intended to authorize, and certainly more, I believe, than the President indicated in his speech in support of the proposal.

I shall leave the matter there, because I believe Senators can read the report of the committee on this matter, and read the President's statement, and see that this is a very careful limitation, in order to preserve our option to put an ABM, eventually, in 1974, in two places, and be able to observe the credibility of our deterrent force.

I was certainly happy to see the statement of the distinguished Senator from Vermont that:

Our defenses including our deterrent and retaliatory powers (should) be kept up to date.

I think this is part of the process of doing it, and on that process perhaps we disagree to a certain extent.

Mr. President, I also wish to comment on the amendment offered by the Senator from New Hampshire (Mr. McINTYRE), for whom I also have high regard.

As I said the other day, I think the Senator from New Hampshire and the other members of the Subcommittee on R.D.T. & E. did a very fine job of analysis of the proposed budget. By virtue of the work which he and other members of the committee did, we were able to cut off almost \$1 billion from the proposed budget. Undoubtedly, as we continue in this effort, we can do some more.

I know his reservations about the ABM, and have now reviewed his proposed amendment, and would like to indicate some of the problems that I see in this if—and I say "if" because I hope there will not be any withdrawal from the position we are in—but if we have to take anything at all, there are problems with this amendment which are inherent in the total program of research and development, and on deployment as well.

Mr. MURPHY. Mr. President, will the Senator yield?

Mr. DOMINICK. I yield.

Mr. MURPHY. I should like to request information as to how other Senators could obtain copies of the amendment, so we could more closely follow the colloquy. Have they been printed?

Mr. DOMINICK. I happen to have a copy here, which I assume comes from Senator McINTYRE's office. I will be happy to let the Senator look at it and return it.

Mr. MURPHY. I thank the Senator very much. I now have one here.

Mr. DOMINICK. The problem with the amendment is that it casts a cloud of doubt over the entire Safeguard developmental effort, as I see it, because the body of the authorization bill, as it came from the committee, authorizes certain expenditures for the Safeguard system in general terms; the proposed amendment purports to redefine and limit this authority by an enumeration of activities for which funds may be used. By implication, at least, expenditure for

anything that does not appear on the list of enumerated activities is unauthorized. The list contained and the language used in the amendment appear, on examination, to be so incomplete and ambiguous as to raise serious difficulties with implementation if it were put into effect, and to cast doubt on the authority to conduct certain necessary developmental and preproduction activities.

The following are examples of some of the practical problems of interpretation and ambiguity that would arise under the amendment:

First, S. 2546 in its title states that the authorization of test facilities at Kwajalein is a specific purpose of the bill and this is implemented by section 203. Yet the absence of language in subsection (a) of the amendment specifically authorizing funds to be spent for such facilities and R.D.T. & E. effort on radar and missiles at Kwajalein, coupled with the further limitation in subsection (b) forbidding the installation of "equipment described" in subsection (a) (1)—that is, radars, computers, and related electronic equipment—at "any proposed anti-ballistic-missile site" other than Grand Forks and Malmstrom, could lead to the conclusion that construction and installation of facilities at Kwajalein is unauthorized. These additional facilities at Kwajalein are required for essential system tests with radars and missiles.

Second, likewise, the provision in subsection (b) limiting the installation of "equipment described" to two specified sites may preclude the establishment of essential modifications to training facilities; it may also prohibit the modification of existing command and control facilities and the production and installation of the tactical software control site at Whippany, N.J., which is essential to the developmental testing program.

Third, subsection (a) (2) raises even more serious ambiguities. This is the only portion of the amendment dealing with what is permitted in the way of preproduction and production type activity. It permits "preproduction expenses"—an ambiguous term—but only for missiles. Considering that subsection (a) (1) permits funds to be used only for research, development, testing and evaluation of system components such as radars, computers, and related electronic equipment, but not for production of these items, it is unclear how funds—particularly PEMA funds—can be used to procure these items for the Grand Forks and Malmstrom tactical sites. The amendment is silent with respect to production engineering and preparation for manufacture of nonmissile items such as radars and computers. Absence of such authority would have a serious impact on timely future deployability of the system.

Fourth, there is no specific authorization for funds to be used for development or procurement of necessary and ancillary supporting facilities that are not "related electronic equipment."

Fifth, this amendment could be interpreted as preventing the accomplishment in fiscal year 1970 of survey, advanced engineering, and site selection for phase 2 sites. If this site selection

activity is not carried out in fiscal year 1970 on several of the phase 2 sites, there will be several months of delay in proceeding with these sites if their later deployment is approved.

So the problem, as I see it in general—and I am not trying to be critical of it because as I say it is trying to accomplish some kind of compromise—if we go forward with this type of amendment, we have ambiguities in what we can or cannot do that will no doubt cause a very great delay in future deployment in the event we need it next year. That is the main problem with the Cooper amendment and with the McIntyre amendment.

Mr. McINTYRE. Mr. President, will the Senator yield?

Mr. DOMINICK. I yield.

Mr. McINTYRE. Mr. President, I have listened to the critique of the language of my amendment.

I have had numerous sources of advice as to how to draw this—from legislative counsel, from members of our own staff, members of the Committee on Armed Services.

I assure the Senator that his critical comments made here will be looked at carefully. In the event we find some merit in them, we will try to make the appropriate modifications in the amendment now at the desk.

There should be no doubt concerning my amendment, as it is very clearly spelled out in the supplemental views in the committee report. However, I appreciate—and I am sure the Senator does—how difficult it sometimes is to put down in exact, legal language in an amendment to a bill the very thoughts that we expressly have in mind.

There is always the question of some ambiguity creeping in.

We will take recognition of the Senator's remarks.

Mr. DOMINICK. I fully understand that. That is the reason why I spoke up. I thought that if the Senator wanted to perfect his amendment, it would give him a chance to do so. Second, in all fairness, regardless of the amendment, the Senator is trying to prevent the deployment in fiscal year 1970 of deployable items. I must in all conscience oppose the amendment, since it will do that.

Mr. AIKEN. Mr. President, may I ask the Senator if he has discussed this matter with the White House?

Mr. DOMINICK. I have not been in touch with the White House. However, I have been in touch with other representatives, and I am sure they agree with that.

Mr. COOPER. Mr. President. There is no need to add to the tributes that have been paid to the senior Senator from Vermont. He was asked by us to approach the question before the Senate with commonsense, fairness, and clarity. These are qualities which have always marked the distinguished Senator from Vermont.

I hope that we will follow his suggestion.

I know there was no intention on the part of any of us who opposed last year the deployment of ABM, to confront the then President of the United States—and now with a new President and one

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of my party, there is no desire or pleasure on our part for a confrontation.

We have offered an amendment which would provide to the administration all the money it has asked, but to be used for research, development, testing and evaluation of all the components of the system so there would be no timelag if in the future—next year, before, or even later—it should become evident that the threat which the Secretary of Defense has projected had become a reality.

As the distinguished Senator from Colorado has called attention to the amendment which the Senator from Michigan (Mr. HART) and I offered for ourselves and on behalf of many others who hold the same position, I point out that the amendment is not ambiguous.

Its sponsors decided as a group to provide to the administration all of the money it asked so that it would be enabled in fiscal year 1970 to proceed with research, development, testing, and evaluation and do so in ways that it thought best, but with the option of developing a more effective system than the Safeguard, if one became needed.

We provide, incident to research and development, that the administration could make such procurement as it believed necessary for such testing. As the Secretary of Defense himself stated in his testimony before the House Subcommittee on Appropriations that no part of the system could be deployed as an integrated unit until 1974, or as separate component parts during the coming year, we have not deprived the administration of anything if the amendment should be agreed to, except the political decision of actual deployment at this time.

Our reasoning is, as many have stated, that, approaching the arms talk, it would be better for the administration to go to the talks without commencing the deployment of the weapons, offensive and defensive, which the very negotiations seek to control. It is to determine if the nuclear arms race can be brought under control.

Our amendment is clear. It will be elaborated in view of the statement of my friend, the Senator from Colorado, I again make this explanation for the purpose of our amendment.

Mr. FULBRIGHT. Mr. President, a few moments ago, the distinguished Senator from Mississippi (Mr. STENNIS), the chairman of the Armed Services Committee, made a brief statement. The first paragraph reads as follows:

The printed record released today of the hearings on Intelligence and the ABM before the Senate Foreign Relations Committee has been cited by the Chairman of the Senate Foreign Relations Committee as evidence of the disagreement between Secretary of Defense Laird and Director of the Central Intelligence Agency, Mr. Helms in their assessment of the strategic threat which makes the ABM necessary.

Then later, in the next to the last sentence, it states:

Both Secretary Laird and Mr. Helms have replied and made it clear that there is no disagreement between them as to the strategic threat.

I thought it was necessary to clear up the record, because the transcript of the

hearing held with Mr. Helms and Secretary Laird, which was released today, does not allege that there was any difference with regard to the strategic threat. I want to read the paragraph. There are differences, but not of that character, because I do not think the CIA has made an assessment of that particular matter. I read from page 6 of the hearings which were released today. This is in a letter which I addressed to Mr. Laird based upon his letter and the hearings:

In fact, as the record now stands it leaves the impression that there have been no disagreements within the intelligence community as far as certain recent developments in Soviet weaponry are concerned. I felt that I had no choice but to agree to the deletions requested by the executive branch on the grounds of national security. But the fact of the matter is that there have been disagreements within the intelligence community on such recent developments, although all the testimony given at our June 23 meeting indicating such disagreements has been deleted from the public record.

Now, those disagreements did not relate to the strategic threat. I wish to make it clear that they do relate, however, to other aspects of the matter which were deleted. They were deleted because all of the testimony of Mr. Helms was deleted on the usual grounds of national security. But I have the hearings before me. I would be very pleased to show them to the chairman of the Committee on Armed Services, to illustrate what I mean. There were distinctly differences of view as to certain weapons systems and their characteristics, and this is what was referred to in my letter to Mr. Laird.

I only wanted to make this statement in order to clarify the record. To say that there were no differences on the strategic threat is, in a sense—I am not sure what the right characterization is, whether it is a red herring or not. In any case, that is not what was at issue at all. I assure the Senator that I hold in my hand the document which clearly shows there were differences between the two agencies—that is, between the intelligence community and the Secretary of Defense—with regard to certain weapons systems and things of that nature in arriving at a judgment as to what the intentions are and also what the necessity of the ABM is at this time—such differences, I may say, relating to the ABM and the Russians, and so on. These are differences with which the Senator is familiar. Those are the differences I was discussing.

Mr. STENNIS. Mr. President, I should like to respond to the Senator's comment, if he will yield to me.

The PRESIDING OFFICER. Does the Senator from Arkansas yield to the Senator from Mississippi?

Mr. FULBRIGHT. I yield to the Senator.

Mr. STENNIS. I thank the Senator. In the first place, the opening sentence of the statement I made uses the term "which makes the ABM necessary." It was not my purpose to imply that Mr. Helms testified that the ABM was necessary. The words should have been "which gives rise to the question of whether or not the ABM is necessary." That is a

refinement of language that makes clear what I said—which gave rise to the question of whether or not the ABM is necessary. I was talking about the strategic threat.

Mr. President, it is hardly possible to describe how many things have been said and written about this conflict in the testimony given by Mr. Laird and Mr. Helms. It has been mentioned to me on the Senate floor by Senators who are interested from one point of view and the other.

Finally, in the rush of all these other matters, I made some effort to look at the testimony of both men. It was not convenient to get it, although I was not denied access to it. It was not convenient for me to see it. But the release of the testimony of Mr. Laird and Mr. Helms, with the deletions, gives rise to the question again: Well, what is the conflict between these men?

I anticipated that the best I could by writing each of them a letter and pointing out that the alleged conflicts had been called to my attention many times and that in preparation for this debate I wanted to know the facts. They are responsible men, in responsible positions.

I attached to my brief statement a copy of the letter to Mr. Helms. I will not burden the Senate by reading both of them, except to read the last paragraph:

I would greatly appreciate if you would respond appropriately after consultation with Secretary Laird indicating your agreement or disagreement with any aspects of his response.

I said to Mr. Laird that I wanted to be provided with a statement and—

Whether your definition and evaluation is concurred in by the Central Intelligence Agency, particularly Mr. Richard Helms, Director, and if there is disagreement, to what extent and in what regard.

Those are very pointed questions.

An answer was received from Mr. Laird. Mr. Helms happened to be out of the country, but this matter was communicated to him. It was read to him, and he has sent a reply through General Cushman, and I will put that in the RECORD. General Cushman was Acting Director in the absence of Mr. Helms from the city. He said:

Although Mr. Helms is presently out of town, he has read the text of Secretary Laird's reply. Mr. Helms wishes to assure you that he has no disagreement with the statements in Secretary Laird's letter to you of 8 July concerning the potential Soviet and Chinese Communist strategic capabilities, as seen from the intelligence point of view.

I should like to dwell on that for a moment—strategic capability. That is the capacity and the possibility of what appears to be the course of events and evaluation of what indications arise as to what the plans are for the future; that is, the capability of our adversary as to the strategic threat. That is as far as Mr. Helms' duties go, as the Senator knows. Mr. Helms does not advise whether we need an ABM—never; nor whether we need an F-14 or F-15 or any other weapons. He works, as the Senator well knows, upon the intelligence, the capabilities.

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Mr. Helms is not going any further than that in his duty; and they certify here that there is no disagreement on these matters so far as Mr. Helms' duty goes; and I think that clarifies the situation a great deal.

Now, we can go back and pick up fragments here, there, and yonder about what Mr. Helms thinks about the indications from—we cannot discuss these things too much—but fragments of matters he may know about, or what Mr. Laird thinks about that. I do not think that is so relevant. But Mr. Laird has the duty of enunciating a policy the best he can.

He and the President and others passed on this intelligence. There is where the matter about the ABM comes in.

Mr. SYMINGTON. Mr. President, will the Senator yield?

Mr. FULBRIGHT. I wish to make one comment, and then I shall yield to the Senator from Missouri unless he wishes me to yield to him right now.

Mr. SYMINGTON. No, but I would appreciate it if the Senator would yield to me later.

Mr. FULBRIGHT. I shall.

Mr. SYMINGTON. I thank the Senator.

Mr. FULBRIGHT. First, I wish to emphasize what is said in that last letter in case those who do not read it carefully should miss it. I refer to the letter to Senator STENNIS from General Cushing. I reiterate that the letter says:

Mr. Helms wishes to assure you that he has no disagreement with the statements in Secretary Laird's letter to you of 8 July concerning the potential Soviet and Chinese Communist strategic capabilities.

And I wish to emphasize, "as seen from the intelligence point of view."

Now, coming to the letter of Mr. Laird, he said:

In short, we believe the USSR has the capability of acquiring, by the mid-1970's: some 400 SS-9 ICBMs, multiple independently-targeted re-entry vehicles, SLBMs matching the U.S. POLARIS fleet, ICBM retargeting capability.

This illustrates a point that has been very slippery in this entire matter. I wish to show to the Senator from Mississippi that the committee of which I am a member did not seek this controversy. We were not trying to nitpick. The whole matter of difference arose out of the statement made by the Secretary of Defense in open session before the subcommittee headed by the Senator from Tennessee to the effect that the Soviet Union was going for a first strike capability. Then, he added, for emphasis:

There is no question about that.

This is a very significant statement. This is where the matter started. This did not start with any little meeting in secret between our committee and the Secretary of Defense or the CIA. We were trying to clarify a statement which was extremely provocative, a statement that, if true, and based upon a finding of the intelligence community, should be taken most seriously.

That statement was generally interpreted to mean that the Soviet Union

was preparing for a first strike, which means utter destruction of the United States beyond the possibility for retaliation. I will read his statement. This is from that hearing. This is the Secretary of Defense speaking:

The Chairman has quoted your statement before the committee which was carried on television. But for the sake of my question I would like to repeat it:

"With the large tonnage the Soviets have, they are going for our missiles and they are going for a first strike capability. There is no question about that."

Secretary Laird did it for emphasis. This is what started the whole matter. This raises extremely serious questions about our whole relations with the Soviet Union. If that statement by the Secretary could be taken literally and fully, my goodness, an ABM would be mighty small potatoes compared to that kind of threat. This is what we have been trying to clarify. And that is why we had this meeting; in order to determine what the Secretary meant.

Immediately after Secretary Laird said what I quoted about a first strike, I inquired of the intelligence division of the State Department, and later of the CIA and the Chairman of the U.S. Intelligence Board to this effect. I asked if that Board ever found that the U.S.S.R. was going for a first strike capability. In other words, were they producing weapons or doing anything else which led the intelligence community to make such a finding? They make that annual finding in the fall and then they meet once a week to update whatever their newest intelligence may bring to their attention.

I was assured they had never made such a finding. In other words, this statement of the Secretary of Defense had been made on his own authority without being based on findings of the intelligence community. That is what started this matter. I think it is important that it be clarified.

I believe that in this last hearing, the Senator should read carefully the committee hearing, and especially the questioning of the Senator from Tennessee who pursued this matter at great length. He was chairman of the subcommittee in which this statement was made. I believe the Senator from Mississippi will find there quite a qualification by the Secretary of Defense himself as to what he intended. I do not believe he intended to give the impression that he did give by that statement. I think he has drawn back from that.

That is the only point I wanted to make with respect to the strategic threat or capability. I am not saying and I do not think anybody is saying that given an all-out effort the Russians could not make lots of weapons and we could not make lots of weapons. This proposition is centered around the thought that by having a meeting with them, and the President has committed himself to having a meeting with them, we can control or stop at least this vast acceleration of the arms race. I think we can, and if we understand the situation better and if each side is convinced that the other side is not going to destroy the deterrents,

then I think a negotiated settlement is possible.

I yield to the Senator from Missouri, who wishes to respond.

Mr. STENNIS. Mr. President, if I may, I would like to make a few remarks in response.

Mr. FULBRIGHT. I yield.

Mr. STENNIS. I appreciate the Senator's statement. I am sure he appreciates what I was doing with these letters. I do not know if we have a qualified statement, but I wanted to get something by both of them to put side by side in this debate.

Now, we know, as far as these letters go, there is no difference between them.

Mr. FULBRIGHT. I do not accept the statement that there is no difference between them. There is no difference on that point. I would not want to let it pass that there is no difference.

Let me say to the Senator that I did not wish to have Mr. Helms come and be confronted by the Secretary of Defense. The Secretary of Defense is a powerful political figure on his own. For a long time, he was an influential Member of the House of Representatives. This puts him with a man who can be dismissed tomorrow morning by the President if he does not suit him. I did not want to have the two men together. It was not done at the insistence of the Director of the CIA. I do not like to ask him, "Do you disagree with the Secretary of Defense?" That puts him in the intolerable position of standing up and disagreeing with a man who, in our political system, is far more secure. I did not want to do that in the first place. I think the letter in which he replied is couched very carefully. I certainly hope beyond all things that as a result of these exchanges, the Director of the CIA is not dismissed. I have been afraid of that, or even to mention him in public after I saw what happened to Mr. FitzGerald and others in the bureaucracy when they disagreed. I have been concerned about that and I did not want to expose Mr. Helms to anything of that kind unnecessarily because he should not be.

Mr. STENNIS. On the question of the first strike capability, that rests more in the minds of our adversaries than anywhere else, I think we can talk about it a long time and no one could put his hand on the answer.

I thank the Senator for yielding.

Mr. FULBRIGHT. The Senator inspired me to make a comment.

I asked a great psychiatrist, 2 weeks ago, about the principle of projection, that it is entirely in the mind. What occurred to me was that when one makes a public statement to the effect that someone else is about to do something, it is a common psychological phenomenon that one really is speaking what is in his own mind. Is the Senator familiar with that principle? [Laughter.]

Mr. STENNIS. The Senator is far beyond me in many things, including psychiatry.

Mr. FULBRIGHT. That was Dr. Carl Menninger who said that, not I.

Mr. SYMINGTON. Mr. President, perhaps it is unfortunate that I am the only Senator who listens to the testimony of

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the Secretary of Defense and the Director of the CIA before the Committee on Foreign Relations, the Armed Services Committee, the Subcommittee on Central Intelligence, and the Appropriations Committee. I have listened carefully to all said testimony.

As a result of the appropriations testimony of the distinguished Secretary of Defense, prior to his latest appearance before the Foreign Relations Committee, I came to the conclusion that there was a difference between these two gentlemen, and that the difference was chronological.

Therefore, as the chairman of the Foreign Relations Committee will remember, I called up and stated, in my opinion, both of these gentlemen were sincere, and the difference was a chronological difference.

To make my point, I went over the appropriations testimony of the distinguished Secretary of Defense with the chairman of the Foreign Relations Committee.

We later had that last hearing, and I must say I felt at that time that over 90 percent of any difference was cleared up to the satisfaction of all concerned.

Mr. President, I take this opportunity not only to observe that I have great respect for the integrity and ability of the Secretary of Defense, but also have the same convictions about the Director of the CIA. It has been my experience during the some quarter of a century that I have been in Government, that every time we draw the Central Intelligence Agency into public discussion or debate—and I must say that this time no Member of the Senate was involved—we get ourselves into a situation which is not in the best interests of the security of the United States.

I would hope, above everything else, that this debate does not in anyway hinder the fine work that Mr. Helms is doing. In my opinion, he is the best Director of the CIA ever had.

Mr. FULBRIGHT. I would say that I feel as the Senator does. He is an excellent man. I have always felt that we got the most objective information from him that could be had in our Government.

Mr. GORE. Mr. President, will the Senator from Arkansas yield?

Mr. FULBRIGHT. I yield.

Mr. GORE. Mr. President, one of the crucial points in this whole debate, not only in this debate but in the justification advanced for deployment of the ABM, is the question of Soviet intent to seek to achieve a first-strike capability.

The able chairman will recall that when President Nixon announced to the American people his decision to recommend deployment of the ABM, he placed great emphasis upon the necessity of ABM deployment to preserve the credibility of this country's deterrents.

Mr. FULBRIGHT. That is right.

Mr. GORE. Then when Secretary Laird went before the Armed Services Committee, he made the same point. In fact, it was the principal point. It was the principal reason advanced for the deployment of the ABM weapon system.

Then, when he came before the subcommittee of which I have the honor to be chairman, before an audience of the American people of many millions via television he said, as the chairman has now quoted him:

With their great tonnage, they are going for our missiles, and they are going for a first strike capability.

Then, for emphasis, he added:

There is no question about that.

Does not the Senator recall that the next day the newspapers of the Nation headlined that the Secretary of Defense had said that the Russians were going for a first-strike capability, and, therefore, that ABM's must be deployed?

Mr. FULBRIGHT. That is correct.

Mr. GORE. So, Mr. President, with the American people involved in this issue, this became crucial, crucial in debate, and crucial in the decision. If in fact the National Intelligence Board had reached a conclusion that the Soviets were going for a first-strike capability, which means, in the terminology of the military, the ability to render against this country such a blow that we could not retaliate with unacceptable risks for them, then, Mr. President, ABM's would not be sufficient.

Oh, no. ABM's would not be sufficient, because then we would be facing the threat, if not the intent, of annihilation of this country should the Soviets achieve a first-strike capability, the United States would not then have the power to deter a nuclear war.

Mr. President, as I tried to say time after time on the floor of the Senate, our whole strategy to avoid nuclear war has been postulated on deterrence.

Mr. FULBRIGHT. That is right.

Mr. GORE. We realize that in a nuclear exchange between the United States and Russia, there would be no winners. In fact, Dr. Kistiakowsky expressed the opinion to us that an all-out nuclear exchange would render at least the Northern Hemisphere uninhabitable.

Thus, we are not only talking about a nonvictor as between the United States and Russia, but the world would also lose. All would be lost.

Not only have we postulated our position on deterrence to prevent a nuclear war, so have the Soviets. Now we have reached this balance of terror, when both countries have a second-strike capability and thus the power of deterrence.

I doubt whether many Americans are frightened by the Russian ABM's. Is the Senator from Arkansas? They are not aimed at Little Rock. [Laughter.] In fact, they go only a short distance.

By the same token, I doubt whether the Russians would be very apprehensive about some of our ABM's in Montana and North Dakota which have a range of not more than 500 miles.

I dare say they would be concerned, were they contemplating an attack upon the United States, about the Poseidon missiles in our nuclear submarine fleet; about our intercontinental ballistic missiles; about our missiles on the surface of naval vessels; about the missiles in certain foreign countries near them;

about our tactical missiles in Western Europe under our command, some of which can reach the Soviet Union; or about our intercontinental bombers.

I think they would be concerned about that with which we could retaliate upon their country, and not about an ABM "shoot-'em-down-maybe" short-range defensive capability.

Mr. President, here we are talking about the central issue in this battle. The Secretary of Defense arrogated to himself, it seemed to me, some special responsibility that Senators do not have for the security of their country. He does have a responsibility, but so do we. Before millions of the American people and a Senate committee he said, and I repeat:

They are going for a first strike capability. There is no question about that.

We promptly set about to examine it and found, I say unequivocally—and if there is a secret session, we will show the record—that there has been no finding of the National Intelligence Board to support that conclusion.

The Secretary of Defense has a right to reach any conclusion which he feels justified. I do not question that. But so do Senators.

We found no evidence that the Soviets were going for a first-strike capability; and that was the principal justification given for deploying ABM's.

Mr. President, they have retreated from that. The Secretary of Defense has retreated from that. It is no longer advanced. Now the principal reason given in support of ABM deployment is that the President needs it in order to go to the conference.

In other words, we arm to parley. That has failed many a time in history. But now, fortunately, this afternoon, it seems to me the senior Senator from Vermont has pointed a signal for accommodations. I stand ready, in the hope that such an accommodation can be reached in the national interest, and I say in the interest of the President, and in the interest of the Senate. He advocates continuation of research and development but no deployment. I agree, but it must be only research and test.

Mr. FULBRIGHT. Mr. President, I appreciate very much what the Senator from Montana has said. He said it extremely well, as he always does. He made a great contribution to the hearings and to the clarification of this very point, which I think is now understood.

I agree with what the Senator said about the Senator from Vermont. I think he has pointed a way to a settlement of this question which I hope can be brought about. I hope it will be brought about.

I agree with the Senator that the best way to strengthen the hand of the President in the forthcoming trip—or in the negotiations with the Russians would be a good, solid vote on this matter, which, if you would like, can be called an accommodation. I am not quite sure of the terms in this—an accommodation in the sense I believe the Senator from Ver-

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mont used that phrase. I hope that can be worked out.

Mr. STENNIS. Mr. President—

Mr. FULBRIGHT. Does the Senator want me to yield to him?

Mr. STENNIS. On this one point.

Mr. FULBRIGHT. I yield.

Mr. STENNIS. I think these letters from the men referred to speak for themselves. One word about Mr. Helms. I certainly want to point out, with great force, that, as it seems to me, he is outstanding in his work. I do not have the slightest indication that there is any other sentiment than that toward him or Mr. Laird or anyone else. I have not talked to Mr. Laird about Mr. Helms except in a general way, and I know he has a very high regard for him.

I did not want to leave this discussion in a way that might cause disagreement if something came up.

Mr. FULBRIGHT. I really said what I did as a preventive. If something happened, it would be too late. I wanted to take the opportunity to say in advance that I, certainly, and I believe the Senator from Mississippi shares my view, felt Mr. Helms speaks very forthrightly. I refer not only to this event, but I go back 3 or 4 years, when he used to report his findings. It seemed to me that subsequent events justified his estimates of affairs and supported his findings, particularly in the Vietnam area and others, a great deal more than they did some of the optimistic findings of some members of the Department of Defense. So I already had a considerable prejudice in his favor in the reliability of his estimates.

Mr. STENNIS. I thank the Senator.

Mr. FULBRIGHT. Mr. President, I yield the floor.

Mr. STENNIS. Mr. President, to the extent that I am the floor manager, I do not know of any other Senator who desires to address the Senate this afternoon on the pending measure. There will be debate tomorrow. We have already set the speech of the Senator from Texas (Mr. TOWER), by a special order, for tomorrow, following the morning hour, I believe.

Mr. HART. Mr. President, will the Senator yield?

Mr. STENNIS. I yield.

Mr. HART. Mr. President, I rise to comment on the remarks made a few minutes ago by the Senator from Vermont (Mr. AIKEN). I regret that he is not on the floor, but I am delighted that the Senator from Kentucky (Mr. COOPER) is.

First, may I explain the reason for my absence at the time the Senator from Vermont was speaking. Unfortunately, I was chairing a subcommittee meeting.

The Senator from Vermont was gracious enough, before he made his remarks, to see that I had a copy of them. I have read them. I rise now simply to express delight that the Senator from Vermont counseled the Senate that we are not yet ready to deploy an anti-ballistic-missile system; that we need to move forward in research and testing. What Senator AIKEN counsels us is, I think, the counsel of wisdom, as we hear so often from that magnificent Senator from Vermont.

I would hope that we would recognize the desirability that the testing be of maximum value and utility. You do not get that kind of testing in the middle of the continent of the United States. You get that testing out in the reaches of the Pacific.

Additionally, when you put equipment that relates to an anti-ballistic-missile system in the Pacific and you say you are testing it, there is credibility to it, because that is its only real virtue out there. There you get the opportunity to lob missiles at it, and you can readily identify its weaknesses and react accordingly.

However, I think it would be a mistake for us to assume that we could get that kind of effective test or believability if we placed these devices, and labeled them "test only," at the ABM missile sites themselves in either Montana or the Dakotas.

I understand that our able majority leader, in reacting to the suggestion of the Senator from Vermont, made the point that Kwajalein and Eniwetok will be appropriate and suitable for fully effective tests. We really want to find out where the "bugs" are. We really want to fix that machine up for the day, if it ever comes, when we have to deploy it in fact. That is the test area in which to find out.

We all recognize that the stakes are very high, and we are all devoted to insuring the security of this country. We disagree on occasions as to the means, and indeed as to the definition of security. But I am delighted that Senator AIKEN has spoken as he has against the deployment of an antiballistic-missile system as recommended by the committee and the administration.

Mr. GORE. Mr. President, will the Senator yield?

Mr. HART. I am delighted to yield to the Senator from Tennessee.

Mr. GORE. Is it the view of the Senator from Michigan that the leadtime involved in the emplacement of radar and computer components, as well as other components, is greater than would be the case for missiles which have already been tested, which can be moved into place in a relatively short period?

Mr. HART. It is my understanding that the leadtime is greater.

Mr. GORE. So we could not, in good faith, undertake in the name of research and development the essential and most difficult parts of an ABM system and, with credibility and good conscience, say that this is merely research and development?

Mr. HART. I could not.

I thank the Senator from Mississippi.

MESSAGE FROM THE HOUSE

A message from the House of Representatives by Mr. Bartlett, one of its reading clerks, returned to the Senate, in compliance with its request, the bill (S. 1583) to provide that appointments and promotions in the Post Office Department, including the postal field service, be made on the basis of merit and fitness.

ENROLLED BILL SIGNED

The message announced that the Speaker had affixed his signature to the enrolled bill (H.R. 4153) to authorize appropriations for procurement of vessels and aircraft and construction of shore and offshore establishments for the Coast Guard.

PROPOSAL THAT JULY 21 BE PROCLAIMED AS A NATIONAL DAY OF PRAYER AND THANKSGIVING

Mr. MATHIAS. Mr. President, the spirit of America will be committed on July 21, as our resources have been for 10 years, to the concept of liberating man from a single planet. On that day we shall abolish horizons as the limit of vision and open the opportunity for a future that is literally without limits.

It should be a time to celebrate the personal achievement of the two men who walk the Moon that day and of their brother astronauts and 200 million fellow Americans who walk with them in spirit. It should be a day of prayer that this achievement, which draws upon the knowledge and wisdom and experience of all men everywhere, will bring peace by showing the fruits of man's peaceful labors.

On July 21 we can pray that as man is released from Earth's bonds, he may be relieved of Earth's ancient scourge of war; that as man turns his eyes to the stars, he shall no longer live in the shadow of Cain, who was his brother's killer; that through peace the marvels of God's universe should be unfolded before us.

I am, therefore, by resolution, which I shall propose in the Senate, and by a letter, which I shall send to the President of the United States, suggesting that the 21st of July be proclaimed as a national day of prayer and thanksgiving.

Mr. BYRD of West Virginia. Mr. President, I suggest the absence of a quorum.

The PRESIDING OFFICER. The clerk will call the roll.

The bill clerk proceeded to call the roll.

Mr. KENNEDY. Mr. President, I ask unanimous consent that the order for the quorum call be rescinded.

The PRESIDING OFFICER. Without objection, it is so ordered.

ADJOURNMENT UNTIL 11 A.M.

Mr. KENNEDY. Mr. President, if there be no further business to come before the Senate, I move, in accordance with the previous order, that the Senate stand in adjournment until 11 o'clock tomorrow morning.

The motion was agreed to; and (at 4 o'clock and 45 minutes p.m.) the Senate adjourned until tomorrow, Friday, July 11, 1969, at 11 a.m.

NOMINATIONS

Executive nominations received by the Senate July 10, 1969:

DIPLOMATIC AND FOREIGN SERVICE

Leonard C. Meeker, of New Jersey, to be Ambassador Extraordinary and Plenipoten-

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tiary of the United States of America to Romania.

The following-named person, now a Foreign Service officer of class 2 and a secretary in the diplomatic service, to be also a Consular Officer of the United States of America: William B. Kelly, of Ohio.

For appointment as a Foreign Service officer of class 2, a Consular Officer, and a secretary in the diplomatic service of the United States of America:

John M. Thomas, of Virginia.

Now Foreign Service officers of class 3 and secretaries in the diplomatic service, to be also Consular Officers of the United States of America:

John T. Dreyfuss, of California.

Ronald A. Galduk, of Florida.

For appointment as Foreign Service officers of class 3, Consular Officers, and secretaries in the diplomatic service of the United States of America:

Leo Arel, of Maryland.

Richard Elliot Benedict, of California.

Marvin E. Brenner, of Pennsylvania.

Miss Gloria L. Gaston, of the District of Columbia.

For reappointment in the Foreign Service as a Foreign Service officer of class 4, a Consular Officer, and a secretary in the diplomatic service of the United States of America:

Stanley P. Harris, of Maryland.

For appointment as Foreign Service officers of class 4, Consular Officers, and secretaries in the diplomatic service of the United States of America:

Robert L. Gingles, of Florida.

Herbert G. Haggerty, of New Jersey.

Miss Carol M. Sheehan, of Massachusetts.

For promotion from Foreign Service officers of class 6 to class 5:

A. Edward Elmendorf, of California.

Joseph Edward Lake, of Texas.

For appointment as a Foreign Service officer of class 5, a Consular Officer, and a secretary in the diplomatic service of the United States of America:

Lawrence D. Russell, of Florida.

For promotion from Foreign Service officers of class 7 to class 6:

Charles S. Ahlgren, of Iowa.

David Russell Beall, of Michigan.

John P. Bell, of Virginia.

Charles G. Billo, of New York.

Miss Janina Bonczek, of California.

William G. Crisp, of Virginia.

Vincent J. Farley, of New York.

Leon S. Fuerth, of New York.

Robert A. Gehring, of Connecticut.

Victor S. Gray, Jr., of New York.

James H. Holmes, of Pennsylvania.

William A. Kirby, Jr., of New Jersey.

Arthur L. Kobler, of New Jersey.

James B. Leonard, of Vermont.

Robert A. MacCallum, of Pennsylvania.

John F. Malsto, of Pennsylvania.

Kevin J. McGuire, of New York.

Jonathan C. Menes, of California.

Richard N. Otto, of New York.

Richard R. Peterson, of Illinois.

Kenneth M. Quinn, of Iowa.

Samuel Vick Smith, of Washington.

David H. Stebbing, of the District of Columbia.

Miss Carol K. Stocker, of Illinois.

Keith L. Wauchope, of New York.

Stephen W. Worrel, of Ohio.

Lacy A. Wright, Jr., of Illinois.

John William Zerellis, of California.

For promotion from Foreign Service information officers of class 7 to class 6:

Miss Mary J. Anderson, of Iowa.

Robert Barry Fulton, of Pennsylvania.

Richard J. Gilbert, of New York.

David W. Hess, of Iowa.

David K. Krecke, of Michigan.

George D. Langham, of Arizona.

Jeffrey H. Lite, of Illinois.

Paul E. Paryski, of New York.

Douglas S. Rose, of California.

Daniel Scherr, of New York.

Terry B. Schroeder, of California.

William J. Weinholt, of Wisconsin.

John G. Wilcox, of Michigan.

For promotion from a Foreign Service officer of class 7 to class 6 and to be also a Consular Officer of the United States of America:

Charles L. Daris, of California.

For appointment as Foreign Service officers of class 6, Consular Officers, and secretaries in the diplomatic service of the United States of America:

Harry E. Jones, of Pennsylvania.

Robert B. Lane, of the District of Columbia.

Chester F. Polley, Jr., of Illinois.

For promotion from Foreign Service officers of class 8 to class 7:

John Christopher Grigassy, of Texas.

Arthur J. Hardman, of New York.

Sherman N. Hinson, of Vermont.

E. Stewart Johnston, of California.

John R. Malott, of Illinois.

Scott Huston Ochiltree, of Connecticut.

Peter S. Perényi, of Connecticut.

Miss Judith Rodes, of Texas.

Miss Ernestine H. Sherman, of Oregon.

Robert E. Snyder, of Massachusetts.

Frank J. Spillman, of Hawaii.

Randolph A. Swart, of Maryland.

Miss Xenia G. Vujnovich, of New York.

Matthew P. Ward, Jr., of Pennsylvania.

For promotion from Foreign Service information officers of class 8 to class 7:

L. Michael Haller, of Illinois.

William H. Maurer, Jr., of Pennsylvania.

Miss Joanne A. Rinehart, of Pennsylvania.

For appointment as Foreign Service officers of class 7, Consular Officers, and secretaries in the diplomatic service of the United States of America:

Douglas B. Archard, of Wisconsin.

Bruce Anthony Beardsley, of Nevada.

Robert W. Beckham, of Florida.

Daniel V. Clark, of New Jersey.

Louis Creveling, Jr., of California.

Jeffrey Davidow, of Minnesota.

David Linus Dolan, of Maryland.

James R. Goesser, of Illinois.

George A. Gowen III, of North Carolina.

Mahlon Henderson, of Virginia.

Richard W. Hoover, of Ohio.

Robert F. Hopper, of California.

John David Isaacs, of New York.

Charles Bowman Jacobini, of Illinois.

Ralph R. Johnson, of Washington.

James D. Lee, of Virginia.

D. Thomas Longo, Jr., of the District of Columbia.

Randolph I. Marcus, of New York.

Joseph Hawthorn Melrose, Jr., of Pennsylvania.

John P. Moddero, of Maryland.

David Richard Moran, of Nebraska.

Miss Alynne Joelle Nathanson, of New York.

Michael P. Owens, of Texas.

David A. Fabst, of Washington.

John L. Pitts, of Washington.

Ints M. Silins, of the District of Columbia.

Richard L. Stevens, of Iowa.

Lawrence Palmer Taylor, of Ohio.

Albert A. Thibault, Jr., of Pennsylvania.

Stanislaus R. P. Valerga, of Texas.

Paul H. Wackerbarth, of New Jersey.

George F. Ward, Jr., of New York.

Reed T. Warnick, of Colorado.

David M. Winn, of Texas.

Geoffrey E. Wolfe, of Maryland.

For appointment as Foreign Service information officers of class 7, Consular Officers, and secretaries in the diplomatic service of the United States of America:

Miss Alison Arstht, of Delaware.

Sheldon H. Avenius, Jr., of New York.

Mark A. Glago, of New York.

Edward J. Hinker, of Minnesota.

Edward S. Iftshin, of Florida.

David L. Jamison, of Maryland.

Miss Kathryn L. Koob, of Iowa.

Anthony A. Markullis, of Virginia.

Michael J. Nugent, of Maryland.

James C. Palmer, of Utah.

Miss Cornelia M. Sheahan, of New York.

David P. Wagner, of New York.

John Dvaid Watt, of Texas.

For appointment as Foreign Service officers of class 8, Consular Officers, and secretaries in the diplomatic service of the United States of America:

Paul H. Blakeburn, of New Hampshire.

Miss Ann S. Carroll, of the District of Columbia.

Daniel Chester Cochran, of Illinois.

Miss Susan Jo Crane, of New York.

Jan de Wilde, of Virginia.

John Seabury Ford, of Ohio.

Miss Carolee Helleman, of Nebraska.

Karl K. Jonitz, of Illinois.

Stephen Kindel, of New York.

Frederic William Maerckle, III, of California.

David Jordan Mangan, Jr., of Wisconsin.

Bennet A. Marsh, of New Jersey.

Miss Mary Helen Maughan, of Utah.

David J. Peashock, of Pennsylvania.

William Morris Pollack, of New York.

John F. Schunhoff, of California.

William H. Siefken, of Texas.

Jeffrey R. Siegel, of New Jersey.

Charles B. Smith, Jr., of New York.

Miss Susan J. Walters, of Connecticut.

Franklin Miller Zuttermeister, Jr., of Florida.

For appointment as Foreign Service information officers of class 8, Consular officers, and secretaries in the diplomatic service of the United States of America:

Miss Geneviève N. Cerisoles, of New York.

Miss Ann Jeryl Martin, of Tennessee.

Miss Susan Davis Todd, of Virginia.

Foreign Service reserve officers to be Consular officers of the United States of America:

Ramon Frank Durand, of California.

Miss Margaret Ann Murphy, of California.

Haviland Smith, Jr., of Virginia.

Foreign Service Reserve officers to be Consular officers and secretaries in the diplomatic service of the United States of America:

Ernest C. Black, Jr., of California.

Charles R. Baquet III, of Louisiana.

Gordon H. Bell, of South Dakota.

Brendan A. Burns, Jr., of Florida.

Johnnie Carson, of Illinois.

Royal E. Carter, of California.

Taylor M. Chamberlin, of Virginia.

Thomas A. Clayton, of California.

Philip C. Cohan, of Maryland.

Gordon F. Compton, of New Jersey.

Vytautas A. Dambava, of Virginia.

Miss Ruth A. Davis, of California.

Warren Burton Duerbeck, of Maryland.

Jake M. Dyeis, Jr., of California.

Joseph D. Ellis III, of Virginia.

John K. Eney, of Virginia.

John T. Enkoji, of California.

Joseph L. Fisher, Jr., of New York.

Daniel Flores, of the District of Columbia.

Lyman P. Flynn, of Maryland.

Jack W. Gallagher, of Pennsylvania.

Robert W. Garrity, of Massachusetts.

Comer W. Gilstrap, Jr., of Maryland.

John P. Gower, of Maryland.

William J. Graver, of Maryland.

Harris C. Greene, of Virginia.

Theodore J. Groll, Jr., of Ohio.

Paul B. Henze, of Maryland.

John H. Hicks, of Missouri.

Philip P. Holts, of Maryland.

John W. Isaminger, of West Virginia.

Gerald L. Jacoby, of Virginia.

Wesley D. Johnson, of Minnesota.

Serge Karpovich, of the District of Columbia.

Milton Kovner, of Maryland.

Arthur T. Ladenburg, of Nebraska.

William D. Lieser, of Virginia.

Kent W. Long, of Virginia.

Richard F. Long, of Maryland.

Kenneth Longmyer, of California.

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It is not enough to appropriate more money—though more money is required. Money without motive insures failure. More money without new direction, after consultation with the Indian people, will only bring about failure on a larger scale.

It is not enough to promise Indians self-determination and self-help—though that must be the cornerstone of our Indian policy. That raises the hopes and aspirations of the Indian people. A failure of commitment and the means to carry through on that commitment will only crush those hopes and aspirations more cruelly.

In short, our understanding of the problem must be thorough, our commitment to the solution of the problem must be unwavering, and our promises must be given genuine substance.

Enactment of this resolution is not an end in itself. It will not, of itself, solve the demanding problems of the Indian people. It will not, by itself, insure success in meeting age-old responsibilities and in solving longstanding problems.

But it will create an atmosphere for success.

Among the Indian people, it will create an atmosphere of confidence and trust in Federal programs and in the sincerity of our commitment to the common good. It will erase old fears and suspicions engendered by the termination policies of House Concurrent Resolution 108.

It will create an atmosphere in which dignity and self-respect can be reclaimed by the Indians, with the sure knowledge that they have a major role in determining their own destiny.

It will create an atmosphere in which administrators of Indian affairs can, in close cooperation and consultation with the Indian tribes and people, be flexible and innovative in their approach to the problems.

INDIAN SUPPORT

The resolution has already given hope to the Indian people and encouragement to their aspirations. The hearings which I held on the resolution on March 5 of last year brought forth a unanimous expression of Indian support for the resolution. Domingo Montoya, president of the All-Pueblo Council representing the 19 Pueblo tribes, stated at that time:

When the day comes that this policy—rather than the manual under which it currently functions—becomes the "bible" of the Bureau of Indian Affairs, then I believe the crossroads will have been reached, and the turning point will be here in Indian affairs . . .

Mr. President, I am introducing this resolution and asking for the favorable consideration of the Congress so that we can reach that crossroad. I ask that it be appropriately referred.

The concurrent resolution (S. Con. Res. 34), which reads as follows, was referred to the Committee on Interior and Insular Affairs:

S. CON. RES. 34

Whereas it is recognized by Congress that American Indians and Alaska natives (Esquimos, Indians, and Aleuts) suffer from adverse economic, health, education, and social conditions which prevent them from sharing equally in the great social economic advancements achieved by our Nation; and

Whereas it is the understanding of Congress that periodic reversals in our Govern-

ment's Indian policy throughout the years have ruled against full development of human and economic potential of Indian communities, thus prolonging the aforementioned deplorable conditions; and

Whereas improved and expanded services in Indian communities in recent years through direct Federal Indian service programs and a wide variety of other services have begun accomplishing encouraging breakthroughs; Now, therefore, be it

Resolved by the Senate (the House of Representatives concurring), That it is the sense of the Congress that—

(1) the deplorable conditions of American Indians and Alaska natives can only be alleviated through a sustained, positive, and dynamic Indian policy with the necessary constructive programs and services directed to the governing bodies of these groups for application in their respective communities, offering self-determination and self-help features for the people involved; and that our Government's concern for its Indian citizens be formalized in a new national policy so that the beneficial effects may be continued until the day when the Nation's moral and legal obligations to its first citizens—the American Indian—are fulfilled.

(2) modern day needs of Indian people are no longer responsive to the programs and services of the two major Federal Indian service agencies alone (the Bureau of Indian Affairs and the Division of Indian Health), but the complete solution of Indian problems will require new and innovative services for the full development of Indian and Alaska native people and their communities, and that the National Council on Indian Opportunity created by Executive Order numbered 11399, because of the representation on the Council of the Secretary of the several Departments concerned with the welfare of the Indian people and of the representation of the Indian leaders and because of the responsibility of the Council, under the chairmanship of the Vice President of the United States, for coordination of efforts of the Executive branch in Indian affairs, should be charged with the important responsibility of coordinating the wide range of Federal, State, and local resources.

(3) Indian and Alaska native governing bodies should be recognized as having the full authority to determine the extent and manner of utilizing all available resources for their communities.

(4) American Indian and Alaska native property will be protected; that Indian culture and identity will be respected; that the necessary technical guidance and assistance will be given to insure future economic independence; that continued efforts will be directed to maximum development of natural resources; that inadequate and substandard housing and sanitation will be corrected; that a comprehensive health program incorporating and assuring curative and preventive physical and mental health will be further developed for Indian and Alaska natives; and that a long-term general, vocational, technical, and professional education program will be encouraged and developed for both old and young American Indians and Alaska natives so that they may share fully in our society;

(5) that the National Council on Indian Opportunity should periodically review all the activities of the Bureau of Indian Affairs and all other agencies of the Federal Government concerned with Indian welfare to assure Congress of maximum utilization of Federal, State, and local resources for Indian and Alaska native well-being; and that the National Council on Indian Opportunity should submit an annual report with necessary legislative recommendations to Congress to indicate the manner in which the intent of this resolution is being carried out; and

(6) American Indian and Alaska native communities should be given the freedom and encouragement to develop their maximum potential; and that Congress will sup-

port a policy of developing the necessary programs and services to bring Indians and Alaska natives to a desirable social and economic level of full participating citizens.

The resolution, presented by Mr. McGovern, is as follows:

RESOLUTION

Whereas, the current alleged policy of our government enunciated in House Concurrent Resolution 108 is a policy for the eventual termination of Indian tribes and reservations and serves as an obstacle to the development of our tribes and reservations; and

Whereas, Senate Concurrent Resolution 11 in the 90th Congress, if enacted, would encourage the development of tribal reservations and assist the various tribes in achieving greater parity with the rest of the people of the United States.

Whereas, this Resolution died in the last session of the 90th Congress and is due for re-introduction again.

Now, therefore, be it resolved, that the National Congress of American Indians in Convention assembled September 24-27, 1968, hereby strongly supports Senate Concurrent Resolution 11, and urges that it be enacted at the earliest possible time.

Now, therefore, be it further resolved, that the Executive Council of the National Congress of American Indians, assembled in Session at Washington, D.C., on January 21-23, 1969, support the said Senate Concurrent Resolution 11 and urges that it be enacted at the earliest possible time.

Adopted by the Executive Council of the National Congress of American Indians, assembled in Session at Washington, D.C., on January 21-23, 1969.

REV. WENDELL CHINO,

President, National Congress of American Indians,

MR. ROBERT JIM,

Chairman, Resolutions Committee, NCAI.

Attest:

MR. BENNY ATENCIO,

Recording Secretary, National Congress of American Indians.

ADDITIONAL COSPONSOR OF A CONCURRENT RESOLUTION

S. CON. RES. 24

Mr. MURPHY. Mr. President, I ask unanimous consent that, at its next printing, the name of the Senator from Alaska (Mr. STEVENS) be added as a cosponsor of the resolution (S. Con. Res. 24) to establish a gerontology center in California.

The PRESIDING OFFICER. Without objection, it is so ordered.

ENROLLED BILL PRESENTED

The Secretary of the Senate reported that on today, July 10, 1969, he presented to the President of the United States the enrolled bill (S. 1647) to authorize the release of 100,000 short tons of lead from the national stockpile and the supplemental stockpile.

AUTHORIZATION OF APPROPRIATIONS FOR FISCAL YEAR 1970 FOR MILITARY PROCUREMENT, RESEARCH AND DEVELOPMENT, AND FOR THE CONSTRUCTION OF MISSILE TEST FACILITIES AT KWAJALEIN MISSILE RANGE, AND RESERVE COMPONENT STRENGTH—AMENDMENTS

AMENDMENT NO. 69

Mr. MCINTYRE submitted amendments, intended to be proposed by him,

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to the bill (S. 2546) to authorize appropriations during the fiscal year 1970 for the procurement of aircraft, missiles, vessels, and tracked combat vehicles, and research, development, test, and evaluation for the Armed Forces, and to authorize the construction of test facilities at Kwajalein Missile Range, and to prescribe the authorized personnel strength of the Selected Reserve of each Reserve component of the Armed Forces, and for other purposes, which were ordered to lie on the table and to be printed.

(The remarks of Mr. McINTYRE when he submitted the amendments appear later in the RECORD under the appropriate heading.)

NOTICE OF HEARINGS ON TRENDS IN LONG-TERM CARE

Mr. MOSS. Mr. President, as chairman of the Subcommittee on Long-Term Care, Special Committee on Aging, I wish to announce that the subcommittee will begin hearings on July 30 dealing with the subject of Trends in Long-Term Care. Testimony will begin in room 3110, New Senate Office Building, at 10 a.m.

Our overall objective is to explore many subjects related to quality and availability of care in nursing homes and other long-term care facilities. The subcommittee will also seek information and opinions related to a new set of Department of Health, Education, and Welfare standards promulgated for skilled nursing homes under medicare.

I ask unanimous consent to have inserted at this point a recent statement I made to discuss the Health, Education, and Welfare standards and other matters to be discussed at the hearing.

There being no objection, the statement was ordered to be printed in the RECORD, as follows:

The basic fault in the regulations recently approved by Secretary Robert H. Finch for skilled nursing homes is that, in the vital area of nursing services, they fail to be responsive to the statute they purport to implement. The regulations on nursing service contain nothing that was not required by HEW policy before the new law was enacted.

A part of the Moss amendment to the Social Security Amendments of 1967 calls for "adequate and properly supervised nursing services . . . all hours of each day and all days of each week." The Department's obligation was to set out in regulations what constitutes "adequate nursing services" and what is required for them to be "properly supervised," and to do so in terms that State agencies could apply in surveying and approving nursing homes.

In fact, they put off for a full year the need to maintain standards which are in effect now.

The new regulations provide that, by July 1, 1970, licensed practical nurses in charge of nursing activities on all shifts must be qualified by graduation from a state-approved school of practical nursing or have background equivalent to such training.

But until then, nurses in charge on other than the day-shift may be licensed practical nurses "waivered" by a state licensing agency.

Recognizing the significance of this relaxa-

tion of standards for a year, HEW's announcement emphasizes that "any state that is not meeting this standard by December 31, 1969, must inform the Secretary of Health, Education, and Welfare of its plans for doing so."

The Department also notes that the newly published standards match those in the handbook of public assistance administration that regulated services until January 1 of this year, with the exception of the waiver granted for the employment of nurses who are not qualified by formal training.

We are left, therefore, with regulations that say, in effect, that a single, untrained practical nurse on duty in a home with 200 or 300 patients or more constitutes "properly supervised nursing services" on the afternoon and night shifts.

It is also questionable whether the provision for what HEW calls "background equivalent to such training," will in fact provide properly trained supervisory personnel. This language permits a state licensing authority to determine that an individual has "background considered to be equivalent" to graduation from a state-approved school of practical nursing. I fear this may mean serious state-to-state differences in supervisory quality.

Much is said about the necessity to hold down standards because of shortages of skilled nursing homes and of nurses. This is known as being "realistic." Granted there are areas in which there are no facilities meeting acceptable standards.

But the problem is not solved but only obscured by calling facilities skilled nursing homes when they are not.

We will be realistic when we stop labeling facilities as skilled nursing homes when we know they are not, stop paying public funds for services which are not being delivered but we tell ourselves they are, stop telling ourselves we are serving patients by placing them in institutions that may not be appropriate for their needs.

Until we begin to be "realistic in these terms, patients will suffer and public money will be wasted. With more than \$1 billion every year of Federal tax collections being spent on nursing homes, it is the duty of Congress and of HEW to see to it that the patients who must use nursing homes receive the quality of care being purchased.

Because of the importance of the issues raised by the regulations, I am going to begin hearings on July 30 on the subject of "Trends on Long-Term Care." I had expected to begin those hearings later in the year, but it has become obvious that the Subcommittee on Long-Term Care of the U.S. Senate Special Committee on Aging cannot very well ignore a current crisis while it considers future trends.

Accordingly, I will ask witnesses on July 30 to comment on the regulations. I believe their testimony will provide useful information that should be considered before the final decision is made on the regulations. I will be especially interested in comments from the American Nursing Home Association.

For the overall Subcommittee study—which will take several months to complete, I will also seek testimony on such matters as: new techniques to improve care and to emphasize rehabilitation, advanced building methods to reduce costs and provide more attractive and functional surroundings, the place of the long-term care institution in the development of comprehensive health care facilities for communities and regions, the need for trained professional and other staff, the effects of the development of "chain" facilities, methods of keeping costs to a minimum, and improvements in Federal programs related to nursing home construction or operation.

ADDRESS BY SENATOR TYDINGS BEFORE WASHINGTON COLLEGE ALUMNI BREAKFAST MEETING

Mr. KENNEDY. Mr. President, the Senator from Maryland (Mr. TYDINGS) made an excellent speech on student unrest before the Washington College alumni breakfast meeting last May 31. The Senator showed deep insight and sensitivity in his discussion of the frustration which is leading many moderate young people into the camp of confrontation politics. Senator TYDINGS warns us that it will be our generation and not that of our children which will be to blame if students bent on reform have no alternative to violence. I ask unanimous consent that the speech be printed in the RECORD.

There being no objection, the address was ordered to be printed in the RECORD, as follows:

ADDRESS BY SENATOR TYDINGS

Student unrest is a subject which increasingly has bewildered and distressed the American people. Our brightest and best educated youth profoundly trouble us.

They express a disenchantment with the values and quality of American life; despair over the operation of many of our traditional institutions; futility about the prospects for change.

A few succumb to the blandishment to "turn on, tune in, and drop out," and disappear into the drug subcultures of San Francisco and New York.

However, a much larger number carry their grievances to the universities and colleges. Campuses across the country are astir with protest and demonstrations—demonstrations which in the past year have erupted into violent confrontations with civil authorities.

Many have responded simply by condemning and castigating these students. Few have taken the time to seek out the causes of their alienation and discontent, the reasons for their protest and dissent.

It is this latter course that I wish to explore with you this morning. For I am convinced that unless we—as the parents of these students and as the present custodians of this society—acquire the understanding to bridge the generation gap, our future and that of our children is imperiled.

Our efforts to understand the current restiveness on our campuses must begin with a fundamental distinction: We must not confuse the small minority who would employ anti-democratic means to achieve societal change with the great majority of students who seek reform within a democratic framework.

For the former labor under the dangerous misconception that totalitarian means can successfully hasten the realization of democratic objectives. They fail to recognize the bitterly learned lesson of the twentieth century: That democracy is a process. Violate it as a means and you lose it—whatever your objectives.

Therefore, those who denounce freedom of speech, the will of the majority, and non-violent negotiation as outmoded obstacles to change must be stopped. On this there can be no question: those who hold themselves above the law must be dealt with firmly and fairly under the law.

Violence and coercion cannot be tolerated. The survival of democracy permits no alternatives.

However, there remains the other group—the overwhelming majority of students who accept the democratic process but reject much of what they see in America. More often than not the best informed and most

about sixty members, half representing public agencies and half from the private sector. The work that it is doing is innovative and action oriented and in just eighteen months we have made radical improvements in the criminal justice system. I mention it today only to let you know that we have knowledge and experience in New York City that has been developed, not in a laboratory but rather in a city that is perhaps more heavily involved in all kinds of crime than any other. I know that we have already shared this information with some cities. Mayor Lindsay has asked me to tell you that when and if your city is ready to move ahead in this area our city will make whatever knowledge we have available to you.

Today our country is grievously afflicted by a problem which daily grows larger. This affects our businesses. But far more important, it affects the quality of life in America. It engenders fear, distrust, lack of faith in government. It is not a good climate for business; it is not a good climate for living.

If we are to change this situation, all of us will have to get involved. You, as business leaders are in the vanguard of every important social effort in the country; you will have to take leadership roles in this field, too.

Our nation has grown great and strong, not because we relied solely on government, but because of the determination, the skill, and the courage of our private citizens. Now we must use the same qualities and apply them in safeguarding what we have built. This is why I urge you to get involved in responsible efforts to control crime—to make this a peaceful and safe and just society.

RECESS

Mr. KENNEDY. Mr. President, I ask unanimous consent that the Senate stand in recess subject to call of the Chair, but not later than 1 p.m.

The PRESIDING OFFICER. Without objection, it is so ordered.

Thereupon, (at 12 o'clock and 12 minutes p.m.) the Senate took a recess subject to the call of the Chair.

At 1 o'clock p.m., the Senate reassembled, when called to order by the Presiding Officer (Mr. GOLDWATER in the chair).

AUTHORIZATION OF APPROPRIATION FOR FISCAL YEAR 1970 FOR MILITARY PROCUREMENT, RESEARCH AND DEVELOPMENT, AND FOR THE CONSTRUCTION OF MISSILE TEST FACILITIES AT KWAJALEIN MISSILE RANGE, AND RESERVE COMPONENT STRENGTH

The PRESIDING OFFICER. The Chair lays before the Senate the unfinished business, which will be stated by title.

The LEGISLATIVE CLERK. A bill (S. 2546) to authorize appropriations during the fiscal year 1970 for procurement of aircraft, missiles, naval vessels, and tracked combat vehicles, and research, development, test, and evaluation for the Armed Forces, and to authorize the construction of test facilities at Kwajalein Missile Range, and to prescribe the authorized personnel strength of the Selected Reserve of each reserve component of the Armed Forces, and for other purposes.

The Senate resumed the consideration of the bill.

The PRESIDING OFFICER. Under the previous order, the Chair recognizes the Senator from Maine.

Mr. MANSFIELD. Mr. President, will the Senator yield, without losing her right to the floor?

Mrs. SMITH. I yield.

Mr. MANSFIELD. Mr. President, I suggest the absence of a quorum.

The PRESIDING OFFICER. The clerk will call the roll.

The assistant legislative clerk proceeded to call the roll.

Mr. MANSFIELD. Mr. President, I ask unanimous consent that the order for the quorum call be rescinded.

The PRESIDING OFFICER (Mr. EAGLETON in the chair). Without objection, it is so ordered.

Mrs. SMITH. Mr. President, I speak in favor of this bill and I commend the distinguished chairman of the Armed Services Committee for his able and comprehensive presentation. Senator STENNIS has stated well the actions of the Armed Services Committee which devoted so many weeks to the consideration of this important legislation.

The authorization for the procurement of major weapons, research and development, and reserve strength is a matter of significant importance this year and I urge Senate passage.

In speaking in favor of this legislation I speak in the interests of our national security. At a time when it has become fashionable to question, challenge, and defy defense spending I urge a word of caution to those who would emasculate our Nation's defense posture.

In pressing for passage of this bill I am not unmindful of the many ills that plague the Nation. I am keenly aware of our economic and fiscal problems and the need to match the Federal budget against a selective list of national priorities.

There are no instant solutions to our perplexing domestic problems and by the same token there are no instant solutions to countering the threat in a troubled world. I ask the Members to consider my remarks in the light of those realities in which we live, the actual world we are experiencing today and not the utopia that we would all like to see.

I recommend that in the deliberation of this bill extreme care and thought be given to the complexities of modern arms production. Also I ask that the members examine well the need to provide the time necessary for development of modern weaponry.

The provisioning of adequate aircraft, missiles, ships and other major items is far more complicated than authorizing and appropriating. The modern arsenal of today and more particularly that of the next decade require extensive and painstaking investigation. The lead time for deployment of these modern arms has multiplied many fold. The range of uncertainties in fabrication to insure reliability will not be lessened by postponement and incremental funding.

The high defense costs are repugnant to many Americans just as they are to me. But this is another fact of life that is no less real and I prefer to pay the price and avoid gambling with our security.

In my 29 years of congressional service I have strongly supported our nation-

al research and development programs and I will continue to do so. I did not favor cuts in research which were made in the Armed Services Committee.

The strategic advantage long held by the United States begins to disappear in 1969. Certainly on the rapid rate to achieve parity by the Soviets the balance may dip in the early 1970's. Until now we have maintained a viable military deterrent. I attribute this considerable achievement to our research and development effort.

In urging passage of this measure I caution those who would cut or curtail our strategic offensive capability. There has been much criticism of what was done wrong. I do not condone misfeasance, nonfeasance or malfeasance. But lest they lose sight of our destination, those desperate-minded critics should stop and pause for a reassessment. Heaping scorn on the Pentagon and making our uniformed personnel the scapegoats for our national and international ills represents the cynicism of those very elements that threaten our property, our institutions, and our lives. This critical chorus does little to enhance public confidence and does much to obscure the realities of 1969.

Mr. President, for the foreseeable future a strong military posture remains absolutely essential to our national survival. The recommendations of the Armed Services Committee on the offensive weapons of the future were decided upon only after a most searching examination of the threat and the alternatives. To delay or delete the aircraft and naval vessels contained in the bill is to settle for obsolescence. Cuts or deferrals in these areas is tantamount to acceptance of mediocrity.

Everyone must know the avowed goal of the Kremlin and Peking masters and we all know that the United States is the only nation that has denied them the attainment of their objective. Since we have accepted the challenge of leadership in this conflict of ideologies I, for one, will not support a policy of diminishing returns. I cannot in good conscience support a reduction of our offensive capability and a relinquishment of our technical superiority.

Mr. President, most assuredly it is a costly process but our cherished freedoms were not purchased at the bargain counter. Those who oppose us have always had a very high esteem for our offensive strategic forces. I strongly urge that we meet these needs now if we are to fulfill our national aspirations. I think America is equal to the task. Mr. President, I urge passage of this legislation.

In closing, I want to say a few words in defense of the muchly maligned military officers of our Nation. They are currently the favorite whipping boy of critics who have shared neither their responsibilities, experiences, sacrifices, nor risks.

Today they are the No. 1 targets just as the State Departments careerists were in the early 1950's when varying numbers of State Department personnel were accused of being card-carrying Communists.

In 1950 I spoke in defense of the State Department personnel who were being

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in our streets" are overworked phrases in our present-day vocabulary. Americans are bombarded daily with news articles and speeches warning and alerting them, but little is offered in the way of constructive solutions.

Mr. Richard L. Gelb, president of Bristol-Myers Co., in a speech April 28, 1969, before the annual meeting of the U.S. Chamber of Commerce, took a positive and constructive stance on the facts of crime. He outlined an approach needed from businessmen of this country to meet the challenge of reducing crime.

Industry as a whole should heed Mr. Gelb's call for support and, more important, involvement, in responsible crime control and correction. Their degree of participation will determine the quality of our society.

I ask unanimous consent that the text of Mr. Gelb's remarks be printed in the RECORD.

There being no objection, the speech was ordered to be printed in the RECORD, as follows:

CRIME: A BUSINESSMAN'S CHALLENGE
(By Richard L. Gelb)

I have very mixed feelings as I stand here before you today. On the one hand, I am rather overwhelmed at the honor of your invitation; on the other, I am saddened by the fact that this first luncheon meeting should have to be devoted to the problem of crime in our nation. Five years ago most of us were basically unaware of the impact of crime. Today you are not only aware of it but you want to do something about it. Across the country the amber light has finally changed—the signal is now green—we are ready to move against crime and against the breakdown of law and order. President Nixon signalled his continuing concern on April 28 in his message to Congress. The people through the ballot box and through the polls have already signalled their concern, and I am quite sure that the Attorney General will give you some very clear signals shortly.

How we may help is a more difficult question and before attempting any answer, I would like to make several brief observations concerning the special interest of business in the crime picture of our nation.

Today, for perhaps the first time, American business is facing up to the reality that crime is not just something in the movies or on TV, but rather, it is a fact of life which vitally affects American business in several ways.

Take costs—high crime costs in high taxes—our crime control system now costs more than four billion dollars a year. That figure is equal to roughly 5 per cent of all American business profits in 1968. High crime rates cost people higher prices—all of you are aware of the impact organized crime has on any business which it controls. For the first time the public is becoming equally aware of the problem. Crime reduces our market. Fear of crime causes people to stay at home. One study in the Crime Commission Report indicated that 43 per cent of the people in some areas of this country stay off the streets after dark. Crime inhibits business expansion. A company moves out of a city not because it wants to but because its women employees are afraid to walk the streets at night. Crime can mean the difference between a profit or a loss. The Firemen's Fund Insurance Company stated that 30 per cent of all business failures was due to theft by the employees of those companies. Finally and most important, the businessman personally, as a citizen, deplores crime. He often lives and usually works

in the city. What does it avail him—or anyone in fact—to build a career and an income if he must live in fear of becoming a crime victim. Money is no good if you live in a jungle.

Less than two years ago, I was grateful for the opportunity to present a businessman's view of crime and law enforcement to our nation's top police officials.

I urged these leaders to call upon their counterparts in business, to adopt their techniques and practices where needed and invoke the might, power and influence of business in this common effort.

Today I say to you that the time has come for us as citizens and particularly as businessmen, to take measures to defend against crime. What we must do is take part in an effective organized control strategy against crime. This is the only way to create an impact. It is not just a case of new devices, or more policing, or larger jails. The entire criminal justice system needs a strengthening which it cannot achieve without our full support and participation.

As with any new endeavor it is difficult to know how to begin and specifically what to do. In this regard I would like to draw on my experience as a Trustee of the National Council on Crime and Delinquency in presenting what I believe are effective action suggestions—things that you can actually do and thereby know that the results of your actions will be felt—particularly with the desirable multiplier effect resulting from action in almost every community in America which is represented in this room. Each such community must invoke an additional multiplier by using the leverage of the organizations in which you are active in order to spread the word. You are the men and women who will motivate the activities of your Chambers of Commerce, Church Groups, Rotary, School Boards, Planning Boards and other civic organizations.

1. The businessman can begin this effort right at home in his plant or place of business. Most of us never think of the possible consequences of having a seemingly innocuous employee taking bets at work. Many of us would be shocked to think it exists. Some of us are apt to be permissive about what seems to be just a little gambling. But "on premises" gambling can lead to trouble and those who are familiar with even the rudiments of organized crime will be able to prophesize the probable results of such activities.

Organized crime is not limited to gambling. Next comes loan sharking. Some employees who bet go broke and inevitably seek to borrow money. The mob knows this and has a ready lender who not only has been waiting to lend the money but is also waiting to exert the pressure that follows non-payment. What happens next is limited only by the imagination.

Good inside information can lead to hijacking, extortion or successful payroll stick-ups. It is difficult to defend yourself against crime's fifth column—the enemy within your own ranks—and you are inviting him in when you have criminal activity, especially gambling, taking place on your premises.

2. As businessmen and respected members of the community you can exert political power. Help prevent the election of politicians who look the other way when it comes to illegal gambling or other criminal activities.

If we are going to do this job of fighting crime, we must get rid of corruption in government at all levels as a starter.

3. The businessman can use his financial strength as a lever to fight crime. For example, a large corporation was planning to move into a California City. So was organized crime. The corporation had warned city officials and business leaders "if the mob comes in, we stay out." The community kept the mob out.

Before going into a city determine if it is

in the clutches of organized crime. Is the criminal justice system a good one? You will have a big stake in that community and these questions are every bit as important as whether or not there is a good school system, good transportation or an adequate labor supply.

4. As businessmen, we can make our weight felt when local governmental budgets are drawn up to make sure that the criminal justice system gets its share. Alone, but more effectively through the Chamber or other business groups, we can press for appropriations to do something about poorly paid police, understaffed criminal courts and ineffective correctional programs. A sound criminal justice system is as important to your city as any other governmental service.

5. Businessmen can help gear their trade associations to become a stronger anti-crime force. Although trade associations and the Chamber cannot and should not get into the crime business, they can encourage and stimulate programs and seminars to educate and draw the blueprints for action with regard to the other points about which we are speaking.

6. The businessman can become a valuable resource for law enforcement agencies. Such help is offered to almost every other branch of government. The knowledge we have, and which we have so often given to other branches of government, of sound management and administrative principles should be made available to our own local law enforcement agencies.

7. You can shape crime control legislation. Your influence with legislators at each level can make a difference. A lack of such interest and contact by you shows that you really don't care.

8. As businessmen we can help provide opportunities for offenders so they are not forced on to the treadmill of crime. On his own, a businessman can employ released offenders. He can permit work-release programs to operate in his plant. He can urge others to endorse and adopt such programs.

9. The businessman can encourage his friends and associates to undertake crime control projects.

In your fight against crime, not only must you get involved, but you must get others involved. The National Council on Crime and Delinquency has compiled a list of fifty citizen action projects which show individual citizens how to effectively engage in combating crime and delinquency in their communities.

Let's sum up the nine ways you can actively fight crime:

1. Clean house.
2. Use your political power.
3. Use your financial strength.
4. Support a better criminal justice system.
5. Get your business and civic organizations involved.
6. Make yourself available to law enforcement agencies.
7. Support anti-crime legislation.
8. Support new ideas.
9. Get your associates, your employees, your friends and your family involved.

One final word on what you and your community can do and should do. It stems from this recommendation of the President's Crime Commission dated March, 1967 and I quote, "... all of the city's activities against crime should be planned together, by a single body. The police, the courts, the correctional system and the non-criminal agencies of the community must plan their actions against crime jointly if they are to make real headway."

In response to that suggestion in New York City that same month Mayor Lindsay created the Criminal Justice Coordinating Council to act as a single planning body for crime control measures and for the reform of the administration of criminal justice in New York City. The Council has

smeared from this immunity-cloaked Senate Chamber with tactics of half-truths, guilt-by-association, trial by accusation, and other techniques against which those smeared had no adequate way in which to defend themselves and prove their innocence.

Recently I have read some commentaries concluding that our country was returning to those days of the smears. I think we have already returned and just as I defended the smeared State Department personnel nearly two decades ago, now I want to defend the castigated military personnel of today.

Why are they being attacked? The answer to this question is very simple. Many want to find a scapegoat for the long, drawn-out, and unpopular Vietnam war. They have selected the military to be the scapegoat. They seek to blame the Vietnam war on the military. They seek to place the military in the role of the devil and of evil men who have no concern for the very critical, urgent and desperate domestic problems here at home.

How quickly we forget the military after they have successfully defended our Nation. But in this case, the most amazing aspect of the vitriolic attacks on the military stemming from weariness and concern about the Vietnam war is the failure to do the honest thing and recognize that this has not been a war of their choosing nor of their direction.

They did not make the decisions to intervene in Vietnam. Those decisions were made by their civilian bosses. They did not make the decisions to expand, intensify and escalate the war. Those decisions were made by their civilian bosses.

They did not make the decisions to observe sanctuaries from which the enemy could regroup and resupply to attack again—and even from which the enemy could shoot. Their civilian bosses made those decisions.

It was not the military who misled the public with such irresponsible optimistic statements that the boys would be back home from Vietnam by Christmas 3 or 4 years ago. It was not the military that was so tragically wrong in such estimates about ending the war. It was their civilian bosses who were so tragically wrong in evaluation and estimates of the enemy. It was their civilian bosses who made the unjustified optimistic predictions that ultimately undermined public confidence in the credibility of our Government.

Make no mistake about it, the military not only did not make the decisions, but their advice was repeatedly rejected and scorned and deprecated. Make no mistake about it, the military was derogated by their civilian bosses and subjected to open contempt by the decisionmaking "whiz kids."

Now, attempts are being made to make the military the scapegoats for the disastrous decisions made by their civilian bosses through the elite, but woefully inexperienced "whiz kids."

Make no mistake about it, the military has only been following the orders of the civilian bosses. Make no mistake about it, the military has not been formulating strategy and tactics as in past wars. In-

stead the strategy, and even the battlefield tactics, have been devised by their civilian bosses.

Make no mistake about it, the mistakes that have been made are the mistakes of the civilian bosses rather than the military.

Yet, the pattern has been always to credit the civilian bosses with any successes and to blame the military for any failures. This has even extended to the most recent withdrawal proposal advocated by former Secretary of Defense Clifford.

For actually the proposal advanced by Mr. Clifford is really a basic plan that General Westmoreland proposed some time ago but for which he has been given no credit.

Mr. President, we are all weary and tired and frustrated with the Vietnam war. But in that weariness, discouragement, and frustration, I plead that all of us strive for greater perspective. I plead that instead of making the military a whipping boy for decisions, policies, and actions of its civilian bosses that we all take a good hard look at ourselves and ask if we have any responsibility for what has happened.

I see no more justification for the intense campaign against the military now than for the intense campaign against the State Department personnel back in the early 1950's.

Mr. STENNIS. Mr. President, will the distinguished Senator from Maine yield?

Mrs. SMITH. I am happy to yield to the Senator from Mississippi.

Mr. STENNIS. I want especially to thank the Senator from Maine for her long contribution to the problems and work of our committee and particularly with reference to the bill. We began working on it in January, giving it a great deal of time from then until now. The Senator from Maine is always constructive in her approaches and in her remarks, and is always frank in her counsel and is always well informed. That means a great deal. She deserves special credit. The committee is indebted to her. I am even more indebted to her as the committee chairman.

I commend the Senator from Maine for a very fine, pointed speech which sums up the needs for our security and the proper approach, I think, toward reaching sound decisions on the items to which she refers.

I am pleased, too, that she made the remarks she did about our professional military men. I hold no special brief for them. I am not connected with them in any personal way. I admire them greatly for the hard decisions they make and the heavy responsibilities they often carry. I am proud to be a part of a country that can afford such men.

I include in these remarks the fine young men who have been fighting in Vietnam. This country has never been represented on the battlefield by a finer group of young Americans.

I shall have something more to say about personnel later, but at this time I want especially to commend the distinguished Senator from Maine once more, and thank her for her very fine, unselfish work.

Mrs. SMITH. Mr. President, I want to express my deep appreciation to the distinguished chairman and our able colleague. It has been a very great privilege to work with him. I have a good teacher in him.

Mr. HOLLAND. Mr. President, will the distinguished Senator from Maine yield?

Mrs. SMITH. I am happy to yield to the Senator from Florida.

Mr. HOLLAND. I should like to say to the distinguished Senator from Maine that I, too, am happy to have heard that portion of her speech which I was able to be present to hear. Her speech was fine, inspiring, and uplifting.

It should remind us of some of the things we need to recall. One of them is with respect to the limitation of our objective in the Vietnam war, that the military certainly did not make that decision. To them it was an almost unknown thing to have their objective so limited. It was our own national policy in foreign matters, the decision of our leaders in the field of foreign affairs from the President right on down who were responsible for that decision. I think we should always remember that.

We here in the Senate have a particular reason to remember that the passage—almost unanimously—of the Gulf of Tonkin resolution was an assumption of our responsibility in the matter, which we should never forget. It certainly was not the act of the Armed Forces.

I appreciate so much the speech of the distinguished Senator from Maine. As always, we find in her expressions of conscience—the conscience of a gentle but firm New Englander—an uplifting experience for all of us.

Mrs. SMITH. Mr. President, I deeply appreciate the very generous words of my able colleague and friend from Florida.

Mr. MURPHY. Mr. President, will the distinguished Senator from Maine yield?

Mrs. SMITH. I am happy to yield to the Senator from California.

Mr. MURPHY. Mr. President, I should like to congratulate the distinguished ranking minority member of the committee for having carefully and clearly delineated a condition that all of us should be conscious of at all times but which, unfortunately, in the complexities of our society today, we sometimes tend to forget.

Sometimes, when things happen which we like, the honor goes to the wrong place.

Sometimes, in matters with which we are not too well pleased, the blame is put in the wrong place.

I can think of no one more capable of explaining this complex problem in clearer terms than the distinguished Senator from Maine has just done.

I think her speech is timely. It is important, and I should like again to congratulate most heartily my distinguished colleague.

Let me say one other thing, that as a new member of the committee involved in this particular bill, it has been one of the most gratifying experiences of my life to serve under the distinguished chairman, and under the distinguished

ranking minority member. It has been the finest exhibition of the committee system in action. I give most of the credit to the two leaders, the Senator from Mississippi (Mr. STENNIS) and the Senator from Maine (Mrs. SMITH).

Again, I thank her very much for her fine presentation and associate myself with her remarks.

Mrs. SMITH. Mr. President, I want to thank my good friend and able colleague from California for his kind words. It has been a very great privilege to have had seven colleagues on my side of the table present most of the time, and always present at the hearings that were held. The senior Senator from California has made an invaluable contribution to the work of the committee.

Mr. BROOKE. Mr. President, will the distinguished Senator from Maine yield?

Mrs. SMITH. I am happy to yield to the Senator from Massachusetts.

Mr. BROOKE. Mr. President, I take this opportunity, on the occasion of the speech of our distinguished ranking minority member on the Armed Services Committee, to commend the distinguished Senator from Mississippi, the Honorable JOHN STENNIS, our chairman, and Senator MARGARET CHASE SMITH, from Maine, our distinguished ranking minority member on the Armed Services Committee.

They have conducted the hearings in a most fair and impartial manner at all times. They have given every member of the committee an opportunity to voice his opinion. They have given every member an opportunity to serve on important subcommittees at great sacrifice, particularly to the distinguished ranking minority member of the Armed Services Committee, Mrs. SMITH.

I certainly want to commend them and to say at this time, that as a new member of that committee, it has been a great privilege to work with them. At all times, they have displayed the best kind of leadership qualities of any chairman or ranking member, I am sure, of any committee in the Senate. And they have done this in spite of the voluminous work they have had put before that committee.

I certainly want to associate myself with the words spoken by Senator SMITH so far as the armed services are concerned. I think what she said needed to be said. I think the Nation should know those are the facts. If there is criticism, the criticism should not be directed to the professional members of the armed services, because in our form of government it is the civilian branch of the Government which makes the ultimate policymaking decisions. We want to keep it that way. We certainly do not want at any time to use the military as a scapegoat for our mistakes or as a target for our mistakes.

So I associate myself with those statements, and I commend the Senator from Maine for bringing them before the Senate and the Nation. I commend her for the entire statement. I say to her and to the Senator from Mississippi (Mr. STENNIS) that I am honored to have the opportunity to serve with them on this important committee.

Mrs. SMITH. I am grateful to my able colleague from the State of Massachusetts. It has been a pleasure to have had him on the committee and to have had the benefit of his wise and respected opinions. I am grateful to him.

Mr. GORE. Mr. President, will the Senator yield?

Mrs. SMITH. I yield.

Mr. GORE. Mr. President, the fine compliments that I have just heard rendered in favor of the distinguished senior Senator from Maine recall the occasions when I had the pleasure of hearing the distinguished Senator from Maine when she was then an honorable Congresswoman from Maine. To my colleagues who have been making these eloquent statements let me say that they have had a privilege which I have enjoyed since the time when the senior Senator from Maine and I were Members of the other body. I share in the fine sentiments expressed with respect to her speech and her service.

I rose to ask the distinguished and charming Senator from Maine to yield for the purpose of addressing some thoughts with respect to a sentiment or view she has expressed in her speech, which I have followed word by word in its entirety. The Senator expressed support and interest in the necessity of preserving and having a viable deterrent. I wish to endorse fully her views in that regard and to associate myself with those views.

In this nuclear age, in this era in which great nations have the power to obliterate each other, and to destroy civilization in the Northern Hemisphere, there can be no victor in a nuclear war. In an all-out exchange between the United States and Russia, they would lose, we would lose, the world would lose, all would be lost. So in such a tragic and dangerous situation, the only practical and viable defense strategy—peace strategy—is, as the Senator, in my view, has said, to preserve a viable deterrent, a deterrent which will prevent the Soviets, or any other nuclear power that might sometime achieve such a power of destruction, from initiating a nuclear war against us.

I think the able senior Senator from Maine will agree with the senior Senator from Tennessee that the United States has no intention of initiating a nuclear attack against the Soviet Union. So the way to prevent a nuclear war, and thus preserve peace and freedom and life for all the American people, is to prevent a nuclear war by deterrence. Deterrence, in my view, as I expressed in the Senate late one evening this week, is of two parts: First, the power to retaliate with the destruction of a nation that might level a nuclear attack upon us; and, second, the will to use that power in retaliation if we should be so attacked.

That being the case, I go then to another part of the Senator's speech, if she will be so kind and tolerant as to yield to me a moment further. That is to preserve the offensive power necessary for such a viable deterrence.

Mr. President, though I do not now wish to draw the able Senator into a discussion of the ABM issue, just let me say

that the proposed ABM weapons system does not fit into this strategy. The ABM would be purely a defensive mechanism, designed to shoot down—maybe—some incoming nuclear missiles. This is not something that, in my opinion, would deter the Soviets from initiating a war. It would seem reasonable to conclude that the Soviets would not be likely to be any more apprehensive about U.S. ABM weapons than we are now apprehensive of Soviet ABM's. What they fear, or would fear in event an attack upon us should be under consideration, is the power of retaliation against them. This, then, makes very pertinent the remarks of the very able Senator, in the opinion of the senior Senator from Tennessee, of the necessity of preserving a viable deterrence.

In this age of danger and technology and capability of total destruction, it is necessary, in my view, as the Senator from Maine has said, to keep a viable deterrent. I think we have it. I think the Soviets know we have the power to retaliate with their destruction. We want to be sure also that they believe we have the will to do so.

I thank the able Senator for yielding to me.

Mrs. SMITH. I want to thank the distinguished Senator from Tennessee for his observations. I especially appreciate such generous words from one with whom I have worked for so many years, in both the House and the Senate and for whom I have such high regard.

Mr. GOLDWATER. Mr. President, will the Senator yield?

Mrs. SMITH. I yield.

Mr. GOLDWATER. Mr. President, we who live in the West have always been charmed by the people from New England. They go away back into our early history. We often wonder what it is about these people from the Northeast part of our country that makes them so acceptable to all of us. It is something past their charm, attractiveness, and gentleness. Today we have an example of what I have been trying to ascertain, which for a long time I have suspected was true. It is the honesty of these people, as expressed and exemplified by the distinguished senior Senator from Maine (Mrs. SMITH), their ability to say what they want to say, and say it quickly. I think to have such a speech as this made in such a short time is a fine example of that quality.

I compliment the Senator from Maine, who is my leader on the minority side of the committee, for what she has said here today, and for the very persuasive and precise way in which she has said it. I associate myself particularly with that portion of her remarks which pertains to the protection of the men in uniform.

It has been my pleasure to have served with the Senator from Maine on this committee in the years before I took a little leave, and it is my pleasure to serve with her once again. I look forward to enjoying that pleasure for years to come; and I thank the Senator for her very able and honest remarks.

Mrs. SMITH. Mr. President, I wish to express my deep appreciation to my able and distinguished colleague from Ari-

zona. Words such as his, coming from one who knows people well, mean a great deal to me. We are very pleased to have him back on the committee. He has been of tremendous help to us.

Mr. MANSFIELD. Mr President, will the Senator yield?

Mrs. SMITH. I am happy to yield.

Mr. MANSFIELD. Mr. President, I wish to join my colleagues in what they have said about the speech just made by the distinguished Senator from Maine. I noted that she recalled, indirectly, her declaration of conscience made almost two decades ago, and tied it in with an attempt which is seemingly being made by some elements in this country today against the military.

One thing about the Senator from Maine is that she has always been candid. She wastes few words, which I think is a New England characteristic, and always comes to the point. I want her to know that, as one who served as a seaman second class in the Navy, a private in the Army, and a private first class in the Marine Corps, I agree with her remarks about the attacks being made against the military at this time.

I do think that the military has made plenty of mistakes; but I believe, as the Senator has indicated she believes, that what they have been doing is carrying out policy and assignments laid down, in large part, by their civilian superiors, not only in the executive branch, but also in the Senate and the House of Representatives because we, in the Congress, did not exercise enough supervision, authority, and responsibility. Because of that, I believe that Members of this body should not find too much fault with what the military has done on the basis of what their superiors in the civilian areas of this Government have suggested, requested, or ordered.

When a man puts on a uniform, he undertakes a most serious obligation; and to the best of my knowledge, our men, regardless of their rank, have done a good job in looking after the interests of this Nation, in carrying out their responsibilities and obligations as good citizens; and if they have made mistakes in the awarding of contracts and in carrying out various kinds of assignments, that is to be expected, as mistakes will be made by all elements in our population.

I join the Senator in emphasizing the fact that the mistakes made by the military, policywise and otherwise, have in many instances been the fault of the executive branch and of Congress; and if we are going to lay around the blame, it is my very strong belief that we should look first at the mote in our own eye, look at the policies laid down by the executive branch, and share the blame as equitably as possible, and not place upon the military the blame for all the ills which beset this country.

Vietnam is bad enough. It is worse than bad enough; it is a tragedy. We should never have become involved there. But the military did not get us involved except incidentally, because the responsibility and the authority did not lie with them.

I would hope that this mania which seems to be affecting some portions of

our population as far as the military is concerned would realine itself, stabilize itself, and look at the facts for what they are, not seeking scapegoats, but rather cures for illnesses which may exist, and which may be cured or may in the future be prevented.

I again thank the distinguished author of the declaration of conscience for the fine speech she has made today, and for giving all of us the benefit of her remarks and recommendations.

Mrs. SMITH. Mr. President, it has been a very great privilege to have served with the majority leader in both the House of Representatives and the Senate. As always, he is most understanding and most kind; and even though we are on opposite sides of the aisle, I have always found we are much in agreement on very many issues. I thank the Senator very kindly.

Mr. THURMOND. Mr. President, it is a pleasure for me to commend Senator MARGARET CHASE SMITH for her fine statement today in defense of the military. I endorse her views, and I congratulate the distinguished Senator from Maine for speaking up for our men and women in uniform.

Mr. President, I plan to make a substantial statement at the first opportunity in support of our Armed Forces. My colleagues and I are as concerned as other Americans about our defense costs. We are equally concerned about our military who are responsible for our Nation's security. It is time to put the blame where it belongs, and I intend to do so in my address in the very near future.

Mr. McINTYRE. Mr. President, it was my privilege to chair the special Subcommittee on Research and Development appointed to help the full Armed Services Committee in its consideration of the Department of Defense authorization bill.

I want to compliment the chairman of the Armed Services Committee, the Senator from Mississippi (Mr. STENNIS). He has, as we all know, assumed the chairmanship of this great committee after the years of distinguished leadership given it by the senior Senator from Georgia (Mr. RUSSELL).

The Senator from Mississippi quickly proved his capacity for carrying out this difficult task by vigorously moving ahead to deal with the problems presented by the authorization bill we are now considering. He made great strides in opening up sources of information to Members which were not available to them in other than highly classified form in previous years. He appointed subcommittees to probe the key parts of this proposed legislation. He conducted a long series of hearings, including those on ABM, so that the members of the committee, and, where possible, the public, could be educated in the important facts and figures concerning our defense posture. And he was able to bring to the Senate an authorization bill that insures the security and defense of the Nation while still effecting needed economies.

I want to say a word of praise, too, for the distinguished Senator from Maine (Mrs. SMITH), who is the ranking Republican on the committee. Her knowledge and understanding have always

been of enormous assistance to all who serve on the committee.

It was my pleasure to work with the Senator from Ohio (Mr. YOUNG); the Senator from Virginia (Mr. BYRD); the Senator from California (Mr. MURPHY); the Senator from Massachusetts (Mr. BROOKE); and Everette L. Harper, of the Armed Services Committee staff, in carrying out this assignment.

The subcommittee was asked to study the research, development, testing, and evaluation budget and to make judgments on funding levels for research and exploratory projects, social and behavioral sciences research, and systems calling for sharp increases in research and evaluation funding for fiscal year 1970 and R. & D. and developmental increases in the future.

The committee found here, Mr. President, a great deal of work that needs to be done in the future. But I wish to stress right here that the subcommittee took a long, strong, and hard look at these various aspects.

To be completely fair, time was working against us. We took a look, as I state later on in my remarks, at about 20 projects of significance. We spent about 40 hours in briefings in depth, questioning the governmental witnesses, Government scientists and experts; and I do not deny the fact that at many times it was a labyrinth that caused at least this Senator to find many stairs and avenues leading into passages where it was difficult to discern the light. But we did look, and we looked hard.

Specifically, the subcommittee was called upon to examine the request for authority to obligate about \$8 billion for defense R.D.T. & E.

This figure represented more than a third of the authorization bill as originally submitted by Secretary Laird.

Needless to say, Mr. President, this budget presented the subcommittee with a most demanding challenge.

It is difficult enough to make judgments on the procurement program, but in that category, programs are reasonably well defined, costs can be estimated with some degree of hopeful certainty, and the military requirement for the weapon system under consideration has been validated. Detailed studies have been completed on available alternatives, and the Defense Department has recommended specific courses of action.

This is not the case with research and development, for research and development operates at the very frontiers of technological uncertainty.

I want the Senate to know that it was thoroughly impressed upon the committee as we started work that the one great advantage our country has in our competition with the Soviet Union is that we have a strong technological base. Nothing we are doing here or recommending undermines that, in my opinion.

The burden of responsibility borne by this subcommittee is attested to by the fact that, operating in the absence of firm decision factors, judgments had to be made on today's research and development efforts which would determine the limits of our deployment options 8, 10, or 12 years from now.

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The budget for R.D.T. & E. covers a spectrum of responsibility ranging from the maintenance of a technological base to the deployment of weapon systems, and beyond that to the updating and modernization of existing weapons systems.

To make valid judgments on those considerations, the subcommittee attempted to follow the guidelines set down by the Director of Defense Research and Engineering—but within the broader framework of simultaneously considering other national priorities.

Dr. Foster's guidelines were:

Consider the total range of uncertainties and make decisions on programs to provide all reasonable hedges against possible new needs or changes in threat. We continuously make a series of calculations starting with intelligence to compare our own estimated leadtime with the worst case for the deployment leadtime of a potential enemy. We carry out R. & D. to provide all reasonable options. We deploy either when there is a clear, actual or imminent threat or when we cannot insure against our uncertainty with only a R. & D. program.

Dr. Foster admits that this is a low-risk policy. By low-risk policy, I mean low risk to the people and the peace and security of the American people. Dr. Foster explains it in these words:

Where threat information is adequate, we invest in amounts sufficient to meet the threat. Where information is inadequate and uncertainty high, we run some risks of overinvestment to insure that our capability will be adequate, that it is sure to fulfill our strategic objectives.

Now the low-risk policy is a logical policy if viewed from the traditional disposition to err on the side of strength when it comes to matters of national security. It is also a very expensive policy.

But all of us in this distinguished body are aware of the tremendous drain on our national resources made by today's truly staggering defense requirements, and none of us is unaware of the crying domestic needs unmet because of defense demands.

The matter of national priorities had to be considered, and it was the subcommittee's consensus that the low-risk policy afforded some cushion for realistic budget cuts that would not jeopardize security.

Still another factor helped determine the operating procedures of the subcommittee. That factor was time.

The subcommittee was created on February 28, 1969. At the outset it was determined that it would be impractical, because of time limitations, to make a detailed examination of the thousands of line items in the budget.

Instead, the subcommittee elected to test the integrity of the decisionmaking process. We looked for soft spots in the R.D.T. & E. program. We looked for interservice duplication or parallel developments leading toward the same or similar weapon systems as an end product. We examined the operational requirements for which some costly systems were being developed with a view toward measuring the ultimate cost against the priority. We found that a number of systems proposed for development did not

stand up to a searching analysis in these terms.

It was the conclusion of our subcommittee that in a number of cases—even if a system were successfully developed at a cost of hundreds of millions of dollars—it would not enjoy a high enough priority for development to compete for funds with other costly and vitally needed operational systems.

Where the subcommittee was able clearly to identify such doubtful programs we recommended reduction, stretchout, or outright cancellation of the project.

In the course of its considerations, the subcommittee devoted more than 40 hours to 19 briefings from the committee staff, the Director of Defense Research and Engineering and members of his staff, the CIA, and military departments. Subcommittee members also heard testimony before the full committee by officials of the Department of Defense and the military departments and closely examined the witnesses on research and development activities.

I am sure the other members of the subcommittee share my appreciation of the generous allocation of time for such questioning that was afforded us by the chairman of the full committee.

The Senate knows what it means when the chairman of a committee gives a generous allocation of time for presentation. The chairman of the full committee, the distinguished Senator from Mississippi (Mr. STENNIS) afforded us a generous time allocation.

The material the subcommittee obtained from its briefings, from the full committee hearings, and from reports provided by the Defense Department and other sources led to certain conclusions.

First, it was apparent that there were a number of programs where R.D.T. & E. efforts in one service did indeed parallel those under development in another service. In these areas the subcommittee determined that stretchout or an outright elimination of R. & D. would not seriously hamper the defense mission.

Examples would be the Army and Navy heavy-lift helicopter programs and the radar programs of the Air Force AWACS and Navy E2C projects. The subcommittee recommended that the Army heavy-lift helicopter program, \$15 million, and the Navy E2C radar program, \$66 million, be deleted, a total reduction of \$81 million.

Let me give you the essence of our reasoning for these cancellations:

We did not believe the Army heavy-lift helicopter development was justified, because of the enormous estimated cost per copy—\$15 million each—of this machine we felt it was extremely doubtful that it could compete with other high priority deployments for the heavy funding required in the mid-1970's.

The HLH appears to be designed to operate on a permissive battlefield, yet it is not at all clear that this would be the environment the Army would face in the mid-1970's.

This is one of the things I want to stress. As defense scientists and military planners see these threats coming over

the horizon, they develop a counter, and at first the budget just creeps along a million or two; and then suddenly the decisional process is at work, and we find the \$1, \$2, or \$3 million suddenly escalating to \$15 or \$20 million. Then, if you look down the road far enough and say, "Well, when the time comes that you want to deploy this weapon, what is it going to cost?" sometimes those figures are staggering. This is one of the things the subcommittee learned.

While only \$15 million is required for R. & D. funding for the HLH in fiscal year 1970, the funding requirements would escalate sharply within the next few years. This year appeared to be the decision point at which maximum savings could be achieved.

Moreover, it was felt that a large portion of the Army's requirements for heavy-lift helicopters can be met by its existing flying crane, or if necessary, by procurement of Navy heavy-lift helicopter equipment.

On the other hand, it was felt that the Navy/Marine requirement for battlefield recovery of disabled helicopters in Vietnam was necessary and could be met by a much less ambitious Navy heavy-lift helicopter program that could be completed and deployed on a much more timely schedule.

The Navy was requesting this year \$5 million in R.D.T. & E. for its heavy-lift helicopter. The Army was requesting \$15 million. Even though the word "commonality" is sort of out of place right now, the subcommittee said, "Why isn't there a common design here?" We necessarily found, as we talked to the Navy and Army experts, that there were different specifications, different areas of accomplishment, in which they were interested. But the Navy helicopter was within the state of the art. The Army heavy-lift helicopter was beyond the state of the art. It looked toward a deployment date of the mid-1970's. So the subcommittee, as I have said, canceled the Army heavy-lift helicopter, but recommended going forward with the Navy heavy-lift helicopter. This can be accomplished with a total R. & D. effort of \$60 million, and initial operational capability could be achieved much earlier than the Army development.

Let me say a word about the heavy-lift helicopter, the crane, in Vietnam today. This helicopter has a remarkable record of recovery of downed helicopters. It has done outstanding work. It does not have such a good record when you talk about recovery of downed airplanes, but the subcommittee had no difficulty in going along with the Navy's request. But, after a great deal of thought, we did decide that the Army heavy-lift helicopter should be canceled.

In selecting a vehicle for its airborne warning and control system, the Air Force evaluated the Navy's E2C aircraft as a possible candidate. But this aircraft fell short on the three crucial counts: It is a short range aircraft having an endurance of something over 4 hours. It is too small to mount the radar which can give automated discrimination capability of low-flying targets over land. And even if its range were extended by refueling,

it could not carry a large enough crew to provide extended time on station.

So the subcommittee was looking at another situation where we felt that we had found a parallel development. This was the case of the radars in the airborne warning system and the E2C Navy system.

The subcommittee felt that a more productive way of looking at consolidation of the Air Force and Navy requirements would follow this line:

In almost any future operation involving the employment of tactical air strikes, it would be feasible to employ a long-range Air Force AWACS. It is difficult to conceive of any extensive operation of this kind that would not employ both Navy aircraft and the strike aircraft of the Tactical Air Command. Therefore, it should be both feasible and desirable to have these strikes controlled by a single control authority.

Granted the validity of this premise, then it might be possible to reduce the Navy requirement for carrier-based AWACS to the single mission of controlling interceptors protecting the fleet against aircraft attack. If relieved of the strike control mission, the remaining mission could be performed with fewer E2A's per carrier and the 52 aircraft in the inventory probably could handle this situation so far as the Navy is concerned.

What we said, in essence, was this: Here is the Navy trying to develop a sophisticated radar. Here is the Air Force working along the same line. It is the conclusion of the subcommittee that the Air Force should go ahead, AWACS should go ahead. The Navy's attempt to develop control for tactical air strikes, flying off the carrier, could in almost every situation be handled by the Air Force project, rather than two—Navy and Air Force—thus eliminating the need for \$66 million additional with the E-2C program.

The second conclusion reached by the subcommittee involved a number of programs of doubtful operational priority.

Some of these programs would have taken only a small share of the R. & D. budget in fiscal year 1970, but would have amounted to hundreds of millions or billions of dollars in ultimate R. & D., procurement, and deployment costs.

The subcommittee felt that such programs would have little probability of deployment when competing with other urgently needed weapon systems in the late 1970's.

In this category, examples would include the undersea long-range missile system, surface-to-air missile, sea-based ballistic missile intercept system—the Navy's concept of ABM—and the manned orbiting laboratory program. The last named program was on the subcommittee's list for recommended deletion before the administration's announcement that it had been dropped.

The subcommittee recommended that each of these programs be deleted for a total net reduction of \$373 million.

The subcommittee's reasoning concerning the Sam-D, surface-to-air missile development, should be of interest to the Senate.

Sam-D is a followon surface-to-air missile program to replace the Nike-

Hercules and Hawk systems and give the Army a capability for defending against high performance aircraft and short-range ballistic missiles. It is a battlefield system. It is designed as a mobile system for deployment with field armies, as well as for deployment in the United States as a replacement for Hercules missiles in the bomber defense system.

Fiscal year 1969 development costs on Sam-D were \$60 million, and the fiscal year 1970 budget is \$75 million. Total estimated R. & D. cost for the system is \$682 million. The total deployment cost of Sam-D is estimated in 1969 at nearly \$2½ billion for deployment in the mid-1970's.

There is little doubt that surface-to-air missile are an effective complement to other forms of air defense, and little doubt that the Sam-D would represent a substantial improvement over either the Hawk or Hercules systems. It would permit the engagement of short-range ballistic missiles as well as high performance aircraft and would make possible the simultaneous intercept of a number of targets.

But in considering the \$75 million item in the fiscal year 1970 budget, the subcommittee was impressed with the tremendous cost of providing what is really a rather limited defensive capability. And this raised the question of whether Sam-D has a sufficient standing in the Army's priority system to give it a reasonable chance for deployment even if it is successfully developed.

Do I make myself clear? As things go down the pipeline of R. & D. suddenly decisions are made. Suddenly the question arises: Should we go into deployment? Should we install 49 batteries of the Sam-D missile system? At that time, it has to compete with other items under consideration in the budget. So this was a controlling factor with the subcommittee. We did not think it had a reasonable chance for deployment if successfully developed.

It will be competing for procurement funding in the mid-1970's with a number of high cost systems, several of which are designed to provide protection against air attack. It is fairly obvious that we will not be able to deploy all of these systems against the single facet of the threat.

The subcommittee questioned the need for substituting Sam-D for Hercules in the bomber defense of the United States. This year a number of operational Hercules batteries were phased out on the grounds that the current bomber threat does not justify continued expenditures of O. & M. funds for their operation.

The subcommittee also questioned the threat for which Sam-D is designed. Is a tactical Sam system needed, to defend against high performance aircraft? The Vietnam war has demonstrated that even high performance aircraft deliver their strikes at subsonic speeds. Assuming the threat of short-range surface-to-surface missiles, is it feasible to deploy Sam systems in sufficient numbers effectively to defend against short-range ballistic missiles? Such missiles presumably would be fairly cheap and could be launched in quantities sufficient to saturate Sam defenses.

The subcommittee thus concluded that in the present climate of austerity it would be unrealistic to expect to allocate sufficient resources to the Sam-D requirement to develop and produce this weapon system.

The third major conclusion by the subcommittee involved a number of programs of such highly charged emotional content in the eyes of many as to call for particularly diligent scrutiny.

In instances where such programs were deemed to have low priority and, as symbols of controversy, threatened more needed R. & D. programs, the subcommittee recommended their reduction.

Such programs included chemical and biological warfare, behavioral, and social sciences, and Federal contract research centers or "think tanks."

These, then, are some of the highlights, but in sum the subcommittee recommended R.D.T. & E. budget cuts totaling about \$1.3 billion. The full committee, after considering these recommendations, ordered reductions totaling \$1,042,900,000.

The full committee, and its other subcommittees, recommended the deletion of the following additional R. & D., line items: AH-56A Cheyenne helicopter, RF-111 aircraft, light intra-theater transport, tactical AGMC-3 missile, a 75-percent reduction in the airborne warning and control system, and a cut of \$14.9 million in the Maine battle tank program.

Other items relating to the development of chemical and biological weapons were recommended for deletion, and activities relating to military science, aircraft, ordnance and combat vehicles, and missile programs were recommended for substantial reductions.

The R. & D. budget request for the three services and the Defense agencies was thus reduced by 12.7 percent.

This \$1,042,900,000 reduction from the \$8.227 billion asked by Secretary of Defense Laird is the largest reduction in an R.D.T. & E. budget made by the Armed Services Committee in recent years. I am hopeful this will indicate to all of my colleagues in the Senate that a conscientious, sincere, and diligent effort to effect judicious cost reduction has been made by the subcommittee and the full committee.

I would like to take this opportunity to compliment Chairman STENNIS on his decision to appoint three subcommittees to screen the authorization budget, to thank the chairman and the members of the Subcommittee on Bomber Defense and the Subcommittee on Tactical Air for their help in scrutinizing the R.D.T. & E. items in their respective categories, and to express my personal appreciation for the work done by the members of the subcommittee and their staff members, and the full committee staff, with particular reference to Colonel Harper.

The future work of the Subcommittee on Research and Development would be greatly facilitated by additional staff help, for it is the subcommittee's intention to broaden and deepen its examination of the authorization budget next year in order to make even more detailed recommendations to the full committee.

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One major effort by the subcommittee will be to encourage greater comparability among the various budget presentations brought to the Congress by the Department of Defense.

Elimination of confusing differences between sets of figures relating to individual programs will do much to help Members better identify the exact amounts of expenditures being requested.

This is not to imply that the various figures are incorrect or deliberately confusing. In most instances, the differences are attributable to variations in computing objectives. Nevertheless, comparability for clarity of understanding must be a primary goal in next year's authorization consideration.

In a time when the proper ordering of national priorities is of such importance, it is crucial that cost and potential impact of every program under consideration be clearly understood and carefully weighed.

It was very difficult at times to follow some of these items through the labyrinth of the budget lines.

Mr. FULBRIGHT. Mr. President, will the Senator yield?

Mr. McINTYRE. I am nearly finished with my remarks and then I will be glad to yield to the Senator.

Within the limits of time and available staff, the Subcommittee on Research and Development tried to do that this year, Mr. President.

In conclusion, let me emphasize that the reductions in the authorization recommended by the subcommittee and the full Armed Services Committee should not imply lack of faith in the research and development activities of the Department of Defense.

Our Defense leaders, our scientists and other experts, through R. & D. efforts over the years have developed world leadership in technology. All Americans can take pride in the contributions made by these dedicated men. We are continuing to maintain that technological advantage. In these uncertain times we cannot afford to lose it.

It is my view, shared by those who have studied these reductions along with me, that we have not recommended reductions which would reduce our technological advantage. We believe that these reductions can be absorbed while retaining our leadership base in technology.

Mr. STENNIS. Mr. President, will the Senator yield?

The PRESIDING OFFICER (Mr. GRAVEL in the chair). Does the Senator yield?

Mr. McINTYRE. I yield.

Mr. STENNIS. I wish to highly commend this subcommittee for the very fine job they did and to commend especially the chairman for his unrelenting efforts and very effective leadership in this vast field. It is a large undertaking to have \$8 billion worth of a multitude of research projects thrown into one's lap with a very few weeks before the hearings are to start on the major bill. One can hardly imagine the variety of problems that are involved in connection with research and development. The subcommittee has done an amazing amount of work and they have accom-

plished a great deal in their work. I thank them especially. I think this is the forerunner of even greater work that they will be able to do in future assignments in this field.

I commend the Senator as well as thank him. I believe his work there will prove to be sound, solid, and lasting.

Mr. McINTYRE. I thank the Senator. I yield to the Senator from Arkansas.

Mr. FULBRIGHT. Just before the Senator concluded, I thought he mentioned petroleum.

Mr. McINTYRE. Petroleum? No.

Mr. FULBRIGHT. I so understood him.

Mr. McINTYRE. I did not mention petroleum.

Mr. FULBRIGHT. I am prompted to ask a question about a recent story about petroleum that appeared in the newspapers. Apparently the armed services were unable to account for some \$21 million worth of petroleum supply in Thailand.

Recently I was discussing this matter with a man who is the head of one of the largest petroleum gathering organizations in this country. By that I mean he operates oil pipelines and trucklines and gathers production of a great many small producers. That is why he has expertise in this area.

He told me he could not understand how it was possible for the armed services to lose track of any substantial amount of petroleum in view of the modern measuring techniques which have been developed and which are in daily use by industry.

Can the Senator enlighten us as to what happened to the \$21 million worth of petroleum that disappeared?

Mr. McINTYRE. I wish I could. The Senator is referring to headlines that appeared in newspapers recently?

Mr. FULBRIGHT. Yes.

Mr. McINTYRE. I do not have the answer. My subcommittee's jurisdiction was in a different area. I would be glad to find out what the Department of Defense has to say about it.

Mr. FULBRIGHT. Is the committee concerned with the disappearance of \$21 million worth of petroleum or not?

Mr. McINTYRE. Yes.

Mr. FULBRIGHT. Have they looked into it at all, or inquired about it?

Mr. McINTYRE. I think the Senator will have to direct his question to the chairman of the full committee. I have been busy with the behavioral sciences.

Mr. FULBRIGHT. That was the next question I was coming to.

Mr. McINTYRE. I will get the Senator off petroleum.

Mr. FULBRIGHT. I thought the Senator mentioned petroleum but am prompted now to ask about the social sciences. This is a matter we talked about a little bit last year, I believe. Can the Senator refresh my memory as to how many foreign universities are going to be included in the coming year's program for research?

Mr. McINTYRE. I do not know the precise number offhand, but we have taken a hard look at it. I want to assure the Senator that in his statement of May 1, most of the time when he talks about research in foreign universities,

he puts it under the heading of social and behavioral sciences, when it is really hard science. If we take a look at what the projects are about, they are hard, physical sciences.

I can tell the Senator that out of \$630 million under military sciences—and that is a big figure, I want to assure the Senator from Arkansas—in the short time allotted, we did not get the opportunity to take an item-by-item look. We did start to look and quickly learned that out of the \$630 million, only about \$6 million will embrace what the Senator is talking about. Under universities, only about \$6 million will be spent in foreign countries. A good share of that will go to American personnel.

As to how many universities, I could count them.

Mr. FULBRIGHT. Was this reported to the committee?

Mr. McINTYRE. Yes. I have very adequate information on it this year.

Mr. FULBRIGHT. Last year, when I inquired about it, the Senator did not have any information about it.

Mr. McINTYRE. Last year, when the Senator inquired about it, the Research and Development Subcommittee had not yet been established; the Senator was inquiring about a \$5 or \$6 million item in a budget of about \$22 or \$23 billion.

Mr. FULBRIGHT. I agree with the Senator that that is a big figure. That is the reason why the Senate has not been informed to any reasonable degree as to what is spent, because we are always being confronted with such enormous sums of money that we give up in utter hopelessness and frustration.

To me, \$6 million is quite a lot of money. For 4 years I have been trying to get less than that for a project on the Little Red River in Arkansas and I cannot begin to get it off the ground yet. The Senator speaks of \$6 million as if it were just a drop in the bucket and he could not be bothered with it. I am not so much interested in that amount of money—although, of course, I am interested in it—but I am interested in the Department of Defense going abroad and injecting itself into foreign countries either in its universities or in projects such as Camelot and things of that kind, because it is this kind of activity that brings us into disrepute among the countries of the world and does a great damage to our foreign relations. Our foreign relations are already bad enough without the Department of Defense adding to it. I would like to know, how many countries will the Senator let out contracts to? Surely the Senator should know that.

Mr. McINTYRE. Let me give the Senator some idea—

Mr. FULBRIGHT. I raised that question last year.

Mr. McINTYRE. Let me answer the Senator's question in broad terms—he is asking the question in narrow terms. The bulk of the money spent in foreign countries by the Department of Defense is for the gathering of information. Let me give the Senator a classic example. If we are studying the effects of high altitude on men, the place to go is Peru. There is where one gets high altitude and he can

find out what happens to men under certain stresses of heavy work. That is where we would go to find out something about that.

Mr. FULBRIGHT. They do not go nearly so high as Apollo will go, do they? Why is that so necessary?

Mr. McINTYRE. I have not finished. Mr. FULBRIGHT. I am sorry.

Mr. McINTYRE. If we want to take a look at some other problems, such as one having to do with the hardening of silos and the effects of bursting bombs on weapons, one of the places to go is to examine the crust of the earth in areas around Greece where many volcanic eruptions and earthquakes have taken place in the past. The Department of Defense, if it knows of an expert in Vienna, or in Liege, Belgium, or of any top man who knows something about aerodynamics, or on another project of that kind which is important to our Nation, the Department of Defense does not hesitate to hire such men and to contract with universities for a 2- or 3-year program. That is where the bulk of the money the Senator was complaining about last year was spent overseas. It is not always possible to find what we need to know to solve some of the gigantic problems we have in the United States. It is not always possible to find in this country the man we need who is most informed.

Mr. FULBRIGHT. The Senator mentioned Peru. Is the Senator saying that it is necessary, because the mountains in Peru are so much higher than they are in the United States, to go down there, that their altitudes are greater than they are in this country?

Mr. McINTYRE. Their altitudes are higher than here.

Mr. FULBRIGHT. Their mountains are higher than our mountains?

Mr. McINTYRE. I am not an expert on topography, but I have been to Peru, and it is one place where there is going to be a project to study how much a man can endure in a very high altitude.

Mr. FULBRIGHT. I thought the Himalayas were higher than the Andes. But if we want high altitudes, those mountains are not nearly so high as the Apollo mission can go, are they? Why would they want to know how much a man can endure? What relation does that have to the military defense of our country?

Mr. McINTYRE. I would imagine in some future military effort. We never can tell.

Mr. FULBRIGHT. What kind?

Mr. McINTYRE. I would not know. That would be a behavioral or a physical need of tomorrow.

Mr. FULBRIGHT. A need tomorrow. That is why I said last year, and now, that there are many projects in this bill that should be disassociated from the Department of Defense. They cannot possibly be justified as matters of defense. By that I mean the approach of persons like Mr. Teller on the subject of nuclear weapons. He says that nothing should stand in the way of research—no matter what it is. He was against the Test Ban Treaty, for example, because, he says we need to know, and nothing should stand in the way of knowledge. I do not agree

with that. I do not agree with the Department of Defense that because something needs to be known by someone, if it has any relation to a function or a mission of the Department of Defense, the Department should be producing it. I think that the social sciences and research projects, no matter how valid they are in themselves and no matter how suitable for the New School for Social Research in New York City, nevertheless should not be sponsored by the Department of Defense which takes the taxpayers' money and spends it in that fashion.

The chairman, as chairman of the subcommittee, should be able to give to the Senate an itemized list of the kind of projects that this money is being spent on, in how many countries, and in which institutions. I personally object to these projects unless absolutely essential for the Department of Defense itself. I object to going abroad to other countries—some of which used to be quite friendly—and injecting ourselves into their activities, just as in the same way the Department did in Chile on the project called Camelot. I know this kind of thing has been done in some other countries, too. Before this debate is over, the Senator should be able to supply that information for the benefit of the Senate and the public.

Mr. McINTYRE. What is it the Senator wants to know about? Is the Senator talking about social sciences, or physical sciences? I have got to know what the Senator is talking about before I can answer.

Mr. FULBRIGHT. The social sciences. Let us start with that.

Mr. McINTYRE. Let me read from the social sciences the Senator is talking about, where we are spending money overseas. That is in his speech of May 1 this year.

Mr. FULBRIGHT. I was inquiring. I was not telling the Senator. On May 1, I was asking for information.

Mr. McINTYRE. The Senator starts out in his talk complaining about money being spent for social and behavioral sciences by the Department of Defense, and then the Senator proceeds to list—oh, my goodness, I do not know—there are 30 or 40 countries he lists, in which I cannot find one on social and behavioral sciences. Here, for instance, is one of the subject matters—in Argentina—X-ray spectrometry and galactic studies from the Southern Hemisphere.

Incidentally, where would the Senator suggest that the Department of Defense go if it wants to study the effects of the aurora borealis on satellite communications?

Mr. FULBRIGHT. Let me make it clear that I obtained the list I put in the Record from the Department of Defense. I would not pretend to understand many of those titles. Most of them are gobbledegook to me. I have not the faintest idea what they mean. I put them in the Record because I got the whole list from the Department of Defense. I put them in the Record for the information of the Senate. I did not have the means nor the understanding to analyze studies like the Senator has just referred to. I did not say that every one of them had

no relation to the Department of Defense. I say a great many of them have. I believe they have. I thought the committee was going to come prepared this time to justify each of these projects and show they have some relationship to the mission of the Department of Defense.

Mr. McINTYRE. I will be happy to appear before the Senate and justify it. I tried, before the Senator arrived on the floor, to give a brief analysis of the recommendations of the full committee. We can talk about the social behavioral sciences and the physical sciences for the rest of the day, but I will be glad to come here and give a defense of them, because they can be defended. As a matter of fact, the committee looked into most of the social, behavioral science projects. We are in complete accord with them. Those are not the ones the Senator complains of.

Mr. FULBRIGHT. Can the Senator give me an example of a behavioral science project that the Senator thinks is justified?

Mr. McINTYRE. To give the Senator an idea, I think a behavioral science project relating to men working on our air carriers in Vietnam, who suddenly develop a hearing difficulty, is justified. By behavioral studies, we learned it was wise to keep these men on the deck of an aircraft carrier only a limited amount of time, and then have them go below. We tested them to see if their hearing was affected as a result of the loud jet noises on aircraft carriers.

We also went into the question of a pilot's possibly losing his sight from flash blindness because of bombing.

A behavioral science project could justifiably go into the question of why we have a 29 percent turnover in our Armed Forces today. I think any study can be justified that indicates a group of men can be tested in order to eliminate the 10 percent or 15 percent of the men who would not have a good chance of passing a radar operator course. If we could eliminate that 10 or 15 percent of the men who are going to fail beforehand, we would save ourselves money.

With reference to the justification of these behavioral science studies, it should be pointed out that we use some complicated instruments, radars, and sensors that require men to sit in a rather uncomfortable position, watching radar, for example, for hour upon hour. We want to know when those men begin to lose their efficiency and when they should be taken off that duty. A man must sit there for 4 or 5 hours, watching some lines.

Social behavioral science studies as applied to the Department of Defense have saved millions of dollars.

When we get down to the areas the Senator from Arkansas is talking about, he has something to complain about. They are hard to justify. When we go to the science studies in Europe, for example, which are 99 percent physical sciences, to find a man there in a certain area, that is something else. We need a study of how the aurora borealis affects people so it can be helpful in the space program. The committee has recommended reductions in some of these areas.

Mr. FULBRIGHT. I may have used the wrong language. I would have thought that a study of the effect of the exhaust of an airplane on a man's hearing would have been more in the field of medical science. I would not think it was in the field of social sciences.

Mr. McINTYRE. It would be biomedical.

Mr. FULBRIGHT. I read in the paper the other day that there were 50,000 desertions from our Army during the past year. This would clearly be more in the field of social sciences. Has the committee made a study of why so many of our soldiers have deserted? Has the committee studied that question? Has the committee given any attention to it? Is there a project on it?

Mr. McINTYRE. Excuse me. My attention was distracted.

Mr. FULBRIGHT. Has the committee a project studying the question of why so many of our soldiers have deserted our Army? I think I read in the paper that this past year the number was over 50,000.

Mr. McINTYRE. There again we get into the question of definitions. Does the Senator know the difference between AWOL and desertion?

Mr. FULBRIGHT. Well, a desertion is an absence of more than 30 days.

Mr. McINTYRE. As a former military lawyer in World War II, I defended many who were away 60 days, and they were not charged with desertion.

Mr. FULBRIGHT. Well, it is a fact that there has been a substantial increase in desertions in the past year over 5 years ago or 3 years ago. Is that not correct? Has the committee made any study as to the number of AWOL's, whether it involves a week, 3 weeks, or 30 days?

Mr. McINTYRE. Yes, we have.

Mr. FULBRIGHT. Can the Senator give us that information?

Mr. McINTYRE. The Senator from Hawaii (Mr. INOUYE) was chairman of a subcommittee that went into the question of AWOL's and desertions. We were particularly interested because of the State Department's putting its big nose into some of these situations, which resulted in an uneven pattern of punishment, to the extent that someone who had gone AWOL in Tampa, Fla., had the book thrown at him, while some member of the Armed Forces who had gone to Norway was taken home and given a free ride and 10 days off. There is a report on that matter which speaks very strongly on it. The Senator from Hawaii (Mr. INOUYE) was chairman of that subcommittee.

Of course there is an increase in AWOL's. Of course there is an increase even in desertions. We had them in World War II. Why should there not be with this unpopular conflict in Vietnam?

Mr. FULBRIGHT. Has the committee made a study of that question? Is that increase in desertions due to the character of the war in Vietnam?

Mr. McINTYRE. I have not made the study. The subcommittee has.

Mr. FULBRIGHT. The Senator mentioned behavioral sciences and some of these studies.

Mr. McINTYRE. Is the Senator acquainted with the subcommittee's report, by the Senator from Hawaii, on the question of AWOLs and desertions?

Mr. FULBRIGHT. No.

Mr. McINTYRE. Is the Senator acquainted with the work of the committee to upgrade the charge of being AWOL?

Mr. FULBRIGHT. No. I saw in the papers that there was a very large increase. I think the article said there were over 50,000 last year. I cannot remember whether it was 1,500 or 15,000, but I think there were 1,500 prosecutions in the courts. This was an article within the last 2 or 3 weeks. I may be able to look it up. I thought it was a very interesting subject. I thought it might be one on which there was a research project. It would seem to me to be pertinent to the activities of the Defense Department. A number of those studies have no relation, I think, to the Defense Department.

Mr. McINTYRE. Of course, the distinguished Senator from Arkansas realizes when he talks in generalities of desertions and AWOLs, that a man who fails to get on a morning report is considered to be AWOL. We have statistics that show AWOL increases. The number has been increasing. The subcommittee of which the Senator from Hawaii (Mr. INOUYE) is chairman did go into that question. That information can be obtained for the Senator.

Mr. FULBRIGHT. The Senator is a member of the committee. I thought he was undertaking to give to the Senate and to the public statistics about it. I am not a member of the Armed Services Committee. If I have misstated it or given the wrong impression, I ask the Senator to straighten me out. How many desertions have there been? Define what a desertion is. What is an AWOL? I am only looking for light and understanding on the subject.

Mr. McINTYRE. What is it that the Senator is hoping to find? That the AWOL's and desertions are very high because of the unpopularity of the war?

Mr. FULBRIGHT. If the Senator knows, I would expect that information from him.

Mr. McINTYRE. The Senator expects quite a bit if he expects me to tell him how many desertions and how many AWOL's there are, and how much we are spending on universities on projects, and so forth. I am here today discussing research and development. All this other information is easily available.

Mr. FULBRIGHT. It is not for me. I have great difficulty obtaining any information from the Defense Department.

Mr. McINTYRE. Has the Senator asked for information on desertions?

Mr. FULBRIGHT. No. I thought the Senator would give it today. There are other members of the committee here, if they care to give it. I do not care which member of the committee furnishes it.

Mr. McINTYRE. We are here on an authorization bill. The Senator wants to ascertain how many desertions there are. We will have that information for the Senator tomorrow. Is that satisfactory?

Mr. FULBRIGHT. Well, that is all right, too. Any time, I apologize if the Senator does not like the question.

Mr. McINTYRE. May I say to the Senator from Arkansas that we are talking today about a \$20 billion budget, and I thought the Senator wanted to know how many universities we are spending the money in.

Mr. FULBRIGHT. It is an \$80 billion budget.

Mr. STENNIS. Mr. President, will the Senator yield?

Mr. McINTYRE. Certainly.

Mr. STENNIS. Mr. President, last year there was a special subcommittee of the Committee on Armed Services, chaired by the Senator from Hawaii (Mr. INOUYE), which made a special study of these AWOL's, absences, and alleged desertions, and filed a very fine report thereon. I have asked someone to telephone for him, and have not received any response as yet. Apparently he has some other duties to take care of.

But the matter has been fully covered, and strong recommendations were made to the Department of Defense about the first part of this year.

My recollection is that the statistics are not nearly as alarming as the Senator from Arkansas might have been advised, in comparison, say, with World War II. But I do not have that report broken down. I have not seen it in several months, and I do not know that that is the subject of any special research by the Department of Defense; but I know it is a subject of concern, and that they are digging deeply into it.

My strong recommendation, personally, was that they were going to have to deal out more punishment in the proper cases, and that disparity of punishment was one of the factors. I will obtain a copy of that report for the Senator.

Mr. FULBRIGHT. Mr. President, will the Senator from New Hampshire yield further?

Mr. McINTYRE. I yield.

Mr. FULBRIGHT. I do not wish to press the Senator on anything that is not within his area of responsibility. All the Senator needs to say is that it is not. I would agree with the Senator from Mississippi that it seems to me this is a subject which is a little more appropriate for research for the Department of Defense than is the effect of heights on a man in the Peruvian Andes, or some other place, which does not quite seem to me to be as interesting to the Defense Department or to the people of this country as why we have so many desertions.

I have been trying to make the point, as I did last year, that a number of these research projects struck me as being irrelevant to the function of the Defense Department.

I wish to cite another case which embarrassed me very much. I happen to be a member of the Board of Regents of the Smithsonian Institution. They were engaged as a kind of subcontractor—I do not know what the exact legal relationship was—for research, in the Pacific islands on the subject of bird migration. Then it was alleged the project had to do with germ warfare. I wish to state that of my own knowledge I do not know whether it had to do with germ warfare or not, but the contract turned out

to be embarrassing to the Smithsonian Institution. Is the Senator familiar with that particular incident? If not, it is all right; but there was something in the newspapers about it, which was drawn to my attention.

I later received a letter from the Smithsonian, asking my advice as to whether the Smithsonian should have any further dealings with the Department of Defense, because of this embarrassment. I was, of course, put on the spot to give my recommendation, since I was a Regent of the Institution.

Is the Senator familiar with the incident I am talking about? If not, we will drop the subject and I can look it up somewhere else.

Mr. MCINTYRE. I may have read something on that question.

Mr. FULBRIGHT. The contract was alleged to have been a part of the biological warfare activities of the Defense Department. Does that have anything to do with the Senator's responsibilities on the committee?

Mr. MCINTYRE. Yes.

Mr. FULBRIGHT. Does he have jurisdiction over research in biological warfare?

Mr. MCINTYRE. Just a moment. The Senator's complaint is as to the work done by the Smithsonian?

Mr. FULBRIGHT. I am not complaining; I am asking. I am not complaining about anything at the moment. I am trying to find information.

Mr. MCINTYRE. If the Senator will give me a moment, and bring the subject up again later, I have something here on the Smithsonian's involvement, but I cannot seem to put my finger on it at the moment. I have information here on some 200,000 projects.

I suggest that if the Senator will give me a few minutes here, and will bring the subject up again, I will try to give him the answer he seeks.

Mr. FULBRIGHT. All right. I do not wish to press the Senator. Let me close by saying this: I wonder whether at a later time in the debate we could discuss the justification for a number of the research projects that the committee is recommending in this bill. I should like to do that as an illustration of the point that I am making. I reiterate, just for future reference, that I am not saying that these subjects are not in themselves worthy of someone's attention. I raise the question whether they should be funded and supported by the Defense Department, because they are not really properly related to the Department. We will raise the question again at a later time; I do not wish to pursue it now.

Mr. GOLDWATER. Mr. President, will the Senator yield?

Mr. MCINTYRE. I yield.

Mr. GOLDWATER. While the distinguished chairman of the subcommittee is looking up his answer, I might call to the attention of the distinguished Senator that on page 1609 through page 1613, and including a part of page 1614, of the Senate report, is a complete list of the countries involved, numbering some eight or nine, and the subjects covered by these research programs.

I might say to the Senator from Arkansas that I feel this to be a lucrative field where we can do some cutting; and the subcommittee has already recommended close to a 13-percent cut in these particular figures. I join the Senator from Arkansas in believing that there are a lot of these items that are not needed.

I do not know how, though, we can discuss them on the floor of the Senate, to determine which are needed and which are not. I simply wanted to refer the Senator to those countries, and to the lists of projects under them.

Mr. FULBRIGHT. That is at page 1609?

Mr. GOLDWATER. Yes.

Mr. STENNIS. Yes, they begin there.

Mr. CRANSTON. Mr. President, will the Senator yield?

Mr. MCINTYRE. I am happy to yield.

Mr. CRANSTON. In connection with behavioral science projects, have there been or are there now, or are there authorized, studies of men under stress and in grave danger? Have there been studies of the effect of grave danger on their ability to make wise decisions, their ability to think clearly, and their ability to carry out difficult and complicated orders under certain conditions?

Mr. MCINTYRE. Under the branch of social and behavioral sciences, there are two areas called human performance and human factor engineering. Both of these fields have brought to light a great deal of information about the human being.

It has been discovered, for example, that something like 40 percent of all our weapons failures and aircraft and other problems occur, not because the machine gives out, but because the man makes a mistake under great stress such as the Senator has indicated. Particularly with the sophisticated weaponry we have today, to which I have already alluded, like radar operations, the sensors, and everything else we have, when men are required to work long periods of time under difficult circumstances, these studies have been of great benefit.

Mr. CRANSTON. Do those studies in depth go into circumstances such as might involve the commander of a Poseidon submarine, who presumably has the ability, if he wishes, to make a decision whether to launch? Do the studies explore the factors of stress and danger, and the effect upon a man of having the grave responsibility, virtually in his own hands, of deciding whether to launch a missile under certain circumstances?

Mr. MCINTYRE. I do not know whether the stresses involved in the exact situation of which the Senator is speaking have been studied or not. The Senator is assuming, of course, that a Polaris or Poseidon commander would have the authority to press the button. I imagine studies they have conducted involving command decisions under great stress would be part and parcel of the overall picture.

Mr. CRANSTON. And have studies been made not only of stress, but of stress under grave danger, danger to life, and its effect upon the ability of a man to

judge and to make delicate and vastly important decisions?

Mr. MCINTYRE. I would be guessing if I were to try to answer that. I think the subject of stress has been studied, yes, but as to stress under grave danger, I do not know.

Mr. JACKSON. Mr. President, will the Senator yield?

Mr. MCINTYRE. I yield.

Mr. JACKSON. It is my understanding that the officers in charge of strategic weapons have all been given detailed psychiatric tests in connection with their regular medical examinations.

Mr. STENNIS. Mr. President, will the Senator yield?

Mr. MCINTYRE. I yield.

Mr. STENNIS. Mr. President, to complete the record, I point out to the Senator from Arkansas that the committee report on page 47 gives some exact figures about the reductions.

One is foreign military security environments. There is a recommendation there for an actual reduction of \$800,000. That is almost 10 percent on that item. The next one has to do with policy planning studies. It is recommended that the reduction in that item be \$700,000.

In the last paragraph, at the bottom, the committee is recommending that a number of these efforts be transferred to other agencies—some to the Department of State, some to Arms Control and Disarmament, and some to the National Science Foundation and to others.

It takes a great deal of weeding out to be specific with reference to many of these categories.

I call that part of the report to the attention of the Senator. I appreciate the earnestness of his inquiry.

Mr. FULBRIGHT. Mr. President, will the Senator yield?

Mr. MCINTYRE. I yield.

Mr. FULBRIGHT. Mr. President, I am very glad that the chairman of the committee has called that to the attention of the Senate. I am especially glad to see the last part which recommends the transfer of a number of these programs to other agencies. For example, the Senator mentions the National Science Foundation, which is one that, it would seem to me, would be appropriate.

I assume that one reason they were not there to begin with is that they did not have the money for the programs. Will the Senator transfer them the money to fund them?

Mr. STENNIS. We will transfer the appropriation bill, if the Senator's committee has its way, over to his committee and others.

Mr. FULBRIGHT. Mr. President, I want to pursue the matter a moment. I want to give the Senator an illustration so that he will not think I am being too nit-picking about the matter.

Mr. President, I have in my hand a document that is a research project. I will read the specific name. This is from the University of Massachusetts. It is entitled "The Atatürk Revolution in Turkey. Religion and Revolution. A Study of Comparative Politics and Religion."

This is funded by funds for research projects from the Department of De-

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fense. This is an aspect of what this is about.

It states:

Beginning with a brief discussion of the decline and fall of the Ottoman empire, the report analyzes the interplay between Ataturk and the forces of religious traditionalism in the Turkish revolution. Special attention is given to the role of religion in the struggle for national sovereignty that ended in 1923. The report concludes with a brief discussion of the position of Islam in contemporary Turkish society.

That is an example of what I was raising a question about, as to the appropriateness for the Department of Defense to have funds authorized, and for us to appropriate money, that is spent for matters of that kind.

I do not see why this is a matter that the Defense Department should undertake.

I do not urge the Senator to answer now. I would let him have a look at the matter first. However, I am giving it as an illustration of what I have in mind.

Mr. McINTYRE. Would the Senator tell me what fiscal year this is planned for?

Mr. FULBRIGHT. This is a completed one. This was 1968.

Mr. McINTYRE. You are now talking about fiscal year 1969.

Mr. FULBRIGHT. That was an illustration of what I meant.

Mr. McINTYRE. Is the item in the budget for the fiscal year 1970?

Mr. FULBRIGHT. No. That is something that has gone by. It is an illustration of the type of activities I have reference to that are not related to military affairs. There are a number of these.

I do not have the ones that are in process as yet. I got all the information I could. However, for the Department of the Army, for example, in the hearings beginning on page 2209, many pages and many items are listed.

I assume they are still underway on plans for fiscal year 1970.

We notice some of them are on the right. These are some that I got from the Department of Defense. They indicate the type of things that have been done.

Mr. McINTYRE. What page is the Senator referring to?

Mr. FULBRIGHT. This is from the hearings of the Committee on Armed Services. It is the one that was on my desk.

Mr. McINTYRE. What page?

Mr. FULBRIGHT. Page 2209.

Take the first item there. This is in fiscal year 1970. It says:

Beliefs and habits of certain foreign populations of significance for psychological operations.

I suppose that in some areas psychological understanding is necessary or helpful. If we had had any understanding of the psychology of the Vietnamese, I do not think we would have gotten into that war. There was a complete lack of understanding of what the Vietnamese people were like. I cannot say it would not have been helpful.

I do not think that particular one has any relation to the military responsibility. I doubt that the military is the

proper one to handle it, simply because they are not familiar with that type activity.

I have two others here. I do not wish to burden the Senator at the moment. I hope that at a little later time the Senator will be prepared to discuss some of these projects which I have discussed and possibly I will offer an amendment to strike them out, if that is an appropriate way to pursue the matter on the ground, that they have no place in the authorization.

Mr. McINTYRE. I think that is a perfectly appropriate way to handle the matter.

This gives a little idea of the difficulty the Research and Development Subcommittee had.

In calling attention to page 2209, the Senator is now talking about funds that are spent in Washington, at George Washington University. Even the item mentioned there is coded. I do not know if it is terminated now or if it is being continued.

If the Senator will supply us in advance with the 10 or 20 items he picks out of what amounts to 200,000 or 300,000 items, we will not have to spend all night figuring the matter out. If the Senator gives us advance notice of what he is criticizing, we will be here to either defend the matter or criticize it.

If the Senator is talking about the gamma gamma goat which turns out to be a six-wheeled track vehicle used in Thailand—

Mr. FULBRIGHT. If a sophisticated member of the Armed Services Committee thought it was a goat, I do not think he should blame me.

Mr. McINTYRE. I think everyone thought it was a goat. However, it is a six-wheeled track vehicle.

Mr. FULBRIGHT. I do not even know of a goat that has six wheels.

Mr. McINTYRE. Let us agree on the areas the Senator wants to complain about. Then if the Senator gives us advance notice, we will be prepared to defend or concede.

Mr. FULBRIGHT. That is fair enough. We brought this matter up tentatively last year. We had a little debate. I know that the chairman anticipated that I would bring the matter up again.

What I am really trying to do is to tighten up the whole operation. I think a lot of the civilian activities in our country are suffering from an overexpansion of the Military Establishment into fields which are really unrelated.

Mr. McINTYRE. The Senator has expressed my own sentiments. I think the Senator is justified in calling the attention of the committee to this work.

Because of our scrutiny of this area, action has been taken by the Department of Defense to tighten up the organization. The programs have been cut. We are asking the Senate to cut them even further. The subcommittee cut a billion dollars. There has been action. It is extremely difficult because of the multitudinous items to discuss one that the Senator suddenly picks up from nowhere.

Mr. HART. Mr. President, will the Senator yield?

Mr. McINTYRE. I yield.

Mr. HART. Mr. President, whatever develops as we go down the road on this research and development matter, as the Senator from New Hampshire has indicated, perhaps on an item-by-item review there will be further limitation.

I rise to thank the Senator from New Hampshire, the Senator from Mississippi, and the committee for digging into this area and coming in here with a recommendation that trims R. & D. by in excess of a billion dollars.

A year ago last April I offered an amendment that sought to maintain the research and development figure for the fiscal year 1969 at the level of the 1968 fiscal year. At that time the Committee on Armed Services recommended an increase in research and development of approximately \$508 million, even though we were all going through a great deal of discussion about the need to economize. My amendment—on which we voted on April 18, 1968, failed by just two votes.

I cite that experience to make the point that all of us, in the passage of 12 months, have developed a much greater and a much clearer understanding of the responsibility that the entire Senate carries with respect to what heretofore had been rather esoteric, box-car-type figure problems.

So I thank the Senator from New Hampshire and the committee. I wish that a year ago we had been able to keep the \$500 million from being added on.

I am sure that in part we reflect the mood of the country. But more than that, I think there was some leadership from the Senate to persuade the country to this move. Today we find ourselves receiving from the Committee on Armed Services a report which reduces by more than a billion dollars the research and development figure which a year ago we fell short of trying to keep from being increased a half billion dollars, and that, in anybody's book, is progress.

Mr. McINTYRE. I thank the distinguished Senator from Michigan. It was his good work of leadership that propelled us into taking a hard look, and we should continue taking a hard look, and look even harder.

Mr. CRANSTON. Mr. President, will the Senator yield?

Mr. McINTYRE. I yield.

Mr. CRANSTON. I should like to refer to the behavioral science area we were discussing. It is an area in which I believe there may be need for more research in the interest of national security.

I wonder whether the Senate from New Hampshire could advise Senators, before consideration of this measure is complete, a bit more about the area of studies of men under danger—not stress so much as personal danger. There are behavioral scientists who believe that under conditions of grave danger to one's life, the ability to think wisely and carefully and to judge soundly is adversely affected.

The Senator from Washington (Mr. JACKSON) has advised me that men in positions of grave responsibility, such as commanding Poseidon submarines, are

given psychiatric tests, and those likely to crack up generally are weeded out.

But the fact may be that the human being generally, by normal human practices or characteristics, tends to lose his ability to judge wisely when in grave danger. He is suddenly filled with adrenalin, his muscles swell, and he desires to smash whoever may be threatening him. The question of how this would affect the judgment of men who do have grave responsibilities at times of grave danger to themselves and to loved ones at home is one about which we should be fully knowledgeable. This could be the weakest link in and the gravest threat to the whole security performance of the United States, in the opinion of scientists.

Mr. McINTYRE. The Senator from California would like the chairman of the committee to find out what studies have been conducted or are planned that concern men under great physical danger who are in a decisionmaking capacity?

Mr. CRANSTON. Exactly that.

Mr. McINTYRE. We will try to find that out.

Mr. GORE. Mr. President, will the Senator yield?

Mr. McINTYRE. I yield.

Mr. GORE. I wish to express my very deep personal gratitude for the eloquent and informative speech of the able Senator from New Hampshire. It gives to the entire Senate a better understanding of the delicate and intense problems with which his committee has been coping. There are but few Senators who could command the audience of Senators and hold their attention as he has done today. He is favored, too, with the presence in the gallery of a charming lady, Mrs. McIntyre, during this long debate.

I thank the Senator both for his speech and for her presence.

Mr. McINTYRE. I thank the distinguished Senator from Tennessee. He is always so generous.

Mrs. SMITH. Mr. President, will the Senator yield?

Mr. McINTYRE. I yield.

Mrs. SMITH. Mr. President, earlier this afternoon, the chairman of the Committee on Armed Services, the Senator from Mississippi (Mr. STENNIS), commended the chairman of the subcommittee and the members of that subcommittee for the job they had done.

While there were areas in the recommendations with which I was not in full agreement, I do want to commend Senator McINTYRE, the chairman of that subcommittee, and the members of the subcommittee for the tremendous job they have done. They have put in a great deal of time. While this is the first year they have gone into this matter in such great depth, I think that out of it will come some good.

Mr. TYDINGS. Mr. President, will the Senator yield?

Mr. CRANSTON. I yield.

Mr. TYDINGS. I ask the Senator from New Hampshire whether as a result of a colloquy he had with the Senator from Arkansas, he is going to provide the Senate with the name of each foreign educational institution which receives funds from the Pentagon, and also

whether he is going to provide us with the purpose of the grant and the amount of the grant.

Mr. McINTYRE. The Senator from Maryland asks easy questions compared with those asked by the distinguished Senator from Arkansas.

I believe we can place the information in the RECORD, subject to the security question, which is always bothersome. We have here the names of universities, other centers of intelligence for the countries where DOD is planning to spend money for fiscal year 1970. I think we can make it available, if not place it in the RECORD. This appears to have been in the RECORD, so it can be put in the RECORD again.

Mr. TYDINGS. I have another question. On Monday evening there was a colloquy on the floor between the Senator from Massachusetts (Mr. KENNEDY) and the Senator from Montana (Mr. MANSFIELD). I refer to page S7643 of the RECORD. In his statement, the distinguished majority leader mentioned some figures, and I will now quote from his statement. He is referring to Pentagon expenditures which found their way to the Hudson Institute:

In going back only 3 years, including this year, the figures show that in 1967, this organization received from the Department of Defense \$713,000. In 1968 it received \$444,000, under a Democratic administration, I might say. So far in 1969, under both a Democratic and Republican administration, I would assume, it received \$873,000. That comes to about \$2 million covering 3 years, and the third year has not been completed.

In his concluding sentences, the majority leader said:

I wonder how much of the research money, which comes to \$8 billion last year for the Department of Defense alone, has been siphoned to the Hudson Institute, the Rand Corp., colleges and universities, and other institutes in this country.

My question now to the Senator from New Hampshire is this: How much did the Hudson Institute receive, directly or indirectly, from the Department of Defense or the Pentagon in 1967, in 1968, in 1969, and how much is it going to receive in 1970? I think it might be helpful if the Senator could provide any information with relation to the amount of the cost of the book "Why ABM?" authored largely by members of the Hudson Institute, of Croton-on-Hudson, N.Y., and the relationship between that book and the funds received by the Hudson Institute from the Pentagon.

Mr. McINTYRE. In answer to the Senator's question I can only say I have before me a sheet of paper which has been forwarded to me by the Department of Defense entitled "Funding Summary for Federal Contract Research Centers." This is a table which reflects that the Hudson Institute under actual fiscal year 1966 received \$827,000. The table shows that for fiscal years 1967, 1968, 1969, and planned fiscal year 1970 the Hudson Institute received none or none is now planned to be turned over by the Department of Defense to the Hudson Institute as a Federal contract research center.

We will have to inquire if this was a grant or if it is involved in this matter. We will try to find the information for the Senate.

Mr. TYDINGS. Forgetting that question if we could, I would like to go back to how much money the Hudson Institute received directly or indirectly from the Pentagon in 1967, 1968, 1969, and 1970, and if we could have the total budget of the Hudson Institute and the percentage of their budget which is financed or carried by the Pentagon, I think it would be helpful. Could the Senator provide those figures?

Mr. McINTYRE. The only answer I can give the Senator is that it is listed here as a Federal contract research center in 1966. For all other years, 1967 through 1970, the Hudson Institute shows no appropriation whatever. Directly, or indirectly, we will provide the information. I will place this table in the RECORD.

Mr. TYDINGS. The Senator will provide the information. I thank the Senator.

(At this point, Mr. GURNEY assumed the chair.)

Several Senators addressed the Chair.

Mr. McINTYRE. I yield to the Senator from Washington.

Mr. JACKSON. At the same time will the Senator supply for the RECORD the amount of money supplied the Massachusetts Institute of Technology by the Department of Defense?

Mr. GOLDWATER. Would the Senator yield so that I may amend that request?

Mr. McINTYRE. Just a moment. Does the Senator want an answer?

Mr. JACKSON. Does the Senator have the information now? It runs into the millions.

Mr. McINTYRE. As a Federal contract research center the figure is about \$65 million. I do not believe that is all.

I wish to say this in explanation of what seems to be the difficulty in providing these figures. The subcommittee, in going into this matter, found a baffling series of line items and areas where one could make these figures jell and coincide. We are trying to get them, particularly for the Hudson Institute and MIT.

The Massachusetts Institute of Technology, as a Federal contract research center, looks like \$65 million.

Mr. JACKSON. Is it not a fact that MIT receives more Federal money in the national defense and national security area than any other educational center in the United States?

Mr. McINTYRE. I believe that is correct.

Mr. GORE. Mr. President, will the Senator yield?

Mr. McINTYRE. I yield.

Mr. GORE. I do not know whether the funds under contract with the Massachusetts Institute of Technology or the Lincoln Laboratory or the Hudson Institute are justified. What I rise to suggest is that it is not realistic to put into juxtaposition a great institute of learning like the Massachusetts Institute of Technology with a so-called think-tank like the Hudson Institute. It seems to me that whether either expenditure is justified or unjustified is one matter, but to compare these two institutes or organizations is quite unrealistic.

Mr. JACKSON. Mr. President, will the Senator yield?

Mr. McINTYRE. I yield.

Mr. JACKSON. Mr. President, to complete the subtle questioning here, if it is subtle, I think it is well known that there are certain people at MIT who have strong anti-ABM feelings. I had the impression by reason of the question asked by the distinguished, able, and very fine Senator from Maryland, that the two were being linked.

I did not raise the question but as long as we go down that road it would be interesting to follow through with other institutions.

Mr. TYDINGS. I think the pertinent point would be that percentage of the money of the Hudson Institute which comes directly from the Pentagon. If the Institute or a group of scientists are dependent primarily from one source for their whole sustenance and livelihood, they are more likely than a great institutions that has been in operation for years to produce the type answers that the source of their funding would suggest.

I would think that the link would be the percentage of their budget which comes from the source which may influence them.

Mr. JACKSON. Freedom of speech has not been interfered with in this regard. MIT, which receives more money than any other educational institution in the country, has a lot of spokesmen speaking against Department of Defense programs. In fact, they have a most active anti-ABM group, some of whom have testified before Senate and House committees recently.

Mr. TYDINGS. Does the Senator know whether the percentage of the budget of the Hudson Institute which comes from the Pentagon is more than 50 percent?

Mr. JACKSON. I do not know, but since this matter has been brought up I thought it pertinent to point out that at MIT, which receives the most money, they have more people opposing the ABM. I wonder what influence DOD money had on those people.

Mr. GOLDWATER. Mr. President, will the Senator yield?

Mr. McINTYRE. I yield to the Senator from Arizona.

Mr. GOLDWATER. We are not talking about MIT. We are talking about Lincoln Laboratory. I think Lincoln Laboratory last year received something like \$31 million. Dr. Wiesner is one of the top deans of MIT and opposes the ABM. Mr. Kahn of Hudson Institute happens to favor the ABM. I hope we would not get into innuendos where we suggest that Hudson might be dealing off the bottom of the deck, and we have to doubt the veracity of learned people at Lincoln. I was sorry to see this whole matter injected into the discussion the other evening. I thought it was completely out of place in the record.

Mr. McINTYRE. I thank the Senator.

Mr. President, I ask unanimous consent to have printed in the RECORD at this point a table entitled "Funding Summary for Federal Contract Research Centers" for the fiscal year 1966 through planned fiscal year 1970.

There being no objection, the table was ordered to be printed in the RECORD, as follows:

TABLE II.—FUNDING SUMMARY FOR FEDERAL CONTRACT RESEARCH CENTERS

[Dollars in thousands, all appropriations]

FCRC's ¹	Actual fiscal year 1966	Actual fiscal year 1967	Actual fiscal year 1968	Estimated fiscal year 1969	Planned fiscal year 1970
University centers (total).....	(\$26, 711)	(\$22, 272)	(\$21, 438)	(\$21, 130)	(\$17, 735)
Math Research Center (Wisconsin).....	1, 295	1, 300	1, 300	1, 350	1, 455
HumRRO (GWU).....	2, 750	3, 367	3, 427	3, 995	4, 253
CRESS (AU).....	2, 347	1, 939	1, 560	1, 960	2, 100
Hudson Labs (Columbia).....	4, 759	4, 710	4, 800	3, 412	.....
ORL (Penn State).....	9, 512	8, 120	7, 159	7, 433	7, 407
APL (University of Washington).....	6, 048	2, 836	3, 192	2, 980	2, 520
Systems analysis and technical direction (total).....	(94, 102)	(108, 120)	(104, 565)	(108, 403)	(114, 619)
MITRE Corp.....	27, 859	33, 222	32, 578	34, 131	36, 350
Aerospace Corp.....	66, 243	74, 898	71, 987	74, 272	78, 269
Specialized research (total).....	(77, 773)	(108, 288)	(71, 913)	(76, 323)	(83, 206)
Lincoln Labs (MIT).....	40, 400	59, 549	39, 120	40, 043	41, 990
APL (JHU).....	37, 373	48, 739	32, 793	36, 280	41, 216
Operations research and systems analysis: (total).....	(58, 082)	(57, 045)	(55, 653)	(57, 321)	(61, 605)
IDA.....	13, 257	11, 239	10, 546	10, 898	11, 150
RAND.....	19, 628	20, 805	20, 440	21, 171	23, 855
RAG.....	11, 125	9, 842	9, 619	9, 985	10, 800
ANSER.....	1, 345	1, 340	1, 500	1, 572	1, 600
CNA (University of Rochester).....	7, 000	9, 119	8, 838	9, 195	9, 500
ECAC.....	4, 900	4, 800	4, 710	4, 500	4, 700
Hudson Institute.....	827	.....	.....	.....	.....
Total.....	256, 668	295, 725	253, 569	263, 177	277, 165
APL (JHU).....	18, 504	12, 205	9, 375	12, 106	11, 160
Lincoln Labs (MIT).....	23, 035	18, 189	24, 130	27, 530	23, 210
ORL (Penn State).....	.....	1, 403	2, 212	1, 125	950
Total subcontracts.....	4, 539	31, 797	35, 699	40, 761	35, 320
Computer service to Government as opposed to professional services APL (JHU).....	.....	.....	.....	1, 200	1, 200
Grand total.....	289, 207	327, 522	289, 268	305, 138	313, 685
Grand total (R.D.T. & E. only).....	253, 814	291, 602	252, 300	270, 500	283, 400
Percent of fiscal year 1966:					
Grand total: ²					
Gross.....	100	109. 83	97. 00	102. 32	105. 19
Adjusted ³	100	104. 59	87. 98	88. 38	86. 54

¹ Includes 5 percent per annum for increases in the cost of living.

² The above amounts include subcontracts of less than \$1,000,000 per FCRC. Below are the amounts subcontracted by each FCRC where the total per FCRC is greater than \$1,000,000.

³ Grand total less subcontracts over \$1,000,000.

Mr. FULBRIGHT. Mr. President, will the Senator yield?

Mr. McINTYRE. I yield.

Mr. FULBRIGHT. Mr. President, to answer the question propounded by the Senator from Maryland, just a few weeks ago I had Dr. Brennan appear before the Committee on Foreign Relations. I shall now read from page 371 of the committee hearings, where I asked Dr. Brennan these questions:

Senator FULBRIGHT. What percentage of the support of the Hudson Institute is attributable to Government sources?

Dr. BRENNAN. I cannot give you an accurate number over any particular period of time, but I think if I said something like 80 percent over the past 2 years it would probably be roughly correct.

Senator FULBRIGHT. What was it when you were president? Was it about that when you were president?

Dr. BRENNAN. No, sir, it was higher.

Senator FULBRIGHT. How high was it?

Dr. BRENNAN. Probably around 90 percent.

That was the testimony of Dr. Brennan, who is still the head of that organization, and partly had to do with this book. He is on the staff and was president in March.

I think the point of the Senator from Maryland is quite correct. This is a relatively small institute. As he said, 80 to 90 percent of his funds come from this area.

The Senator from Arizona said the lab at MIT is a semiautonomous. I had a

delegation of students before me about a month ago. I think there were a few faculty members from MIT. They raised this question. They were primarily students who were concerned with the reputation of MIT. They sought counsel on whether or not they should urge their administration at MIT to completely disassociate itself from the Lincoln Lab because of the dissatisfaction that has arisen in many student bodies because of the association with the Department of Defense. It is a very active problem. But MIT, as such, is a great institution aside from the laboratories.

Mr. McINTYRE. Mr. President, I yield the floor.

Mr. JACKSON. Mr. President, first, I want to associate myself with the remarks made today and yesterday by the able chairman of the committee, the distinguished Senator from Mississippi (Mr. STENNIS). His approach to the budget this year has been excellent. He proceeded to appoint subcommittees to go into the key areas of concern at the outset of the year.

The able and distinguished Senator from New Hampshire (Mr. McINTYRE) has done a very fine job as chairman of the Subcommittee on Research and Development, and I want to compliment him.

The same applies to the chairmanship of the Subcommittee on Tactical Air, as handled by the able and distinguished Senator from Nevada (Mr. CANNON).

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The Senator from Mississippi, as chairman of the full committee, undertook chairmanship of the Bomber Subcommittee, an all-important one. In my judgment, the bill now before the Senate reflects the kind of thorough review, investigation, and study made of this most important area of our national security.

All members of the committee were most diligent in pursuing the problems with which they were faced.

I want to single out once again the distinguished lady from Maine (Mrs. SMITH) who, as always, in a very conscientious way, made a great contribution to the committee.

The Senator from Tennessee (Mr. GORE) mentioned earlier today her association in the House of Representatives. I had the privilege of serving with her in the House, where she was an able and distinguished member of the House Naval Affairs Committee, now a part of the House Armed Services Committee. Thus, Mr. President, we have been fortunate in having that kind of support in the committee in bringing this bill to the floor of the Senate.

Mr. President, in considering the fiscal year 1970 Department of Defense authorization bill, which is now before the Senate, I can think of nothing more essential for the Congress than clear thinking about the Soviet Union.

How can we reach sound judgments on the national defense budget if we do not understand the nature of the Soviet adversary?

Can you think of a top American business leader who would make decisions determining the survival of his company before he had carefully studied his chief competitors and what they were up to? Yet many in Congress seem willing to make decisions that could determine the safety and survival of this Nation and the future of individual liberty without facing up to what the Soviet Union is up to.

Recently, we have heard a great deal about "national commitments," disarmament, and threats to "cut and cut and cut and cut" the defense budget. But we have heard precious little discerning comment from those same sources about the nature of Soviet leadership and what is really going on in the Soviet Union.

Who are the Kremlin rulers today? What sort of people determine the foreign and defense policy of the Soviet Union?

Briefly, these are the members of the 11-man Politburo, in alphabetical order:

Leonid Brezhnev, age 62, General Secretary of CPSU Central Committee. Russian by birth, he began his career during the Stalin purge of 1936-38 in the Ukraine where there were three survivors of the 102-man local central committee. This is one of the men who denounced others on innumerable occasions. Orthodox in outlook, built his career on the political platform of return to doctrinal rigidity, partial rehabilitation of Stalinism, and crackdown on liberal writers. His political priorities are protection of the supremacy of the party, tightening the ties of the Socialist camp under Soviet dominance,

protection of defense goals through allocations to heavy industry, with agricultural allocations ranking second.

Andrey Kirilenko, age 62, Secretary of CPSU Central Committee. Russian by birth. Rose from a career of bloody and petty intrigue in the provincial Ukrainian party committees. Thus far one of Brezhnev's most loyal political supporters. Alternates with Suslov in deputizing for Brezhnev when the latter is out of town. Has been increasingly prominent in the past year and may now have edged Suslov out as the No. 2 man in the party. Kirilenko displayed a strong pro-consumer bias during the Khrushchev years and in the period immediately after his ouster. These views have been muted since 1966 when ideological orthodoxy and preoccupation with the needs of defense began increasingly to dominate the thinking of the leadership.

Aleksey Kosygin, age 65, Chairman of U.S.S.R. Council of Ministers. Russian, born in Leningrad. Took the first moves in his career in the great purge of 1936-38. He played an active role in party life at a time when the main "activity" was the denunciation and purge of the previous secretaries and bureaus, and when the Leningrad Communists were being slaughtered on a very large scale. During that time he advanced rapidly—moving up in four steps, from shop manager in a Leningrad factory to a post in the Soviet Government in about 2 years. Pragmatic with a strong interest in a balanced economy, especially interested in increased attention to consumer goods and "rationalization" of economic planning methods. His age, desire to preserve his privileged position, and orthodox Marxist training, however, limit his receptivity to new ideas and methods.

Kirill Mazurov, age 55, First Deputy Chairman of U.S.S.R. Council of Ministers. Byelorussian by birth. Started his career in the party at the time of the 1936-38 purge. He has served some years in KGB operations. Pragmatic in outlook, responsible for light industry, but also interested in agriculture. Is behind a grandiose plan for the "urbanization" of the countryside being strongly pushed by the Byelorussian party organization, but currently hard up for funds. In foreign policy, Mazurov seems to favor an aggressive stance against the West. Alternates with Polyansky in deputizing for Kosygin.

Arvid Pelshe, age 70, Chairman of Party Control Commission. Latvian by birth and career, began his rise in the Latvian party during Suslov's pro-consulship of that area, and is reported to owe his present high position to Suslov's patronage. A colorless party functionary, orthodox in outlook, he has spent important years in KGB operations.

Nikolay Podgorny, age 66, Chairman of Presidium U.S.S.R. Supreme Soviet. Ukrainian by birth and career. Under Khrushchev, identified with relatively liberal views, but since early 1966 has moved steadily toward orthodoxy in support of Brezhnev.

Dmitry Polyansky, age 51, First Deputy Chairman of U.S.S.R. Council of Ministers. Ukrainian by birth, career ties to the Crimea, and thus far a loyal member

of the Ukrainian group in the Politburo. Has served in both party and state positions. As First Deputy Premier is responsible for agricultural production and is a zealous champion of investment in the agricultural production base. As a result has been increasingly in direct competition with the military for scarce resources. He is interested in doing business with the West and acquiring advanced Western technology, but otherwise seems to be ideologically orthodox in his foreign policy views.

Aleksandr Shelepin, age 50, Chairman of All-Union Central Council of Trade Unions. Russian, made his career in the Komsomol, then as head of the KGB. One of the most powerful figures in the leadership at the time of Khrushchev's ouster. Since 1966 his political position has steadily weakened. Interested in administrative efficiency and modern methods of control. Was behind move to rehabilitate Stalin in early 1966 and seemed to favor a tough, chauvanistic foreign policy. There are now indications that he is in search of a new platform to "run" on. Is said to have opposed Politburo handling of Czech crisis, but was an advocate of the aggressive line in the 1967 Middle East war.

Petr Shelest, age 61, Ukrainian by birth and career, still based in Kiev. First Secretary of Ukrainian Central Committee. Conservative on most domestic issues though something of a Ukrainian nationalist and champion of the "rights" of the republics, which however does not prevent him from applying harsh measures against his independently minded Ukrainian countrymen. A hard-liner on military matters. His remarks on foreign policy issues have been consistently tough, and he is reported to have pushed hard for a military intervention in the Czech crisis, fearful of the spread of the freedom-virus to the bordering areas of the Ukraine.

Mikhail Suslov, age 66, Secretary of CPSU Central Committee with informal ranking of second-in-command. As the 1936-38 purge struck, Suslov began his spectacular rise, becoming one of the Rostov provincial secretaries. In 1939 he was appointed First Secretary of the Stavropol Regional Committee, where in 1944 he became involved in the deportation of the Karachai people. Proving successful in this, he was made Chairman of the Bureau of the Central Committee for newly occupied Lithuania, in 1944 and reimposed Soviet rule against a bitter resistance. High priest in doctrinal matters with special interest in the cohesion of international communism. Orthodox in outlook and long opposed to "revisionism" in any field.

Gennady Voronov, age 58, Russian by birth. Grew up in the Soviet Far East and for many years party boss of one of the large districts bordering on Communist China. Chairman of RSFSR Council of Ministers. Ambiguous figure with no apparent political ties with other members of the Politburo. Has been outspoken defender of the technocracy and favors establishing Western-style management training schools.

The often neglected truth about this group of men who are now on top in Rus-

sia is that they are the first generation of rulers who are actually the products of the Stalin system. Those who rose with Brezhnev, Kosygin, Suslov, Kirilenko, and the others in the purge of 1936-38 were qualified for promotion by the denunciations of their colleagues. To have moved ahead in those days is a certain sign of complicity in Stalin's terror.

Now, in power, these men have shown themselves unable and apparently unwilling to make the reforms, small or large, required to meet the needs of an increasingly more complex, sophisticated Russian society. As one Russian observer put it:

There are not liberals at the top. Not in the Politburo. No Soviet Dubceks in sight, and no viable faction within the Party that would support one. That's the worst of it all.

Indeed, the repressive measures employed today to intimidate, frighten, and stifle expression of dissent approach those of the 1930's and 1940's in their intent and in the dogged intensity with which the Politburo executes them. There are more intellectuals now incarcerated in jails, committed to mental hospitals, or exiled to Siberia than at any time since Stalin's terror—Aleksandr Ginzburg, Yuri Galanskov, Pavel Litvinov, Larissa Daniel, and all the others. In addition, Soviet official organs employ countless other methods of repression. Liberals are slandered in the official press. Travel abroad is denied dissenters. Writers are denied the right to publish their works in their own country.

The lack of qualifications of most of the Politburo in dealing with foreign affairs is obvious. Careerists in the provincial or Central Party apparatus, they are generally narrow-minded, nationalistically oriented, basically hard-boiled Communists, limited men, concerned for their own positions and privileges, and knowing little of foreign reality.

After World War II, Maxim Litvinov used to take foreign diplomats and newspapermen aside and warn them that Stalin and his colleagues were thoroughly ignorant of the outside world, and that this constituted a very great danger. It seems that most of the present Politburo are no better off in knowledge of the outside world, some of them probably worse off. Clearly, we cannot discount the danger that these men, who are showing themselves unequal to the need for reforms at home, may make serious errors of judgment in their conduct of affairs abroad.

This is the group that chose to use armed force to strangle the evolutionary democratization of its own friend and ally, Czechoslovakia, which under Dubcek's leadership was indicating to the Soviet Union itself a way out of the vicious circle of repression, fear, repression. This is the group that then concocted the ominous Brezhnev doctrine of limited sovereignty which asserts the right of the Soviet Union to intervene unilaterally in all Communist-run countries.

It is difficult to see how one could have thought up a more clumsy and self-defeating rationalization of the Czech invasion. All the talk about the sub-

ordination of international law to the "laws of the class struggle" and the double-talk about defending sovereignty by denying sovereignty gives no comfort to any other Communist ally, and shows a crude and deliberate disregard for the political interests of other Communist parties, particularly many in Western Europe, who, to retain the credibility of their effort to gain power by parliamentary means and of their willingness to support "bourgeois liberties," feel they must repudiate the theory of imperialist communism and Soviet Party predominance.

If anyone had any doubt about the capacity of the Politburo to blunder, its performance in the case of Czechoslovakia should dispel the doubt. The similarities between Moscow's forcible methods and Nazi methods are now fully visible to the peoples of all the Warsaw Pact countries, beginning with Rumania, and to communist comrades around the world whose interests the Soviet leadership brazenly ignored.

Meanwhile, there is little doubt that a struggle for power and influence goes on within the Politburo, and that the outcome is uncertain.

In the Soviet Union a few leaders, conspiring when they choose, can make and unmake a man's power without his knowledge or that of the public. That is what happened to Khrushchev in 1964.

Will change, when it comes, bring merely a reshuffle of the same old party apparatus—Suslov or Kirilenko in place of Brezhnev; Voronov or Podgorny in place of Kosygin? Or will it bring a change of generations of party apparatus—Shelepin, Mazurov, Polyansky?

Will the change continue to restrict Soviet politics to the self-perpetuating Kremlin circles? Even now, the police appear to be gaining ground. As Michel Tatu, one of the most astute analysts of the Soviet scene has said, it is no accident that Yuri Andropov, the KGB chief, has been promoted to be an alternate member of the Politburo, for the first time since the notorious Lavrenti Beria was in the top group. Andropov has presided over the crackdown by the KGB on liberal Soviet intellectuals and signs of him in action during the Czechoslovak crisis have not indicated any doubts on his part concerning the intervention.

Also now, the influence of the Stalinist-type political commissars appears to be on the rise. General Shtemenko, Stalin's former chief of staff, downgraded two ranks on his master's death, has not only been reappointed to high position in the Soviet military hierarchy but is now Chief of Staff of the Joint Armed Forces of the Warsaw Pact states, and is campaigning to refurbish Stalin's image as a military leader. General Yepishev, a particularly sinister figure, who was Stalin's assistant minister of state security in the horrible doctors' plot period, was made chief political commissar of the Soviet Armed Forces in 1962, and promoted to full membership of the Central Committee following the fall of Khrushchev. He is noted for his continual attacks on the liberal writers and on the so-called foreign imperialists. And one gets no comfort from Yepishev's chilling

article, widely circulated this year in *Kommunist*, the official Communist Party journal. In that article he says that "classical Leninist teaching" on the inevitability of "a series of frightful clashes" between capitalism and communism still applies in the nuclear age, and that World War III would "guarantee the construction of socialism and communism."

The resurgence of Soviet thinking in terms of the class struggle, reflected in military doctrine as well as in the Soviet approach to international law, must cause apprehension about the road ahead.

Now, the fact of the matter is that an increasing number of the informed Western analysts of Soviet developments assess the Soviet Union as a dangerous, unpredictable opponent—on the verge of a leadership crisis, the outcome of which cannot be forecast.

In this perspective, the fast-growing military capabilities of the Soviet Union take on added significance.

No one is sure of the future and one has to be prepared for surprises.

I am reminded of the lively discussion of the Czech crisis on August 7, 1968, at a high-powered workshop. The discussion produced a show of hands on the probability of Soviet military occupation of Czechoslovakia. Twenty present believed such an eventuality unlikely; two thought it probable.

One participant later suggested as a possible subtitle for the workshop, "Or Why We Were So Wrong."

We do not know who will have the finger on the Soviet trigger in the months and years ahead. The enormous Russian arsenal will be at the disposal of whatever "strong man" or ascendent faction of tough, ambitious figures come to the fore in the Soviet power struggle.

Hence, there is everything to be said for the United States to maintain a solid and prudent stance.

Mr. President, the essence of a solid and prudent stance is a protected U.S. second-strike capacity which gives us the capability to retaliate against a strategic nuclear attack, and therefore to discourage such an attack. This is the first essential of national security and individual liberty, and of the survival of us and our allies in freedom.

In recent years recognition has grown decisively among officials and scientists that we want to maintain the second-strike capacity—not of just one, but of all major vehicle types of our strategic force: Minuteman, bombers, and Polaris-Poseidon.

As our Armed Services Committee report states:

Each system has different limitations, is subject to varied uncertainties and requires distinct modes of attack. Each type must be protected, so as to insure no easy defeat of our system by an enemy. It must be of serious concern therefore if any part of our deterrent mixture is adversely affected by changing adverse forces and technologies.

The Senate Armed Services Committee has voted to cut about \$2 billion from the proposed 1970 Defense Department authorization bill. I joined in those votes. We can do without some of the less

urgent military programs. But in the face of the likely dangers ahead, tampering with the strategic offense and defense core of the Defense budget is a very risky business.

Of real concern is the continuing Soviet development of their gigantic SS-9 missile, on which they have already begun to test multiple reentry vehicles, and not without success. The evidence is firm that the Soviets have more than 230 SS-9's operational or under construction. If the Soviets continue to deploy additional missiles at the same rate as in the past few years, by the mid-1970's the survivability of most of our Minuteman forces, as presently deployed, would be in question.

Also of special concern is the threat to our bombers from the growing number of Soviet Polaris-type missile submarines, and the danger to our Polaris system from Soviet efforts in nuclear attack submarine construction and in anti-submarine warfare. As the report of the Armed Services Committee puts it:

We cannot assume that our Polaris system will be the first weapon in history to remain invulnerable.

Also of concern is the hard work which the Soviets have put into their ABM for many years. The Soviets are completing the deployment of some 60 Galosh ABM missiles on launchers around Moscow. And, very important, we now have hard evidence that the Soviets are testing an improved long-range ABM, which apparently has a "loiter" capability, so that, after the initial firing, the missiles can coast or "loiter" for a period of time, until a specific target is selected, at which point it can then be restarted and maneuvered to the target. The Tallinn defense system, very extensively deployed throughout the Soviet Union, is believed by many in the intelligence community to be subject to upgrading so as to give it an ABM capability.

Faced with these problems, President Nixon has recommended a phased program to deploy an ABM defense. The functions of the Safeguard ABM program are to help protect, first, the Minuteman silos; second, our manned bomber force; and third, the command and other facilities necessary in a crisis to assure national political control of both our land and sea-based strategic forces. It is intended also to, fourth, provide a partial but useful protection of our people against an accidental, irrational or reckless small missile attack.

The opponents of the Safeguard program initially seemed to deny the fact that we confront increased threats to our deterrent forces in the mid and late 1970's. They now appear to have retreated from that position and are trying to make a case for alternatives to deploying an ABM system which in their view would be better.

Several Senators and scientists have suggested that, rather than defend our offensive forces, we should expand our offensive forces—our Minuteman or our Poseidon, or both. Yet buying more Minutemen without protection is certainly more destabilizing than an active defense of Minuteman silos, since it increases the capacity to strike first. And

buying more MIRVed Poseidon forces would surely be viewed from the Russian side as more threatening than a limited ABM defense of our forces.

Moreover, any significant expansion of our offensive nuclear weapons is more costly than the Safeguard program.

The President and the proponents of the Safeguard system are in my judgment the real moderates on this issue.

Some opponents of ABM advocate delay in deployment—of what they call "an inadequately tested, unproven missile defense system." In fact, the Safeguard system is the result of a very comprehensive research and development effort. The components are more fully advanced and better tested than were the components of the Polaris missile system, when a comparable go-ahead was given.

Mr. President, how can we now prove this system, except through a prototype-like deployment? Phase I of Safeguard is, in effect, a prototype installation that will enable the Defense Department to complete engineering, installation, and shakedown and tests and to have the two stations fully operative by 1974. If we delay the decision for about a year, as some propose, the soonest these two sites could be ready for complete check-out would be in 1976. This would leave us with no option to provide active defense for the essential portion of our Minuteman force on the schedule that may be necessary if we do not reach agreement with the Soviets on limiting or reducing strategic forces. There is obviously no substitute for time. And, what is more, the delay would cost us an extra expenditure of several billion dollars.

We can expect, as in the case of every other offense and defense system, that we can improve its effectiveness over the years. But we urgently need the experience of a deployed working prototype. The idea that we should not be getting this experience in this very important defense area of nuclear weaponry, while the potential opponent was not dormant and has had the opportunity to obtain some of this experience for many years, is to me the height of imprudence.

The statement to our committee by Freeman J. Dyson, of the Institute of Advanced Study, at Princeton, includes this perceptive comment:

In the long run the battle between offensive and defensive technology is a battle of information. If the defense knows where the offensive warheads are, it is not too difficult to destroy them. For the last 20 years the offensive has had an overwhelming advantage, but this advantage is being reduced as defensive information-handling capability improves. In the long run, I believe the defense will prevail because the defense will have more accurate and timely information than the offense. Defensive batteries within a hundred miles of the battle should ultimately be able to out-maneuver incoming offensive vehicles controlled from a command center 5000 miles away on land or in a submarine off-shore. The offensive command will be fighting the battle blind, without any possibility of quick reaction to defensive moves. I consider that it is only a question of time, perhaps ten or twenty years, before these inherent advantages of the defense become actual. The time that it will take to overturn the doctrine of the supremacy of

the offensive will of course depend on political decisions as well as on technological developments.

Some of the campaigners against ABM deployment argue that before deciding to proceed with deployment we should negotiate with the Russians.

Why either one or the other?

Why not both?

If we do not have our ABM system moving along, what inducement is there for the Soviets to negotiate with us on a freeze or a reduction in their ABM deployment? Can anyone seriously maintain that Moscow will agree to limit its ABM's if we now, and unilaterally, abandon deployment of our ABM's? Nothing in the record of negotiations on the control of arms suggests that this would be the way to have a successful negotiation with the Soviets.

I do not think that we can realistically expect the Politburo to sign an arms agreement that rules out a limited Soviet ABM defense and leaves their country vulnerable to nuclear coercion and attack from Communist China and other secondary nuclear powers. And I also very strongly doubt that the American Congress and people would accept an agreement under which the Soviets are permitted to have their ABM system while we have no comparable ABM protection well underway here.

Thus I believe the chance is promising that we could come to an agreement with the Soviet Union for a limited ABM defense on both sides—an agreed ceiling on the number of ABM's, for example—provided that we do not foolishly throw that chance away by now scuttling our own program.

In my judgment, anyone who wants a successful negotiation with the Soviets to halt the further evolution of dangerous strategic armaments should be a strong proponent of the Safeguard ABM.

President Nixon has asked us to give him the funds to proceed with the Safeguard ABM as a matter "essential for national security."

After thorough consideration, a majority of the Senate Armed Services Committee has supported the President's request.

President Nixon believes that he would be in a much stronger position in the forthcoming negotiations with the Soviets on limitation of offensive and defensive nuclear systems if he had the backing of Congress on his Safeguard program. I agree with that analysis. Indeed, in my opinion, nothing would be more detrimental to our diplomatic effort—and more shortsighted—than to deny the President the strong hand he needs just as his negotiators are about to sit down at the conference table.

I have no doubt that the Senate will evidence its commonsense and vote to go forward with the ABM program as part of the 1970 Department of Defense authorization bill.

Mr. TOWER. Mr. President, will the Senator yield?

Mr. JACKSON. I am glad to yield to the distinguished Senator from Texas.

Mr. TOWER. I express my appreciation to the distinguished Senator from Washington for one of the best speeches

on defense research that I have heard in a long time. It is information that everyone should heed. I think, certainly, that it makes the strongest possible case for the acceptance of research and deployment of the ABM.

Now that we are witnessing the resurgence of Stalinism, does not the Senator believe that the time remaining for a detente is less, probably, than in previous years?

Mr. JACKSON. I think the Senator is correct. If anyone has doubts about the nature of the present regime, I suggest that he read some of the quotations from the writings of that long-time Communist, Marshal Tito. Marshal Tito was a member of the Communist Party before many of the present members of the Politburo were even eligible to join the Young Communist League. Marshal Tito is so much concerned that he is now arming his peasants for guerrilla warfare.

If anyone has further doubts, he should listen to the words of the Communist leaders in Romania.

If we want to leave that area and move to Western countries, we can read what Luigi Longo, the head of the Communist Party of Italy, has said about the present regime. Can any Senator imagine how embarrassed the head of a Communist Party must be in a Western country, where free and open elections are held, to have to admit on the platform that if his party comes to power, according to the Brezhnev doctrine, that country, will then come under the discipline of the Soviet Union, and be subject to unilateral occupation by the Soviets.

No wonder the leaders of so many of the Communist Parties in the Western World have denounced the leadership in the Politburo as dangerous and, indeed, a threat to the peace of the world. Yet I am amazed to hear it said in the United States and elsewhere that the Soviet Union is no problem, and this at a time when the top ranking leaders of the Communist world outside the Soviet Union are warning, over and over again, about Soviet imperialism. In fact, the major foreign policy problem which confronts us is Russian imperialism.

Mr. President, the Brezhnev doctrine cannot be explained in the doctrinal terms of Marxist-Leninist philosophy. This doctrine is a most fantastic proposition. It can be explained, however, in terms of Russian history, in terms of Russian imperialism.

I submit that with all the discussion that has been going on about defensive systems and offensive systems, we have spent altogether too much time talking about the military hardware and we have not been debating the central issue. The central issue which you have to decide first before you can decide what kind of military budget you should have or what kind of foreign policy you should have, is: What kind of adversary do you face, and what is he up to?

I submit that even if we just listen to the representatives of the Communist world outside of the Soviet Union, we get a pretty good measure of the threat as they witness it.

Mr. TOWER. Mr. President, will the Senator yield for a question?

Mr. JACKSON. I yield.

Mr. TOWER. The Senator is obviously knowledgeable on this matter. Does he discern any genuine desire on the part of the present hierarchy of the Soviet Union to reduce the current pace of arms technology, development, and deployment?

Mr. JACKSON. Mr. President, there is a direct relationship to the coming of power of the present group in the Politburo and the increase in Soviet strategic arms. They are directly related. There is a direct relationship, of course, to the use of force to subjugate Czechoslovakia and the enunciation of the now-infamous Brezhnev doctrine. I do not think there is any doubt that the men who are running the Politburo today are unsure of themselves. They are not very competent. I think they present to the western world—and to the Communist world outside of the Soviet Union—a real, and unpredictable threat.

Mr. TOWER. Further, does it appear that historically Soviet arms development and Soviet stockpiling of arms, the expansion of Soviet military capacity, is directly related to what we have done in the way of arms development? In other words, have they simply reacted to the things we have done?

Mr. JACKSON. This is not, of course, the case. The Soviets, in my judgment, have decided on what they feel they might need if they ever got into a nuclear war, in order to be in a better position than the opponent if such a war does come. Obviously, there is some interaction between their programs and ours, but it is not the simple action-reaction pattern that some people call it.

In my statement I referred to General Yepishev, who made some rather startling comments about the fact that war was still inevitable, even in a nuclear age. The Senator will recall that Mr. Khrushchev walked away from that position. He said that obviously Mr. Lenin, when he laid down the idea of the inevitability of war, did not have in mind the possibility of catastrophic thermonuclear weapons, and therefore thermonuclear war was unthinkable.

But now we have a high functionary, and influential official in the Soviet Union, writing in an official organ, the Kommunist, saying, in effect, that we might have nuclear war and that indeed the possibility of it was inevitable and that if we did it would "guarantee the construction of socialism and communism."

I think this presents some measure of the preparations that they are making.

Mr. TOWER. Then the Senator would reject the somewhat fragile contention and the historically unprovable contention that if we develop and deploy an ABM, we are simply fueling the arms race for the Soviet Union, that they will react by something greater.

Mr. JACKSON. I do not have the direct quotation before me, but in 1967 this very question was asked of Mr. Kosygin at a press conference in London. They asked Mr. Kosygin, in effect, "Are you not fueling the arms race by deploying an ABM system?" He, in effect, said, "There are two systems—offensive and defensive—and a defensive system is merely in de-

fense of the country, and it does not add to or fuel the arms race." This is Mr. Kosygin's position.

I will point out that the Soviet Union was the first to develop an ICBM, the first to deploy an ABM—which we have not yet done, the first to set off a 60 megaton bomb—something we have never done. They were the first to deploy a fractional orbital bombardment system.

I should observe at this point that from 1945 until the fall of 1949, we in effect unilaterally disarmed so far as the hydrogen bomb was concerned. We had the understanding, the talent, and the know-how from the days at Los Alamos to go ahead with what was then called the super project. We made no move in this regard until Klaus Fuchs was apprehended and we had the conclusive evidence that the Russians knew a lot about it. Klaus Fuchs, of course, turned out to be the greatest traitor in this century, especially in the field of technology and science. He had given this information to the Soviets. But for 4 years we did nothing about developing a hydrogen bomb, because we did not want to fuel the arms race.

We need not go into detail about what the Soviets did in the postwar period when we had an absolute monopoly of nuclear weapons. There are too many people in Central Europe in chains today who testify to what they did. There were the continuing harassments of Berlin, and so on. But there were limits as to how far Moscow would go when it was in a totally inferior nuclear position. But if they get into a position where they feel they could move, from a strategic point of view, with relative impunity, I wonder what they would do in this troubled world in trying to extend their influence. I think they would be tempted to take great risks and this could lead to the most dangerous kind of confrontations with us, and with other powers.

Mr. TOWER. Then, would it not be valid to say that even if we should unilaterally initiate a cessation of development, production, and deployment of strategic weapons in this country, we could not expect the Soviets to do the same?

Mr. JACKSON. There is evidence to completely corroborate the Senator's statement.

The Senator will recall that President Johnson invited Mr. Khrushchev not to go ahead with the production of any more fissionable material with the new plants that were underway. There was a unilateral move on our part. We ourselves announced a shutdown. Mr. Khrushchev indicated he was going to do likewise, but instead they added to their capacity. The Russians went right ahead and added to their production of fissionable material.

Mr. TOWER. I thank the Senator for his remarks, and I should like to associate myself with those remarks.

Mr. DOMINICK. Mr. President, will the Senator yield?

Mr. JACKSON. I yield.

Mr. DOMINICK. I should like to congratulate the Senator for what I think is one of the best speeches I have heard in a long time.

Dammick
July 9, 1966

I think one of the problems we have been facing—and I have said this over and over, to the extent of walking out in anger from one of the Armed Services Committee meetings—is the fact that when we are given data, it is always marked "secret" with respect to what the enemy is doing, but by and large it is not with respect to what we are doing. So the whole security picture has been turned around, and the people of this country have not been permitted to know what the Soviet Union in fact has been doing.

All the information I have—and I would ask the Senator whether this is correct—is that when we leveled off on our Minuteman production and deployment, it is our hope at that time that this would bring down, as I understand it, or would create an atmosphere in which the Soviets themselves would stop their production of offensive weaponry. Am I correct?

Mr. JACKSON. The Senator is correct.

Mr. DOMINICK. What happened?

Mr. JACKSON. The Soviets went right ahead and proceeded to harden their strategic missile sites. They did this at a time when they knew we did not have a first-strike capability.

In fact, today the Soviets are the only one building toward a first-strike capability. We do not have that capability and we do not want it. We made that decision in 1961 when we decided to go ahead with Minuteman. We told the whole world we were going for a second-strike capability and none other than that.

Mr. DOMINICK. In the meantime, did they not produce and deploy the SS-9 and the SS-11 and a good number of their other missiles which are in evidence, and have they not accelerated production, no matter whom they may be targeted on?

Mr. JACKSON. The nature of our position in this matter is well known. The Senator will recall that we entered into a nuclear test ban moratorium with the Soviets. The way in which they announced the termination of the agreement was to set off a 60-megaton bomb. We were acting in good faith and we were not prepared to resume testing. The result was that they were able to test strategic nuclear weapons that were invaluable to them, including ABM weapons, in which 2 years work was involved.

As a result of their action in this regard they were able to obtain data and information in the strategic weapons field that we have not been able to get because we went along with the nuclear test ban treaty. I supported that agreement. But I point out we had this agreement and without warning they abrogated it. They knew very well their intentions in that regard because from what they were able to do it was apparent they had made the decision months and months previous to the time they broke the moratorium in September 1961.

Mr. DOMINICK. The Senator emphasized the leadership of the Soviet Union in the context of what it might be like 5 years, 6 years, or 7 years from now. I would hope that before we are through

we would also get the same type of information with respect to the leadership of the Red Chinese.

Mr. JACKSON. I think the Russians would like to get that information also.

Mr. DOMINICK. I think they would, and I would be happy to have the Senator do the same type of research he has done on this matter and get that information out if he could.

It seems to me that I recall President Johnson urged that we deploy the Sentinel system against a possible Chinese attack in the middle 1970's. I remember reading myself the words of Mr. Mao, who is in charge of that country, saying they would not mind a nuclear world war because they could survive it out of sheer numbers, which would leave no speculation with respect to what might happen if they had more nuclear power than they now possess.

I hope we can get some background analysis of the upcoming leadership in that area and put that information in the Record with respect to the forces we are facing.

I congratulate the Senator.

Mr. JACKSON. I thank the Senator. I wish to comment on the remarks of the able Senator.

I think that the Soviets during these tense days with the Chinese Communists are counting heavily, on having in the period ahead, among other things, an ABM system that can deal with nuclear blackmail efforts or an irrational act on the part of the Chinese. We know that very substantial Soviet conventional and strategic forces have been moved into the Sino-Soviet border area. We do not know what might happen. Anything could happen out there. It is a most explosive situation.

I feel quite strongly that, if there is a chance to reach an agreement involving strategic weapons, it is primarily in this area of the antiballistic missile system, because I believe the Russians are going to insist on a minimum number of ABM's, especially in order to deal with the Chinese problem as it is now, and as they may find it in the period ahead. But to get the Soviets to limit the number of their ABM's, I think we need to have our own ABM system really underway—to bargain with. That is the point I developed in my earlier remarks.

Mr. DOMINICK. Mr. President, will the Senator yield further?

Mr. JACKSON. I yield.

Mr. DOMINICK. One of the things that has been of increasing concern to me is the semantic somersaults made in some areas of the country where people who say we have an overkill say we should not deploy the ABM because that would be provocative; and they say build more offensive weapons. That does not make sense to me. It seems to me that if we have an overkill, we should maintain the ability of that overkill to be used as needed.

Mr. COOPER. Mr. President, will the Senator yield?

Mr. JACKSON. I yield to the Senator from Kentucky.

Mr. COOPER. Mr. President, I heard the statement of the able Senator from Colorado, regarding the support by oppo-

nents of ABM of offensive weapons as an alternative. The distinguished Senator from Washington has made the same statement. In the testimony of Secretary Laird before the House committee, he made a similar statement.

It is said that those who oppose deployment of the anti-ballistic-missile system this year, a defensive system, favor additions of missiles to our offensive systems.

I must say that is incorrect. The framework in which such a statement has been made is—that if a year from now the Soviets are proceeding with the deployment of the SS-9, perhaps armed with MRV or MIRV, at that time, if necessary to protect our deterrent, we could protect our assured deterrent by building additional Minuteman missiles and additional Polaris of Poseidon-type submarines. That is the context in which such statements have been made.

Mr. JACKSON. The Senator is correct regarding his own position certainly.

Mr. COOPER. Yes, but the implication, and I say this with all courtesy as the Senator knows my regard for him, of the statement made here today, and made by Secretary Laird in his testimony before the House Appropriations Committee, is that opponents of the anti-ballistic-missile system are arguing for an alternative; that is, additional ICBM's and the Polaris should be deployed. This is not correct.

Mr. JACKSON. I say in response to the statement of my good friend that it is far less provocative to try to defend our deterrent; then later if that is not adequate, the decision can be made about going ahead with an addition to the offensive system.

We did have some testimony before our committee, the Committee on Armed Services, to the effect that if the situation reaches the point where the Minuteman is really threatened, so that it no longer has a credible position in the deterrent system, then it would be preferable to go the offensive route, rather than try an ABM defense. I think I stated it correctly.

Mr. COOPER. My position is that arms control is the best means of security. But if talks fail—if the threat to this country becomes as serious as the Secretary of Defense says—we can increase offensive weapons to meet the threat. He conjures up a bleak picture for the United States—but one based on several assumptions: First, that the Soviet Union will proceed with the deployment of the SS-9 and construction of Polaris-type submarines. The second assumption, if the Soviet Union takes that course, is that the United States would then protect itself both by the deployment of a better and effective ABM system and by the construction of more intercontinental ballistic missiles, and by Poseidon. These measures would be available to the United States to protect and defend its nuclear deterrent. The assumptions to my mind, are not correct. But they are argued to make the case upon which the ABM is based. The fact is—the Soviets may not proceed as assumed—but if they do—we can protect our security without timelag.

Mr. JACKSON. Let me say in response to my good friend that the Secretary of Defense, of course, must make certain assumptions because prudence tells him that there is a leadtime factor involved. In other words, what we are really talking about, as the Senator knows, is what the Soviets may have in the way of strategic arms in the 1974-76 and beyond time frame. We look at what they are doing and try to make certain extrapolations from that as to what they may have during that period. Unless we allow for the leadtime, we will not have the means to protect our deterrent in that period. The big debate turns on that.

Mr. COOPER. We shall get into those points later, during debate. But on the question of leadtime, if it should become necessary to build additional offensive weapons I believe the Senator will agree that there would be time to do so.

Mr. JACKSON. Well no. This involves cranking up production of Minutemen and Poseidon missiles, producing and deploying them which takes time. Polaris submarines take time. We have had various estimates of the leadtime required, and they can be supplied to the Senate. What we are really talking about is what the capability will be during the mid-seventies and beyond.

Mr. COOPER. We shall be prepared on these points.

Mr. DOMINICK. Will the Senator from Washington yield so that I may make one more comment?

Mr. JACKSON. I yield.

Mr. DOMINICK. In my comment, I did not mean to impugn anything about one of my most beloved friends in the Senate, my friend from Kentucky (Mr. COOPER). I had not meant it personally. What I have said is that from all over the country, and from many scientists, they have said that we are capable of building a defensive weapons system that will be provocative, but if we build an offensive system it will be nonprovocative. That seems to me to be a question of a semantic somersault. I can understand it in the context of putting it in what the Senator is talking about, but this is not the context in which many people are putting it, including the previous Secretary of Defense.

Mr. COOPER. I have heard the testimony of the scientists before the Armed Services Committee, and the subcommittee of the Foreign Relations Committee chaired by the Senator from Tennessee (Mr. GORE); except when I was ill. I have read the testimony. I do not know any scientist—I may be wrong, but I have not so read or heard—who said that, as an alternative to ABM, offensive weapons should be deployed.

Mr. JACKSON. On that one point, the Senator has read the testimony of many experts from each side of the ABM. I do not have that at my fingertips, but in the next few days I will place in the Record a number of statements. It was my understanding that if the threat reached the point that it was, indeed, a grave threat to the Minuteman deterrent, they would advocate going forward with a buildup of the offensive forces. I shall place that in the RECORD. I believe that was the testimony, for example, of Dr.

Rathjens and Dr. Chayer, and possibly others such as Dr. Wiesner.

Mr. COOPER. I think that is correct. That is the statement I have made.

Mr. JACKSON. I thought the Senator said they did not say it.

Mr. COOPER. In the event of a threat that materialized—

Mr. JACKSON. Let us put in the Record what it is.

Mr. COOPER. We would have the option, if necessary, of deploying additional offensive weapons.

Mr. JACKSON. But, as I recall, they said it was in preference to the ABM. It seems to me, from the Russian point of view, that going ahead with an offensive system would be far more provocative and destabilizing than providing for a defensive system. That was my point. But, in any case, the record will speak for itself as to what they and others have said.

Mr. COOPER. We will place in the Record their statements—

Mr. JACKSON. May I just add this other thing, since the colloquy referring to the leadtime necessary to crank-up Minuteman production and deploy a substantial number, I am advised that the leadtime is a number of years—some estimates run as high as 4 to 5 years.

Mr. COOPER. I do not think so. Perhaps the Senator can produce the facts for the Record during debate.

Mr. JACKSON. I will supply data on this matter.

Mr. COOPER. I have listened to the speech of the Senator from Washington very carefully. He always makes a very effective and informative speech. I am not going to question the judgment of the Senator from Washington regarding characteristics of the Politburo. I do not contradict the Senator's statement about the new doctrine which the Soviet Union declared—

Mr. JACKSON. The Brezhnev doctrine.

Mr. COOPER. In connection with Communist countries. It is an unusual innovation in any system of law and international relations. Czechoslovakia was a brutal example.

I would argue that if the Soviet leaders are as unpredictable as it is said they are—and they may be—and if the threat which the Senator has pictured so grimly, as has Secretary of Defense Laird, is a true threat, and knowing that both countries are armed to the teeth, that the United States has more men under arms around the world than the Soviet Union and that though the United States possesses three times as many nuclear warheads as the Soviet Union, that both countries have the capability of destroying the other, even if first struck by a nuclear attack—then the Senator's speech supports the argument that we are making. Let our great and humane country try in negotiations, to determine whether it is possible to reach an agreement to control both offensive and defensive weapons rather than deploying new weapons systems such as ABM or MIRV. If not an agreement in formal terms, a tacit agreement proved by a halt in their deployment by the Soviet Union and the United States.

This course of action, of effort, offers at

least some ray of hope for the people of our country and the rest of the world. It is better to make the effort, even if it fails, than to vote to pile up these weapons, particularly at a time when we are preparing for negotiations to urge their control.

Mr. JACKSON. Let me respond to my good friend from Kentucky by saying that I have the highest regard for his sincerity in presenting his point of view. No one that I know of, on the committee or in the Senate, has stated that we do not have this awesome strategic nuclear capability at the present time. I have been trying to emphasize that we are not talking about that now. We are talking about 1974-76. I do think that the Senate should know what is happening in the strategic arms field. The Soviet Union, as the Senator knows, now has deployed or has under construction, more land-based, long-range missiles, not to mention their medium-range missiles, targeted on Western Europe, than the United States. Also, as the Senator knows, the Soviets have a greater megatonnage deliverability capability right now than we have.

Speaking of nuclear arms, we should remember, when we are talking about nuclear strategic capability, that it is not just the number of warheads that matters; it is warhead numbers, times yield, times deliverability, that spells out the nuclear posture.

I want to add that I share the Senator's desire to negotiate with the Soviets. I have supported all moves in that regard. But now I want to ask a simple question:

Why would the Russians negotiate to give up or limit an ABM system if they have one and we do not have one? Where is our bargaining power in that situation?

Mr. COOPER. They may not. The Senator has answered the question in his own speech. He said it may well be, as a result of these negotiations, that the Soviets and the United States may decide they want an ABM system. But this would be the result of agreement.

Mr. JACKSON. I think it is desirable to have a limited number of ABM weapons. I do think, in light of the condition that exists between the Soviet Union and Communist China—and the Senator is fully aware of what has happened there in recent weeks—there is a good chance that, while the Soviets would not want to eliminate the ABM system, they might agree to limit the ABM's they would deploy—that is, if we do not scuttle our own ABM program before the talks even begin.

Mr. COOPER. That is the issue the Senator raised—that the Soviets would not abandon their ABM system. The argument that we should make a decision now on deploying ABM to help in negotiations does not hold water. I do not believe that a decision now to start deployment of an ineffective ABM system, which cannot be deployed or tested as an integrated system until 1974, is going to have any weight with the Soviet Union. Either Dr. Foster or Secretary Laird testified before the House committee that we could destroy their partially deployed ABM system around Moscow. We would

just overcome it with missiles. I would consider that the Soviets believe they could similarly overcome our ABM system.

Mr. JACKSON. Did he mean now?

Mr. COOPER. Of course, we have the MIRV. They have MRV, we believe.

Mr. JACKSON. We are not so sure they do not have MIRV.

Mr. COOPER. We know what we have. If we are to have control and limitation of arms, I believe the factor that either country has the power to destroy the other will be the deciding factor, rather than an ABM system which may be physically deployed 4 to 6 years from now, and not an effective one, even then.

Mr. JACKSON. Again, on the negotiation question, the Senator will recall that the debate on the ABM grew out of the military construction bill. We discussed foreign and defense policy in connection with the military construction bill for over a week.

The Senator will recall that the argument was made that if we went ahead and first deployed the ABM system, the Russians would not talk. It is all in the record. I do not need to go into detail. The argument was that they would not talk. I took the position that if we went forward with the ABM, we would increase the Soviet incentive to come to the conference table. The Senator will recall that on a Monday we voted to go ahead with the ABM, and on a Thursday Mr. Gromyko asked for talks. This is the significant point. I did not assert at the time that by going ahead we would force the Russians to talk, but I did point out that the constant argument being made that the Russians would not talk if we went ahead did not make sense. The record speaks for itself.

Mr. COOPER. I remember that. I was one of those who argued—

Mr. JACKSON. I do not recall that the Senator took that position, but other Senators did.

Mr. COOPER. I want to be honest—

Mr. JACKSON. I was trying to protect the Senator.

Mr. COOPER. I doubt that the Soviets are so loosely organized that they would make such a decision in 3 days, upon a vote by the U.S. Senate to deploy the Sentinel system. I am almost ashamed to make the debating point that last year the argument was made that construction of the Sentinel system would bring the Soviets to talks. This year, we have abandoned the Sentinel system as ineffective. We should not vote to deploy ABM before we commence negotiations. The objective is to stop the arms race—not accelerate it.

Mr. FULBRIGHT. Mr. President, will the Senator yield?

Mr. JACKSON. I yield.

Mr. FULBRIGHT. The Senator has made a very interesting speech characterizing the leadership of the Russian Government. I am not sure his speech will promote talks, or very friendly talks, but that is beside the point.

Mr. JACKSON. Has the Senator read the series of articles by Anatole Shub recently published in the Washington Post?

Mr. FULBRIGHT. I did. I read another article following that which is contradictory to it. But that is neither here nor there. It does not matter what Mr. Shub said. The Senator is a distinguished Senator from Washington and a leading Senator, who would have been Secretary of Defense, according to all reports, if he had wanted to be. It is quite a different thing to read what the Senator from Washington said and to read what Mr. Shub said. Mr. Shub is a fine newspaperman who was in Russia but was asked to leave by the Soviet Union. I imagine he was not pleased by that development. I do not wish to make any point of that.

I understood the Senator to refer a moment ago to "first-strike capability." I am wondering in what way he uses the term "first-strike capability." What does that term mean to the Senator from Washington?

Mr. JACKSON. It means to the Senator from Washington an ability to destroy their nuclear strike force to the point where they would not be able to provide a credible strike force against us.

Mr. FULBRIGHT. A retaliatory one?

Mr. JACKSON. Yes. I am not saying what the Soviets intend to do with the capability they are building. I do not know what they intend. I am talking only about capability.

Mr. FULBRIGHT. A moment ago I understood the Senator from Washington to say—not in this colloquy, but just before—that the Soviets today have the only first-strike capability in the world; we do not have a first-strike capability.

Mr. JACKSON. I believe the Soviets are building toward a first-strike capability. We are not seeking a first-strike capability.

Mr. FULBRIGHT. I would like the Senator to elucidate that a little.

Mr. JACKSON. Yes; I shall be happy to. As the senior Senator from Tennessee (Mr. GORE), who is a member of the Joint Atomic Energy Committee, will recall, we were advised several years ago that the decision had been made not to go ahead with big nuclear bombs.

Mr. FULBRIGHT. That is right. They are big, but not as big as theirs. I would say one megaton is pretty big.

Mr. JACKSON. I am talking about nuclear weapons that are capable of destroying hardened silos in the Soviet Union. Mr. McNamara made the decision in 1961, when we moved rapidly with the deployment of the Minuteman force, that we had bombers that could deliver nuclear weapons of many megatons greater than the Minuteman or the Polaris or the Poseidon, when it is deployed; but—and this is the point—we could not use manned bombers to knock out the hardened silos in the Soviet Union, for the simple reason that by the time the bombers got there, with the warning the Soviets would have, the silos would be empty.

Does that answer the question of the Senator?

Mr. FULBRIGHT. No. I asked the question, or perhaps the Senator from Missouri (Mr. SYMINGTON) did, of the present Secretary of Defense, Mr. Laird, if he considered that the Russians had

the capacity now to knock our retaliatory capacity. In other words, did they have a first-strike capability? If I recall, he said they did not. So we have a direct conflict between the Senator's testimony and that of the present Secretary of Defense, which strikes me as rather odd, inasmuch as the Senator from Washington could have been Secretary of Defense, had he chosen to be. I am sure that is correct.

Mr. JACKSON. No.

Mr. FULBRIGHT. I mean correct about the difference, not about the Secretaryship.

Mr. JACKSON. Let us stick to the present question the Senator poses. The Soviet Union does not now have a capability of destroying our retaliatory force.

Mr. FULBRIGHT. The Senator said a few minutes ago they did.

Mr. JACKSON. I made a very clear distinction in the colloquy with the Senator from Kentucky. I said we are not talking about our current capability. We are talking about what it will be in 1974 or 1976. I am sorry if there was any misunderstanding.

Mr. FULBRIGHT. This is what I am trying to clarify: I think the Senator said prior to that, because I made a note of it, that the Soviets today have the only first-strike capability in the world, that we do not have a first-strike capability.

Mr. JACKSON. No; that is not correct.

Mr. FULBRIGHT. I was simply going to ask the Senator to clear it up now, because I thought he just now said they did not have a first-strike capability; but he says they do have it now?

Mr. JACKSON. What I am saying is that a first-strike capability, of course, is not achieved, in a technical sense, until you can destroy a sufficient number of the hardened or, shall we say, submerged submarines of the adversary, as well as a sufficient number of the ICBM's to the point that he cannot make a credible retaliatory response.

But I am pointing out to the Senator that I do not know why the Soviets would want to have a 25-megaton capability in their missile, if it is only for a second strike? I would like to obtain a response to that question. I think with a 25-megaton warhead, if you get enough of them, you have a first-strike capability, and you can have a second strike, third strike, fourth strike, many different strikes. But when they get enough of that kind of megatonnage in the warhead of a missile, and enough missiles, if there are no other steps taken to protect our missiles, with the number of Minutemen that we have now deployed, the Soviets could destroy a large enough number to make our land-based retaliatory force ineffective.

Mr. FULBRIGHT. We spent 3 hours, I believe—the Senator from Tennessee was there—in executive session the other day with the present Secretary of Defense and the Director of the CIA, much of it on this point. The Secretary finally agreed that all he was talking about, as to capability, was that these SS-9's were capable of destroying a Minuteman silo. He did not mean to

imply that this would be a first strike capability, because they had no feasible way to deal with either our bombers or the Poseidon, and so on.

In other words, he retracted in my view, what he publicly had said in the first meeting with our committee, when he said:

They are going for a first strike capability, let there be no doubt about it.

All I am trying to do is clarify the record. I do not wish to precipitate a big argument on the merits, although I will have to say, in view of what the Senator has said, that there was a deliberate decision on the part of our Government not to go for these big ones, because they are a less efficient use of our fissionable capacity.

After all, a megaton in a Minuteman is a terrific weapon; it is 50 times the force that destroyed Nagasaki. It was felt that there was no point in developing one that big, and I assume that the Senator from Washington agreed with that decision.

Mr. JACKSON. That was correct.

Mr. FULBRIGHT. This was a deliberate decision, because it was the most efficient way to use our fissionable material.

Mr. JACKSON. I cannot agree with the Senator on that at all. The decision was not based on the efficient use of nuclear material. The decision was made that we would not go for a first strike capability against the Soviets. Bear in mind, we had a wide lead then. The decision was made that we would have a second-strike force that would be usable only against soft sites—cities airfields, and so on—I want to make it clear that the decision was not made on the basis of efficient use of fissionable material.

Mr. FULBRIGHT. You get much more out of a number of small ones than one big one; I think that should be obvious. When you consider the capacity for destruction of a megaton, it is a terrific weapon. You can destroy a city like Washington with one of them.

Mr. JACKSON. The Senator is correct; but he has to make the point, however, when he argues in that direction, that it requires only a minimum megatonnage to knock out a city.

Mr. FULBRIGHT. But we have plenty for a retaliatory strike, if they knocked them all out. That is one point I am making.

Mr. JACKSON. We are talking about what the situation is going to be in 1974, or 1976. I emphasize that, because that is the issue.

Mr. FULBRIGHT. Yes; and that is based upon a lot of assumptions. It is assuming that the Russians will continue to develop theirs, and we will stand still and will not make any more, and that has been argued at great length.

I wish to ask a few other questions. I also understood the Senator to say, and I want to see if I am correct—I believe the Record will show—that the Senator said the Russians have deployed a fractional orbital bombardment system. Did he say that, or not?

Mr. JACKSON. That is correct.

Mr. FULBRIGHT. They have deployed it?

Mr. JACKSON. Yes.

Mr. FULBRIGHT. And it is workable, and in operation?

Mr. JACKSON. I might say to the Senator, he can find the statement in open literature. A top-ranking Soviet officer, in one of their official publications, so announced it. And we know that they have deployed some.

Mr. FULBRIGHT. Some. But I mean, is it an operating weapons system?

Mr. JACKSON. They have an operational system. It is limited in numbers at this time. One of the problems in this regard is that they use, as a booster, the SS-9.

Mr. FULBRIGHT. But did the Senator say it? I am not arguing with the Senator; I just want to be sure I heard the Senator correctly.

Mr. JACKSON. The Senator heard me correctly.

Mr. FULBRIGHT. That it is an operational FOBS system?

Mr. JACKSON. That is right. They have available for use an operational fractional orbital bombardment system.

Mr. FULBRIGHT. Deployed?

Mr. JACKSON. Deployed.

Mr. FULBRIGHT. Very well. I just wanted to be sure.

The Senator mentioned a time when we offered to freeze testing fissionable material, and the Russians, in return, tested a large bomb?

Mr. JACKSON. No, I did not say that.

Mr. FULBRIGHT. What did the Senator say?

Mr. JACKSON. What I said was that in 1961, in September, I believe, the Soviets, without warning, broke the nuclear test moratorium and set off a 60-megaton bomb. I think it was on the same day.

Mr. FULBRIGHT. Was that a formal moratorium, or a tacit one?

Mr. JACKSON. It was an understanding. I ask the able Senator from Tennessee, who is present in the Chamber, and who, I think, attended some of the meetings at Geneva.

It was an understanding, in any event. Whether it was reduced to writing, I do not know for sure. I will come to the other question.

Mr. FULBRIGHT. That we offered to freeze the further manufacturing of fissionable material. Did the Senator say that?

Mr. JACKSON. No, I did not say that. I will answer the question.

Mr. FULBRIGHT. I do not want to put words in the Senator's mouth. I am asking whether he said something to that effect.

Mr. JACKSON. No, I did not. I said that President Johnson announced that we were closing some of our nuclear reactors. He had taken this up earlier with Mr. Khrushchev, and Mr. Khrushchev agreed to close, or not go ahead with, some of the new reactors that the Soviets were building. What happened, though, was that we closed ours, and the Soviets went ahead and finished theirs, and they are in operation. I believe the chairman of the Joint Committee on Atomic Energy at that time, the distin-

guished Senator from New Mexico, Senator ANDERSON, can corroborate what I have just said.

Mr. FULBRIGHT. Then I misunderstood. We did not, either then or at any other time, offer to freeze the development of fissionable material?

Mr. JACKSON. No. This point came up, as the Senator may recall, in a question raised by the able Senator from Texas (Mr. TOWER) about unilateral disarmament proposals. I stated that this was a proposal that we had made and I mentioned what had happened as a result of it.

Mr. FULBRIGHT. I, of course, am not prepared, and do not wish to try to question any of the Senator's characterizations of the members of the Politburo. I do not know them personally. I have read some of the descriptions of them, as the Senator mentioned, particularly those by Mr. Shub and also others. I would agree that the members of the Politburo have not shown, in my opinion, very good judgment, particularly with regard to Czechoslovakia. As the Senator from Washington said, it was a great mistake. I believe he said that. I forget how he characterized it.

Mr. JACKSON. It was a terrible tragedy for the people of Czechoslovakia.

Mr. FULBRIGHT. That is correct.

Mr. JACKSON. But, as the Senator knows, Moscow did not stop with the invasion; the Politburo laid the groundwork for further invasions with the Brezhnev doctrine, which they announced, after the assault on Czechoslovakia, and as an attempt to justify it.

Mr. FULBRIGHT. I think the Senator is correct. But I am not so sure that there is a great difference between the attitude of what they call the Brezhnev doctrine and the recent doctrine of our former Secretary of State, who made statements to the effect that we do not have to have treaties in order to preserve peace around the world; that we were prepared to—I forget the exact language, but the purport was that we were prepared to intervene at almost any time or anywhere that we thought that it was in our interest to prevent the spread of communism.

Mr. JACKSON. I do not think the Secretary said that. May I comment on that point?

Mr. FULBRIGHT. Yes; certainly.

Mr. JACKSON. My understanding was that Secretary of State Rusk had indicated the number of treaty obligations we had throughout the world. Then, after going through that long list, he said there might be situations in the world where it would be in the national interest of the United States to come to the aid of a country, even though we did not have a formal treaty. I think that was what he said.

Mr. FULBRIGHT. I do not see much difference between what I said and what the Senator from Washington said.

Mr. JACKSON. The Senator from Arkansas said "intervene."

Mr. FULBRIGHT. Well, "come to the aid," if the Senator wishes. The Russians are saying that they came to the aid of the sound and God-fearing Communists in Czechoslovakia.

They were coming there to the followers of Novotny who had been put out. Every big country always takes the position that they are coming to the aid of their friends and of those who believe in the same gods they believe in. This is characteristic of all big countries.

It is very unpopular ever to equate one's own country with another country with whom one disagrees or a country that has a different point of view.

The belief that the big countries are characterized by some common faults is not much accepted. The belief is: "It is very good to take the position we are taking." That was the position more or less of the late John Foster Dulles who took the position that we are good people and all other people are suspect, and particularly the Russians.

The Russians are very shortsighted people, in my opinion, in many respects. However, I cannot say on the other hand that everything we have done has been above suspicion and motivated by the common good.

I think we have our national interest at heart. As the Senator has said, wherever our national interests are affected, we act. In the Dominican Republic, in the face of specific treaties that said specifically that we would not under any circumstances intervene in Latin American countries, we did intervene. And we did it without even notifying the OAS until after we had done it.

I am not trying here to argue about the particular merits of the matter. I say that action was very similar to action taken by any big country whenever it feels that its interests are involved. I think if we are ever to go along the road that the Senator from Kentucky mentioned a moment ago and if we are ever to make any progress away from the constantly increasing arms race and the piling up of more and more armaments, we have to have some kind of political agreements.

To make statements condemning the leaders of another country, and one of them in particular, saying that he engaged in bloody intrigue is not a very good way to have talks.

Mr. JACKSON. Mr. President, let me observe that I would think that the first question that any logical person would want to resolve in deciding how to vote on a defense appropriation bill would be: What kind of an adversary do we face? This is what I have done. I have tried. And I spent a lot of time on this matter. I must say that I think we face a very rough adversary, a very dangerous adversary, and an unpredictable one.

I think this is a logical and sensible approach. Let me get to the other two points the Senator raised before I yield to the Senator.

The Senator mentioned Czechoslovakia and said that maybe the Russians were intervening at the request of the Czechs.

If the Senator will recall, early on the night of the invasion or the next morning, the Russians got out a statement saying that they were intervening at the request of the Czech leadership. Of course, the whole handling of the Czech affair by the Russians was so clumsy that it turned out the request had not

been made. They were so crude that they did not even go through the usual Communist ritual of setting up some kind of pro forma request. When they got into Czechoslovakia they could not find a "quisling" to work with and they had to get Dubcek out of jail, where they had put him, and deal with him again.

The Senator has mentioned the Dominican Republic and apparently tried to compare this with Czechoslovakia. What we did there resulted in a free and open election. What kind of election is being held in Czechoslovakia?

Mr. FULBRIGHT. I did not say anything about an election. I did not say the Russians were invited by Dubcek. They were not. But they said they were.

I am not saying they did not lie about it. I think they did. All I am saying is that they put it on the ground of protecting Communists. We originally put our action in the Dominican Republic on the ground, as the President said, of protecting American lives.

I was at the White House when the President told us that 500 Americans were threatened and that we were going to take them out. He never alleged that the Dominican Government asked us to intervene. However, later on different reasons developed.

Mr. JACKSON. However, there was a free and open election there.

Mr. FULBRIGHT. That is another matter.

Mr. JACKSON. That is a very important matter, Mr. President.

Mr. FULBRIGHT. That is not the point I am making. I am not trying to make the point that they are a democracy and we are not. We are a democracy, and we have a Constitution, thank God. And we have a Senate that functions. We are trying to make it function now.

The real point of the debate is not the ABM as such.

The whole point of the debate is an effort on the part of some Members of the Senate to reassert some control over the military department. The Senate is the only agency of the Government that can do it. I do not exclude the President. The Senate is the only agency that can bring about any degree of control over the military department because of the peculiar situation in our Government. That is what the debate is about.

The point that is being argued happens to be the ABM. It could have been any other of a number of things that might develop. However, the ABM developed out of variety of circumstances.

That is what it is all about. I do not deny that we are a democracy. I am glad that we are, but we should not be so self-righteous about it as to say that we do everything because of some fine motives. That is not right. We do it to protect our interests.

I do not deny that in every case. We do it when our interests are involved, and not through some misunderstanding of a situation.

That is the point I am making. It is the same thing with weapons. We have been told we have enough weapons to kill them 10 times over. The Senator from Kentucky said that a moment ago. And I agree with him. The Senator from Mis-

souri (Mr. SYMINGTON) was here. It was said that we have three times as many lethal strategic weapons.

I believe he said that a moment ago. He said deliverable strategic weapons. We are not talking about IRBM's, the short-range vehicle. We are talking about the Minuteman, the Poseidon's, and those that are deliverable by airplanes and so forth.

Mr. JACKSON. If the statement is limited to the long-range manned bombers, we do not have that figure.

Mr. FULBRIGHT. Of course, we have got some manned bombers that are not so long range, too. The Senator knows that. They can deliver them. The reference was to deliverable strategic weapons.

I do not wish to engage in a numbers game. We have enough to destroy them. The Senator from Tennessee discussed it in the hearings and said that we had far more than enough to destroy the 50 largest cities in Russia, to hit each one of those 50 largest cities with 48 missiles.

The point is that, it seems to me, the whole thread of the Senator's argument is, first, that the Senate should not intervene. We should not intervene to put our decision or our judgment in the place of the President's on the ABM, which means the Defense Department.

Mr. JACKSON. Before the Senator goes on to that point, one thing I wanted to get clear is his position. Do I correctly understand that the Senator feels that it is wrong for the Senator from Washington to discuss the nature of the adversary? He said it is going to hurt Soviet relations.

Mr. FULBRIGHT. I do not think it is wrong.

Mr. JACKSON. What was the point, then?

Mr. FULBRIGHT. It is not wrong for the Senator to take the position which I think he does. The thrust of his argument is that there is no point in having talks or trying to make agreements with the Russians. They are so bad that they are beyond the pale.

Mr. JACKSON. I have never said that.

Mr. FULBRIGHT. I said that is the thrust of his argument.

Mr. JACKSON. No, that is not so at all.

Mr. FULBRIGHT. And the effect of what he says about the leadership is that he has not the slightest hope that the Russian leaders will make an agreement.

Mr. JACKSON. You obviously did not listen carefully to what I said, because I argued for serious arms control negotiations with the Soviets.

What concerns me is that many Senators say there is not enough information available about weapons systems, so we are going into executive session—

Mr. FULBRIGHT. I did not ask to go into executive session.

Mr. JACKSON. I did not say that. I said Senators have made this point. Surely we also need as much information as we can get about the Soviets. I was really surprised when the Senator raised the question that somehow it was out of order to discuss the nature of the adversary.

Mr. FULBRIGHT. I did not say it was out of order. The Senator is never out

of order. He says what he pleases. That is why we have the Senate. That is the only place it can be done.

Mr. JACKSON. I would think that the No. 1 order of business in the Committee on Foreign Relations would be to hold hearings on current developments in the Soviet Union—in short, on the nature of the adversary.

Mr. FULBRIGHT. This is interesting. The press did not pay much attention to it, but the Committee on Foreign Relations has held three hearings this year and we had one last year on this point. We made inquiry as to whether there were any competent people in the field of psychology or psychiatry studying the Russians. No such research is going on. We have all kinds of research sponsored by the Defense Department, but, according to the best authorities we could get, such as Dr. Karl Menninger, who is acknowledged to be one of the greatest psychiatrists in the world, and certainly in this country, and Dr. Hall—nobody is really trying to understand the Russians. The Committee on Foreign Relations has tried to foster studies to understand what the Russians are motivated by and what they are like.

Mr. JACKSON. Before the committee called the psychiatrists, I would think it would have called in experts on the Soviet Union.

Mr. FULBRIGHT. We had anthropologists.

Mr. JACKSON. Before the committee called the anthropologists, I would think it would have called the Kremlinologists.

Mr. FULBRIGHT. What is an expert on the Soviet Union, in the Senator's opinion?

Mr. JACKSON. I think there are a lot of scholars in this field who have devoted their life to the study of the Soviet Union and who know a lot about it.

Mr. FULBRIGHT. Would the Senator give me some information about that?

Mr. JACKSON. Yes, I would call that an outstanding witness, Dr. Phillip Moseley, of Columbia, one of the great scholars in this field; also Dr. Fainsod, of Harvard; also Dr. George Taylor, of the University of Washington. There are men like Ambassador Tommie Thompson. There are distinguished authorities like Ambassador Chip Bohlen, who has been in the Foreign Service and served in Russia a long time. I would think it would be a matter of concern to find out what is really going on in the Soviet Union.

Mr. FULBRIGHT. We have had all those at different times in the past. The Senator misunderstands.

Mr. JACKSON. Has the committee made a study of the Politburo? Has the committee gone into it in detail? Who were the witnesses.

Mr. FULBRIGHT. We have had before our committee, both formally and informally, Thompson and Bohlen, in the usual course of events.

Mr. JACKSON. I assume they were there as Ambassadors. They had to come up to be confirmed. What I was talking about was hearings on current developments in the Soviet Union, including the present Soviet leadership.

AN ALTERNATIVE TO SAFEGUARD

Mr. HART. Mr. President, I bring to the attention of the Senate a study by a group of able University of Michigan scientists who support additional defense of Minuteman missiles but reject the Safeguard system on technical and cost grounds.

These scientists conclude that Safeguard, because of radar and computer problems and because of inadequate testing opportunities, is unlikely to provide a credible defense.

They claim that even if technical problems were solved satisfactorily, the proposed Safeguard system would have to be expanded to more than 1,200 Sprint missiles to provide an effective defense for Minuteman.

The study puts the cost of Safeguard, including projected overruns, at \$28 billion; of the expanded system, at \$40 billion.

Noting their support for defending our Minuteman deterrent, the scientists estimate that for \$5 billion we could further harden our silos to the point which would require Russia to launch 6,000 missiles to insure destruction of our retaliatory force.

The Secretary of Defense justifies the need for Safeguard on the grounds that Russia may have 500 missiles by 1975.

The study makes clear that, if indeed it is important to increase protection of our Minuteman missiles there is at least one alternative which is cheaper and more effective than Safeguard.

The study also notes that Moscow could interpret installation of Safeguard as an effort to develop a first-strike capability, thereby stimulating the arms race.

I ask unanimous consent that the report be printed at this point in the RECORD.

There being no objection, the report was ordered to be printed in the RECORD, as follows:

A REPORT OF THE COST OF THE SAFEGUARD ABM AND ALTERNATIVE PROPOSALS SUMMARY

We present assessments of the Safeguard ABM, and of an alternative to ABM that we believe provides better defense of the U.S. ICBM force at significantly less cost.

In developing our cost estimates of the Safeguard system, we have taken cognizance of the radar vulnerability and the small number of Sprint missiles destined for defense of our ICBM's. We conclude that critical reviews of Safeguard would call for much more extensive deployment of radars and Sprints than proposed and for abandonment of most sites not involved in ICBM defense. We estimate the final cost of the currently proposed Safeguard at 28 billion dollars, while 40 billion dollars is our estimate for the revised ABM. This estimate takes into account technical problems such as the short time available from target detection to Sprint ignition and the outstanding computer programming difficulties involved in target recognition under realistic conditions, and the overruns characteristic of deployments requiring solution of such technical problems. On technical grounds it is likely that neither system would provide a credible defense.

The alternative defense of our ICBM force, which we strongly support, is a superhardening of Minuteman silos. The military has

made a proposal for greatly strengthening and isolating the silos which can now withstand some 200 pounds per square inch blast overpressure. This hardening would significantly reduce the distance at which a nuclear weapon could render the Minuteman inoperative. We make several analyses dependent on a range of realistic values for Soviet missile accuracy and payload, and find, for example, that the Soviet Union would have to launch some 6000 missiles of the S-9 category against our superhardened sites, in order to assure 95% destruction of our Minuteman installations, which destruction level is usually taken as one requirement for a "successful first strike." This result applies equally to attacking missiles with 25 megaton warheads and to use of multiple warheads. (The first strike would also have to be similarly effective against all other U.S. deterrents.) It is estimated that this hardening program will cost 5 billion dollars and will not require substantial advances in technology. We submit that it is likely to be a credible defense and that beyond its technical feasibility and much lower cost, it offers the special advantages over ABM of its completely passive nature and its ever-ready standby status.

I. SAFEGUARD AND A REVISED ABM

Introduction

The Safeguard Anti-Ballistic Missile system proposed by the Nixon administration has two goals: The "area" defense of a large portion of the United States, and a "point" defense of portions of several Minuteman ICBM bases. The "area" defense, relying primarily on Spartan missiles with a range of several hundred miles, is proposed in order to counter a "light" attack by a small number of ICBM's against centers of population. President Nixon stated this purpose in his news conference of April 18, 1969: "The other reason (for Safeguard) is that . . . by 1973 (the Chinese communists) would have a significant nuclear capability which would make our diplomacy not credible in the Pacific unless we could protect our country against a Chinese attack aimed at our cities." The "point" defense utilizes Sprint missiles with a range about twenty five miles and is supposed to protect our Minuteman missiles in order that they will be available to retaliate after a nuclear attack. We will deal only briefly with the area defense proposal. There are many reasons to believe that this portion of Safeguard should be omitted, and the suggested phased deployment for Safeguard would permit just that.

Unlike the area defense, a point defense of some of our ICBM's may be feasible in terms of present technology, although it could be overcome by a variety of Russian countermeasures.

Because of this possible feasibility and because of the extreme importance of effective protection of our nuclear deterrent, we feel this to be the essential part of the Safeguard proposal. In Section I of this report we will review the Safeguard proposal and introduce a Revised ABM proposal designed to remove incapacitating weaknesses in Safeguard as protector of our ICBM deterrent. We argue that such revisions would be made in the course of review if it were decided to continue with the ABM program. In Section II of this report we assume that we will use Safeguard or the Revised ABM to try to protect our Minuteman retaliatory force and we assume that the Soviet Union will not develop sophisticated countermeasures. We discuss technical difficulties and costs facing ABM. The cost we estimate is substantially more than the administration estimate, largely because of predictable cost overruns. The Revised ABM is even more costly because

Footnotes at end of article.

it contains added components in spite of our omission of the Spartans and many Safeguard sites. Finally, in Section III, we discuss other strategic deterrents and alternate defenses for our ICBMs. In particular, there are persuasive reasons for supporting the "Hard-Rock superhardening program for the Minuteman silos.

Critique of the safeguard area defense against light attack

Sufficient arguments have been developed over the past year to convince almost every scientist who has studied the problem of area defense against ICBM's that it would be unwise and wasteful to deploy an ABM system for that purpose at the present time.² We are unaware of any detailed attempt to justify this scheme against these arguments. Briefly, the arguments are: (1) The proposed Spartan missiles can be, at most, only marginally effective against incoming ICBM's which employ merely elementary radar-confusing devices, i.e., simple decoys, chaff, and previous nuclear explosions appropriately placed. (2) An important claim for Spartan is that it might disable an ICBM through x-rays at a distance of, say, fifty miles. This possibility would depend, however, on a number of unknown factors, and there would be no choice but to also try to kill the enemy ICBM with Sprints unless the Spartan was known to have detonated only a few miles from the ICBM. (3) If the area to be protected is near the coast, there is no effective defense against either short-range missiles launched from off our coasts or cruise missiles which fly at very low altitude and can maneuver in flight. Because these missiles can be fired from immediately off shore, areas near the coast may have little or no warning. It is inconceivable that any protective systems should have the "hair-trigger" necessary for a defense against such a short-range light surprise attack. (4) It is most unlikely that any nation would be so irrational as to launch a light attack with ICBM's because the damage inflicted upon us would be much less than the destruction we would inflict upon them. Only the ICBM, of the several means available for a light attack, can be definitely traced back to the nation ordering the attack. But the ICBM light attack is the only form for which the Spartan missile has any capability.³

Nevertheless, it may be claimed that, although the Safeguard area defense is neither technically nor theoretically sound, we have nothing to lose by deploying the system as a full-scale experiment.⁴ The danger in this delusion is that if the Soviet Union believes, or if certain elements in the Soviet Union could effectively argue, that this useless system might work its deployment would severely escalate the arms race. In the mad logic of nuclear deterrence this consequence follows from the fact that the Safeguard area defense is an offensive threat because we could use it to protect the United States after we had launched a first-strike attack. The effectiveness of ABM area defense would be greater under these circumstances because: (1) This complex system is more likely to work as planned if given advance warning (2) The attack might be uncoordinated and weak after the U.S. first strike. Thus an area defense is both ineffective and at the same time stimulates the arms race.

Given that the deployment of an area defense system seems unwarranted at present, we assume for our Revised ABM that it will not be deployed and we deduct that part of the cost. We do so because it seems likely that the promised yearly reviews of the AMB situation will conclude that area defense should not be deployed without considerable additional research and successful innovation. Twelve sites in the continental

United States are proposed for deployment in Safeguard. Seven of these are area defense sites, four are ICBM defense sites, and the last is a Washington, D.C., site proposed to defend hardened control centers. We will drop the seven area defense sites in our revised ABM. We think it is realistic to assume that the Washington site will remain in the program. We drop the Spartans at the five remaining sites, although this is not a major cost item. It seems reasonable to retain the long-range radar capability.

McGraw Hill's Defense Marketing Survey has investigated costs of the proposed Safeguard system allowing for no cost overruns.⁵ Their estimate is that a system completed by 1975 will cost \$11 billion. This includes \$8.0 billion, corresponding to the somewhat lower administration figure of \$6.6 billion plus warhead procurement, plus some \$3 billion for research and development and operation and maintenance. Defense Secretary Laird has since confirmed the \$11 billion figure.⁶ Since the portion for the area defense system, not counting long-range radars PAR's would in their estimate cost close to \$4 billion, the net cost for research and development and for deployment of a point defense system at four Minutemen bases (and for a protected headquarters in Washington, D.C.) would be about \$7 billion. In the following section we discuss the sources of added costs if a minimal first-generation ABM system is to be deployed by 1975 or shortly thereafter.

Protection of more Minutemen with more Sprints

Dr. John S. Foster, Jr., Director of Defense Research and Engineering, DOD, has stated that 300 of our Minutemen should survive a first-strike attack in order that our deterrent be credible. This estimate coincides with statements of Robert McNamara. The Safeguard proposal involves protection initially of the Grand Forks, N.D., and Malstrom, Montana, Minuteman farms, which are stated to hold a total of 350 Minutemen. However, although proposed numbers of Sprints have not been revealed, it is apparently proposed to have one cluster of about 75 Sprints at each farm.⁷ Each cluster could cover a region some 40 miles in diameter which would contain some 50 Minutemen (The Minutemen are about 5 miles apart).⁸

When this same program is extended as proposed in Safeguard to two additional Sprint bases at Warren AFB, Wyo., and Whitman AFB, Mo., a total of 200 Minutemen would have some protection, i.e. about 300 Sprints worth. This proposal is not adequate. (Cost considerations lead us to believe that we have not grossly underestimated the proposal.) If 300 Minutemen are to survive an attack it would appear that a minimum of 400 should be protected and that each Sprint base protecting 50 Minutemen should have at least 150 Sprints. We conclude for our Revised ABM proposal that four other Sprint bases must be added to the program, giving a total of 1200 Sprints to protect 400 Minutemen. A reasonable probability estimate shows that if twice as many attacking ICBM's are used against the 400 Minutemen as against undefended Minutemen, i.e., if two perfect reentry vehicles with warheads, RV's, are used against each silo (and none against the radars) then about three-fourths of the replaced ICBM's, or a total of 300, would not be harmed.⁹ Actually many Sprints should be used to defend radar so that the number of Sprints should be even greater than 1200.

Reduction of radar vulnerability

A possibly crippling weak-link of the defense system we are discussing is the vulnerability of the radars. They cannot be hardened so great accuracy is not needed to disable them. A very small number of missile site radars, MSR's, is proposed, in fact only one for each site. A rapid sequence of ICBM's

could be employed as a relatively cheap way to knockout the MSR. Prof. S. Weinberg has shown that Safeguard could be very cheaply exhausted in this manner, because if the defense does not use up its Sprints defending the radar, the radar will surely be destroyed leaving the remaining Sprints useless.¹⁰ In one of his examples, a battery of 75 Sprints is used up against 33 RV's, with the MSR having only a 10% chance of surviving this attack in spite of the defense. In the overall picture, Weinberg finds that a roughly one percent increase in total enemy ICBM's, at a cost to them of roughly \$100 million, would negate two Sprint bases of 75 Sprints each if the extra weapons were used against the radars. It has also been pointed out that the Soviet Union could employ SS-11's, which are inadequate for attacking silos, to attack the radars.

We suggest that a change in Safeguard, with good reason, will soon be recommended as essential to the viability of the ABM system: Rather than one MSR installation per site there should be several, spaced, say, 15 miles apart.

We will add the cost of three backup MSR for each proposed MSR (i.e., 36 at nine sites; five, sites retained from Safeguard and four added) for our Revised ABM proposal.

II. TECHNICAL PROBLEMS AND THE COST OF ABM
Technical problems with radar, data analysis, and control

The missile site radar (MSR), the data-processor, and command and control face a severe problem in the expected conditions of a first strike accompanied by simple countermeasures, i.e., a massive attack with initial explosions leading to radar blackout and with simple decoys, at the top of the atmosphere. We calculate that if a Sprint is to cover a 20 mile horizontal range, it must be fired when the incoming RV (reentry vehicle with warhead) is about 30 miles up (see figure). This is approximately at the top of the atmosphere where the blackout and decoys are still effective.

These numbers are derived from the statement that it is possible to unmask, or distinguish, simple decoys by acceleration and other measurements (from the actual RV) at 20 to 30 miles altitude and below, and that radar blackout will be effective for a significant time (several minutes) over an appropriately large area (about twenty miles diameter) at altitudes of about 30 miles and higher.¹¹ In principle, then, the detection-control system could start a Sprint toward an incoming RV when the latter is some 20 to 30 miles high (see figure). According to information about the velocities of the vehicles, if the impact point is 20 miles off, the Sprint will take about seven seconds from ignition to arrival. The RV will impact from 30 miles up in about 7 to 8 seconds or from 20 miles in about 5 seconds.¹²

To summarize, the time before impact when the RV becomes possibly discernible and the time for the Sprint to reach it before impact are essentially the same—*about 7 seconds!*¹³ This is an astonishing demand upon the detection and control system. The time pressure is relieved up to several seconds if the Sprint is installed close to the point of impact. This means that, to protect, Sprints must be assigned an area much smaller than their range. This substantially increases duplication and costs, and places a premium on very fast data analysis. The analysis of this section and the section "More Sprints to Defend More Minutemen" suggest that the Sprint is not ideal for Minuteman protection. A smaller shorter range missile deployed in greater numbers would be more effective.

This severe time squeeze is, however, only a part of the most crucial problem. Scientists and engineers among our readers are asked to consider the information taken in by the

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MSR scanning well over 1000 square miles in the event of a massive attack with many RV's and many hundreds of simple decoys (any one of which is indeed unmaskable after careful analysis if it is below, say 30 miles) and with previous explosions (at, say 30 miles) resulting in reflection, absorption, and noise. Many hundreds of trajectories must be simultaneously found and tracked in this radar input, and analyzed in detail. The information is to be gathered and fully analyzed over a period of, say, 3 seconds at most and Sprints dispatched (another second to ignition?) and guided. Such a programming problem in pattern recognition is not yet solved. Progress with this type of problem has been much slower than was estimated in advance, and development much more expensive. The time-sharing problems involved in these computations are also staggering.

Professor J. C. R. Licklider has discussed the fact that as computer programs have become larger, programmer effectiveness has dropped. The processing units for the ABM system would have to be many times larger than any previously built and the programming far more extensive, complex, and sophisticated. Professor Licklider writes, "The significant thing is that the main causes of inefficiency lie outside the individual programmer. If (the number of programmers working on a given system were increased from) 100 to 1000, the hourly productivity of each would decline to one-third or one-fifth—or possibly one-twentieth. It may well be that, for any given state-of-the-art, there is an upper limit to the rate of production of complex integrated software . . ."¹⁴

We would like to add that development of an effective detector-control system for Sprints as discussed will be possible only through extensive realistic experiments or tests. A system developed with experience of one missile reentry with decoys will not operate in the presence of many missiles and decoys, and a system developed with experience of these will not operate in the presence of recent nuclear explosions. As Dr. Foster has stated, it would be very valuable (in our opinion, practically essential) to develop it with tests involving atmospheric explosions (forbidden by the test ban treaty).

It is correct to include the expense connected with these difficulties under the heading of cost overruns, since it arises from the difficulty in the course of development to meet specifications for particular hardware and software. Cost overruns are included in our final estimate as discussed below. We will not include added costs for premature deployment of an inadequate electronics system in, say, 1971 or 1972. We hope such premature deployment will not occur.

Cost overruns

History of Overruns

Detailed analysis of Department of Defense contracting reveals that the Pentagon consistently pays substantially more than was initially estimated for its weapons systems. The actual cost divided by the original cost estimate is called the cost overrun factor. The problem we now consider in our analysis of ABM costs is determination of a reasonable cost overrun factor. We shall discuss both the record of other weapons systems and the general reasons for substantial initial underestimates of cost.

The cost of previous systems can readily be separated into costs for development and costs for production. Average overruns appropriate for application to the ABM are found to be about the same for the two types of costs. A study by Professors Merton J. Peck and Frederic M. Scherer contains a record of cost overruns for development of a

number of missile and aircraft projects, mainly in the late 1950's.¹⁵ Their results, with added information, are presented in Table I. These sample projects were of high priority; however, they were typical, not exceptional, in overruns. Several of the well known cases of failure and very high overruns of the period are not included (e.g., Hound Dog, SAGE).

The asterisks in Table I indicate the projects in which "state-of-the-art" problems were severe. They illustrate situations in which techniques to be used were not well-understood or well-developed at the initial stages of the program, so that new areas of engineering had to be developed in addition to the more conventional design work. At present, as we have stressed in Section II above, a useful ABM design would have severe "state-of-the-art" problems in its electronic components, particularly in programming. On the other hand, prototype missiles have flown and thus development difficulties are not expected there. It is not clear how severe warhead research problems will be. Since the major portion of projected development costs is for the electronics system, the appropriate cost factor is among the higher values in Table I, such as those marked by asterisks: it should be more than a factor of 3. Considering that research has been under way for some time and that the contractor, Bell Telephone Laboratories, is particularly strong, we shall use the factor of 3. Previous experience suggests that, along with this overrun, development would be completed approximately two years later than predicted.

Table I.—Development cost overruns

Program	Overrun
Atlas *	4.0
Sparrow III	3.5
Talos *	5.0
Land Talos	2.0
Bomarc *	7.0
Nike Ajax	3.0
Nike Hercules	2.0
B-58	2.4
F-4H	2.5
Jupiter	0.7
F-105	3.0
Average	3.2

*Projects with severe "state-of-the-art" problems.

Production costs play a larger part of projected ABM costs than development costs. A study by Professors A. W. Marshall and W. H. Meckling contains a record of production cost overruns.¹⁶ These are listed in Table II, according to difficulties with the state-of-the-art: small risk, medium risk, and high risk. Highly complex weapons systems with extensive electronics are classified as the riskiest projects. The Safeguard ABM clearly falls into the "high risk" category—that is, by Richard A. Stubbing's definition, "a system in which at least one major component must be redesigned. The radar, computer and circuitry are the heart of each electronic system, and redesign in this area reflects the very highest degree of uncertainty as regards expected performance."¹⁷ The average cost for "high risk" systems is 3.4 times the initial estimate. However, Stubbing notes that "the largest cost increases are in missile development, which during this period advanced into a new and radically different technology, involving computers and other electronic equipment capable of solving complex guidance and control problems without human assistance." The average cost for "high risk" missiles was 4.6 times the initial estimates. We see that production overrun experience is very similar to development overrun experience.

Table II.—Production cost overruns

Small risk:	
Cargo aircraft	1.6
Cargo aircraft	1.5
Cargo aircraft	.9
Cargo aircraft	.8
Fighter	2.0
Fighter	1.5
Average	1.4
Medium risk:	
Bomber	2.8
Fighter	2.5
Fighter	2.0
Fighter	1.2
Fighter	.6
Missile	1.3
Average	1.7
High risk:	
Missile	7.0
Missile	6.4
Missile	6.0
Missile	2.7
Missile	.8
Bomber	4.0
Bomber	1.2
Fighter	4.0
Fighter	1.0
Fighter	.8
Average	3.4

The cost-overrun history cited above has continued in this decade without noticeable change. Let us discuss the two projects which are at this time very prominent in the news: the C-5A transport and the F-111 fighter-bomber. Professor Scherer has recently testified on overruns in these programs:¹⁸ "The cost for developing the F-111 was originally estimated at \$700 million by General Dynamics and \$900 million by military analysts. By 1968, actual development costs had soared to \$2 billion. The Phoenix air-to-air missile for the Navy version of the F-111 was to be developed for \$175 million. Actual costs were nearing \$420 million when the program terminated." The production costs follow the same pattern of grossly underestimated costs for the final product. The initial estimate was \$2.8 million, including engine, for the Air Force version. The final price is about \$6 million for each F-111A. Initially the cost of the Navy's F-111B was put at \$3.5 million for each aircraft. The final cost would have been about \$9 million. This weapons system would probably have been initially placed in the medium-risk category of Table II. Similar very large overruns apply to the Cheyenne helicopter, Ma in Battle Tank (MBT), short range attack missile (SRAM) and other recent projects.

On the C-5A, Scherer testified, "No one seems to know what the true overrun in the C-5A program is, but, for example, as nearly as one can tell, the cost of the first 58 airframes will exceed Lockheed's contract cost estimate by about \$900 million, or 64 percent. Compared to the F-111 experience, this is not at all bad. But transport programs have traditionally attempted less ambitious technical advances than combat-weapon systems, and their cost overruns have been correspondingly lower." As shown in Table II, low risk aircraft showed an average cost increase of 40%. By this yardstick, the C-5A is not an improvement.

Thus we see that any internal reforms initiated by Robert McNamara did not change the cost overrun picture which has been well documented for the 1950's. Indeed, we shall now present arguments that such overruns are inherent to our general system of new weapons development and procurement. We conclude that overrun factors of 3 or more are to be expected on the basis of past experience for a system such as ABM. We

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shall apply a factor of 3 to projected costs other than construction and maintenance (where we assume no overrun).

Basic Reasons for Overruns

Basic reasons for cost overruns have been given as (i) inflation, (ii) Defense Department and contractor "optimism," (iii) contractor inefficiency, and (iv) technological uncertainty (state-of-the-art problems).

(i) Inflation: The effect of inflation is calculable. Apologists for the contractors notwithstanding, unforeseen inflation should not have been an important element in the overruns.

(ii) "Optimism": Professor F. M. Scherer in recent testimony pointed out:

"Getting a major weapons program started is not easy and realistic cost estimates have a sobering effect. Recognizing this, industrialists and military officers are inclined to view a program's future prospects through rose-tinted glasses." Scherer presented two illustrations, the Skybolt and the Nike Hercules (an ancestor of the proposed ABM): "Prime contractor for the Skybolt guided missile program was Douglas Aircraft Company. In the spring of 1959, when 14 firms were competing for the Skybolt job . . . Douglas found its backlog situation desperate. Skybolt appeared to be its best new opportunity, and it went all-out in the design competition. . . ." Scherer goes on to detail the dramatic denouement of this case whose repercussions remain with us. The Nike Hercules, was executed under prime contracts by Western Electric and its affiliate, Bell Telephone Laboratories (as with Safeguard). At the beginning in 1953, it was projected that the ground guidance and control equipment for Hercules could be obtained by converting existing Nike Ajax equipment in the field for \$210,000 a battery. "However, when negotiations for the first production contracts began in the early months of 1955, Western Electric announced a new (and better) approach . . . This turned out to cost \$1.7 million per battery . . . In interviews, Western Electric representatives acknowledged that their production engineering staff members knew early in the game that a field modification program would prove to be impractical, but that they had presented the highly optimistic field modification cost estimates because they were more "sellable" to the Army and Congress."

In the past the only authority that has attempted to bring about some realism to cost estimates before major decisions are made is the Office of the Secretary of Defense, OSD. But there are good reasons why one might expect OSD efforts to be inadequate, including the length of lines of communications within DOD and, particularly, lack of motivation. Other considerations such as balance between the services may be more important than cost.

(iii) Contractor Inefficiency: Contractor inefficiency is a difficult problem because the projects are very long-term and thus are non-competitive over long periods, because there is a very close relationship between DOD and contractors, and because it appears to be in the national interest to see major weapons contractors maintain their capabilities. Problems such as support of excess staff during lean periods and the fact that it would indeed be unreasonable to make contractors suffer for natural difficulties going beyond the state-of-the-art make it very difficult to monitor and judge proper costs. The decision-making process calls for constant consultation between contractors and DOD at all stages. In many respects the DOD and its contractors function as one administrative structure. Consequently, the problems of policing costs cannot be solved by admonishing the DOD to supervise its contractors more closely.

(iv) State-of-the-Art: We feel that tech-

nological difficulties are underestimated as a serious impediment to accurate cost estimates. In the private sector, corporations are very cautious in developing new products. Technically difficult projects are not pushed prematurely. Contrast the military: A tremendous premium has been placed on new kinds of capabilities and relatively less stress on simplicity and reliability. In areas where new technology has to be developed, it is not possible to estimate costs in advance without the likelihood of a large error. Rather than being realistic about this, the military is strongly motivated to err on the low side. Thus we see great fluctuation in cost overruns from project to project and large cost overruns on the average, particularly where problems with the state-of-the-art were severe.

Thus, although there have been many attempts to improve the cost-overrun situation and although these will continue, efforts made after the initial estimate has been made will at best have marginal benefits. The problems are inherent, and will not be circumvented by procedural changes in DOD or showcase default of contract cases. Possibly Congress can develop an independent expert group charged with monitoring programs both technically and economically. However, such a possibility would have little effect on a project beginning now. Our conclusion is that cost overruns for new programs, such as ABM, will be characteristic of similar programs in the past. Thus we estimate that final costs will be 3 times the initial estimates for all R and D and procurement items.

Are Overruns Related to Success or Failure of the Program?

Some high-overrun projects were very successful and well worth the cost. More typical in cases of sophisticated systems is inability to meet specifications. Stubbing cites a "sample of 13 major Air Force/Naval aircraft and missile programs with sophisticated electronics system initiated since 1955 at a total cost of \$40 billion . . . Less than 40% of the effort produced systems with acceptable electronic performance—an uninspiring record that loses further lustre when cost overruns and schedule delays are also evaluated." Many of the projects listed in the tables above must be regarded as failures to meet reasonable overall specifications.

We stress the relevance of this to Safeguard, where the carrot or yearly reevaluation has been held out to Congress. The probability is low that the radar data-processing control system will work as a whole under realistic conditions. There is a likelihood, based on experience with past systems, that the attempt to make it work will continue at great expense even after overwhelming difficulties become apparent to technical staff.

This important point can be illustrated by the TFX or F111. The TFX provides an excellent analogue to the ABM because it too was an entirely new weapons system—and a very expensive one. An important factor

in continuing the expenditures is the scarcity of hard data available to the public for estimating costs. Despite rumors as early as December, 1964, that the TFX costs were spiraling and a Department of Defense communiqué admitting that they were higher than the original estimates, the president of General Dynamics, Frank W. Davis, felt secure enough to issue, in November 1967, a public denial that the plane was caught up in a price increase.

The public finds itself constantly reassured that its billions of dollars of tax money are being well spent, even if they are not. In March, 1965, it was learned that the Navy version was overweight, that the engines were malfunctioning, and that its missile weapons system was still incomplete. On April 22, 1967, an F-111B crashed. More technical problems were found that August. The Navy version had trouble taking off from an aircraft carrier in September, and later that month a fire broke out in the tail of an F-111. In October, Assistant Navy Secretary Robert A. Frosch said that although the F-111B "will probably not meet all the initial specifications . . . [it] represents the finest fleet air defense system available in the immediate future." Almost a year of expenditures was to go by before the Navy was to cancel the overweight F-111B.

The Air Force, however, persevered optimistically through 1968 in the face of highly publicized crashes, difficulties with terrain-avoidance radar, and too-high cost. General G. P. Disoway, commander of the Tactical Air Command, belittled the reports of troubles with the F-111A saying: "We always have a lot of problems with airplanes until we get them out into the field and then the people in the field seem to cure it." Finally, in January, 1969 the Air Force relented and cut back its orders with General Dynamics. Severe difficulties continue, but Secretary Laird insists upon keeping the assembly lines at Fort Worth running.

The money for this failure cannot be shut off. Once a program begins too much money and prestige are at stake for it to be readily terminated.

We stress, in concluding this subsection, that experience suggests that very deleterious technical difficulties in ABM development are unlikely to prevent substantial deployment. Although there are examples to the contrary, it is hard to stop a program under way. The cost overrun is likely to be large regardless of whether the system is technically a success or a failure.

Cost Estimate

The Revised ABM involves 9 sites with a total of 36 MSR's and 1250 Sprints. Other expenses are scaled from the Defense Marketing Survey⁵ estimates for Safeguard as shown in Table III. A cost overrun factor of 3 is introduced for research, development and procurement, but not construction, operation and maintenance. The total cost of the Revised ABM is \$40.5 billion and of the Safeguard ABM is \$27.7 billion.

TABLE III.—COST ESTIMATE IN BILLIONS OF DOLLARS (THROUGH 1975 FOR PROGRAMS WITHOUT OVERRUNS)

Item	Safeguard		Revised ABM	
	Without overruns	With overruns	Without overruns	With overruns
PAR (long range radar).....	0.56	.....	0.56	.....
MSR (missile site radar).....	1.5	.....	4.5	.....
Spartans.....	1.05	.....	.....	.....
Sprints (at \$800,000 each).....	.56	.....	1.0	.....
Data processing, command and control.....	2.0	.....	3.25	.....
Warheads.....	.21	.....	.25	.....
Total, procurement.....	5.9	17.7	9.6	28.7
Construction.....	2.10	2.1	3.5	3.5
R. D. T. & E. (research and development, testing and evaluation— for the particular system in question).....	2.40	7.2	2.4	7.2
Operation and maintenance.....	.70	.7	1.15	1.15
Total.....	11.1	27.7	16.6	40.5

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III. AN ALTERNATE TO ABM
Superhardening

The primary purpose of the Safeguard ABM system is to provide a high level of protection for our Minutemen ICBM's force against a Russian first strike. We shall now consider an alternative approach to the problem of ICBM security and its relative advantages.

The U.S. Air Force "Hard-Rock" program provides such an alternative.¹⁹ Hard Rock is a program to bury Minuteman silos deeper and to further isolate and strengthen them. Measured in terms of blast pressure that can be sustained, the proposal is to superharden our Minuteman silos from the present average 300 pounds per square inch over-pressure to a planned 3000 psi, with control areas approaching a hardness rating of 7000 psi in some instances. Some \$58 million was allocated to the program in Fiscal 1970, but the program has been brought to a virtual standstill by the Nixon administration in the attempt to sell Safeguard ABM.

There is no question that the hardening of underground missile silos renders them extremely invulnerable to the effects of nuclear explosions. A missile silo hardened to 3000 psi could survive the air blast of a 10 megaton explosion at ranges of less than 1000 feet.²⁰ The principal damage mechanism to these underground structures is not the air blast, but the tremendous ground shock accompanying a surface or near surface nuclear blast. There is considerable evidence that heavy, well designed underground structures will sustain no heavy damage from ground shock beyond 1 1/4 crater radii from "ground zero", that is, just outside the ground crater dug by a nuclear blast. The dimensions of the crater formed depend primarily on the yield of the weapon and the type of soil in which the burst occurs. A 10 megaton surface explosion in dry soil will cause a crater of 1400 feet radius, with heavy damage to underground structures extending 1745 feet.²¹

The effectiveness of a superhardened silo thus depends on the accuracy with which the enemy warhead can be brought on target. At present, U.S. and Russian ICBM's are capable of CEP's²² of about 2500 feet. Although this figure could conceivably be improved somewhat by technological breakthroughs, we expect no more than a marginal decrease in ballistic missile CEP's.²³

The Department of Defense has stated that the Russians would not attempt a first strike unless they could destroy 95% of our Minuteman missiles, thus rendering our ICBM retaliation ineffective. The question, then, is how many warheads the Russians would have to launch at our 1000 superhardened Minuteman in order to destroy at least 95% of them.

Table IV gives the number of warheads, of various yields, that must be delivered at a superhardened silo in order to achieve a 95% probability of destroying the target. Three different CEP's are used to account for possible state-of-the-art improvements in weapon delivery accuracies.

If we assume that all Russian missiles will carry a 25 megaton warhead and will have

TABLE IV.—NUMBER OF WARHEADS REQUIRED FOR A 95-PERCENT PROBABILITY OF DESTROYING A SUPERHARDENED SILO

Weapon yield (megatons)	Destruction radius (feet)	Number of warheads to achieve 95 percent kill		
		CEP = 2,500 ft.	CEP = 2,000 ft.	CEP = 1,500 ft.
1	811	47	27	15
4	1,287	12	11	6
10	1,746	9	6	4
25	2,368	5	4	2
49	2,963	3	2	2

a CEP of 1/2 nautical mile of 2000 feet, then four missiles would have to be detonated per Minuteman. In order to destroy 95% of our 1000 Minutemen they would have to launch about 6000 missiles (assuming 67% probability of successful launch and detonation).²⁴ This is to be compared with Secretary Laird's estimate that the Soviets would have about 500 such missiles in the mid-seventies.

Our calculation involves the assumption that first strike capacity would be credible only if the first wave of missiles were adequate. Dr. Foster and Richard Latter have suggested that the Russians could plan to send over second and third waves of ICBM's after somehow observing which Minuteman silos did not suffer close hits.²⁵ We already assume a great deal of optimism on the part of the initiators of a first strike if we assume that they would trust that our ICBM's would not be fired before the first wave. The suggestion that they would plan to trust the U.S. to await second and third waves without retaliation is, indeed, surprising.

An examination of Table IV shows that multiple warheads do not significantly affect the picture.²⁶ Thus with superhardening, where the CEP of the attacking weapon is comparable or greater than the radius at which the emplaced ICBM can be damaged, MIRV (Multiple Independently-targetable RV) capability is of no value. It would not add first-strike capability. Detailed study of this important result is needed.

The cost of the Hard Rock superhardening program is estimated at over \$5 billion. A four year research and development program has been proposed for a new superhardened silo at \$50 million a year.²⁷ These numbers are to be compared respectively with our \$40 billion estimate for an ABM system and with the \$1/2 billion a year R & D program for ABM's. The relatively low R & D costs for superhardening illustrate the fact that it is a civil engineering problem involving no great advances in state-of-the-art.

The principal advantages of superhardening vs. anti-ballistic missiles are cost (approximately one-seventh of the cost of ABM as estimated in this report), effectiveness, reliability (there are few mechanical or electrical parts which could fail and render the system useless), and relative invulnerability to countermeasures. Most important from the standpoint of the arms race, superhardening is passive. It does not pose a long run threat of increased offensive capability. It need not inspire a race to develop countermeasures.

Conclusions

Protection of the U.S. nuclear deterrent is of the highest priority. Proponents of the Safeguard ABM have claimed that it is necessary and credible as protection against a Soviet first strike, deployable at a cost of \$11 billion and completely defensive and therefore not a step in weapons escalation.

If these claims were true, we would support the Safeguard, but the proposal is questionable on every one of these points.

Necessity for ABM

The need for an ABM is a relative question. It must be judged with due reference to the total U.S. defense system: the U.S. has four deterrents such that a small part of any one of them is adequate.²⁸ The ABM is proposed as a marginal protection for one of these. The four deterrents are (1) ICBM's, (2) SAC long range bombers (which remain a remarkably credible deterrent), (3) nuclear missile submarines²⁹ and (4) thousands of warheads deliverable by some 2000 vehicles (intermediate range planes and missiles) stationed at aircraft carriers and hundreds of foreign bases. There are various means of protection for all four deterrents. For ICBM's, aside from ABM, there is mobility (which the U.S. has apparently not chosen), timing

(i.e., the missiles can be fired before the attack is completed)³⁰ and hardening. We have shown in the previous section that superhardening would be very effective.

Credibility of ABM

Arguments have been presented on the technical problems faced by ABM. These arguments can be summarized by the statement that ABM is an unusually complex system that cannot be fully developed by realistic trial and error. Experience indicates that the system as a whole is unlikely to work. In addition, the Safeguard proposal itself does not call for adequate deployment to create a credible defense.

Cost of Deployment

Our cost estimate, based on experience with analogous systems and on expansion of Safeguard into a Revised ABM with some credibility, is \$40 billion compared to some \$5 billion for superhardening.³¹

Potential for Escalation

The ABM approach to defense begins a spiral of measures and countermeasures leading to rapidly increasing cost and, perhaps, to instability. Reacting to actual and potential Soviet deployment of ABM, the U.S. has already developed: hardened warheads,³² electronic countermeasures, and sophisticated decoys. Development and deployment of a sequence of very costly measures and countermeasures can easily be envisioned. The offense holds a lead time of about a decade in this race.

For the above reasons we oppose deployment or partial deployment of ABM. We support continued research and development of ABM at a reasonable level. The present level of some 1/2 billion dollars a year is, perhaps, excessive.

We also support action in the near future to safeguard our ICBM's if that action can be shown to be relatively inexpensive, credible, and not conducive to a rapid arms spiral. On this basis we support superhardening of Minuteman silos.

FOOTNOTES

¹ New York Times, April 19, 1969.

² "ABM", Abram Chayes and Jerome B. Wiesner, Editors, The New American Library, 1969; "ABM, ABC", Union of Concerned Scientists, P.O. Box 289, MIT Branch Office, Cambridge, Mass., 1969; "A Critique of the Safeguard ABM", Council for a Livable World, Washington, D.C., 1969; R. L. Garwin and H. A. Bethe, Scientific American, 1968.

³ On occasion, protection of SAC bomber bases and protection against accidental attack have been advanced as subsidiary reasons for ABM area defense. The former is unreasonable from a cost stand point compared to alternatives. If the highly unlikely possibility of accidental attack is considered to require a defense, an ABM system could be designed which would provide some defense if given adequate warning. This system would not be Safeguard.

⁴ A particular disadvantage of deployment in the continental U.S. is that natural tests of the system will not be possible.

⁵ McGraw Hill's Defense Marketing Survey, Inc. Reported, e.g., by Sen. J. S. Cooper, Congressional Record, May 8, 1969.

⁶ New York Times, June 14, 1969.

⁷ Number of Sprints: D.M.S. Survey, ref. 5; S. Weinberg, ref. 10.

⁸ Number of Minutemen Protected: Deduction from number of Sprints; CBS-TV Documentary, May 1969; R. Lapp, The New Republic, June 28, 1969.

⁹ If we assume each Sprint has an 80% probability of being effective, and assume reasonable strategies of attack and defense then 1200 Sprints would actually protect 77% of the 400 Minutemen if each is attacked by two perfectly aimed and function-

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ing RV's. This assumed success rate of four-fifths is, on the basis of experience, excellent field performance for a system such as Sprint including detection and analysis of incoming RV, command, launch, guidance and detonation. The problem of reliability of complex systems is brought out by experience with the Apollo shots. Very large expert teams employing long count-downs with the replacement of many dozens of parts during count-down are required for the launches to go on schedule with reasonable reliability. Experience with demonstration launches of installed Minutemen, presumably under standard conditions with no count-down, has been frequent failure.

⁹ S. Weinberg, Essay in "ABM", ref. 2.

¹¹ Decoys: See, for example, Harm Bruning, "Flight Mechanics of Space and Re-entry Vehicles", The University of Michigan Engineering Summer Conferences, 1963, p. 127. Radar Blackout: See, for example, R. L. Garwin and H. A. Bethe, Scientific American, March, 1968, and H. A. Bethe, essay in "ABM", ref. 2.

¹² Sprint Velocity: Cecil Brownlow, Aviation Week and Space Technology, March 24, 1969, pp. 27, 28. RV Velocity: H. Bruning, ref. 11, and "Current Research in Astronautical Science, Rome, 1959", L. Broglio, Editor, Pergamon Press, 1961.

¹³ The stated time is optimistic for Sprint because we have not fully accounted for the fact that Sprint is slowed by the atmosphere for a distant low level intercept, while the RV time decreases with increasing altitude of intercept.

¹⁴ J. C. R. Licklider, Essay in "ABM", Abram Chayes and Jerome B. Wiesner, Editors, The New American Library, 1969.

¹⁵ Merton J. Peck and Frederic M. Scherer, "The Weapons Acquisition Process", Harvard Graduate School of Business Administration, 1962, p. 22.

¹⁶ A. W. Marshall and W. H. Meckling, Essay in "The Rate and Direction of Inventive Activity", R. R. Nelson, Editor, Princeton University Press, 1962, pp. 461-475.

¹⁷ Richard A. Stubbing, Congressional Record, February 7, 1969, p. S1450.

¹⁸ F. M. Scherer, Testimony before the Subcommittee on Economy in Government of the Joint Economic Committee, U.S. Congress, June 9, 1969 (Published in Congressional Record and to be published by Public Affairs Press).

¹⁹ Donald C. Winston, Aviation Week and Space Technology, April 28, 1969, p. 16. See also AWST, May 13, 1968, p. 32.

²⁰ "The Effects of Nuclear Weapons", United States Department of Defense, published by the U.S. Atomic Energy Commission, April 1962, p. 300.

²¹ P. 293, ref. 20.

²² The CEP, or Circular Error of Probability, is the radius of an imaginary circle drawn around the target in which 50% of the delivered warheads will fall.

²³ Basic research is presently being done on terminal guidance systems that guide the reentering warhead directly to the target. It is conceivable, although not probable, that the massive technological problems involved could be overcome to make such a system feasible. However, such systems are extremely vulnerable to counter measures that will render them totally ineffective; thus we do not consider them as a threat.

²⁴ If they could achieve a CEP of $\frac{1}{4}$ n.m., or 1500 feet, then they would have to launch about 3000 missiles. If we assume 80% success for their missiles and a CEP of $\frac{1}{4}$ n.m., as Dr. Foster has in one of his estimates, then they would have to launch 2500. This degree of accuracy is not available to the Soviet SS-9 missile being deployed.

²⁵ New York Times, May 13, 1969 and Allensmith Column, Ann Arbor News, June 9, 1969.

²⁶ For example, even if each multiple warhead had the same accuracy as the single

missile, which will not be true, then three 4-megaton IRV's will be no more effective than the one 25-megaton weapon. Eight one-megaton IRV's will be no more effective than the 25-megaton weapon. These numbers correspond roughly to the maximum number of MIRV's which could be carried instead of one 25-megaton RV. Without superhardening, MIRV's could be relatively effective, as has been stressed by the Defense Department. Assume three 4-megaton IRV's per missile with 20% malfunction rate for the independent targeting but otherwise $\frac{1}{2}$ n.m. accuracy and $\frac{2}{3}$ reliability as assumed above. Then without superhardening about 1300 missiles (i.e., 4 RV's per silo) would be needed for an effective first strike against our Minutemen.

²⁷ Ref. 15 and Walter Andrews, Aerospace Technology, January 15, 1968.

²⁸ G. Rathjens, Scientific American, April 1969; I. F. Stone, New York Review, March 27, 1969.

²⁹ Some 41 Polaris submarines are presently in service; at least 31 of these will be equipped in the near future with Poseidon missiles. Proposals exist to equip the Poseidon missiles with multiple independently targeted warheads, MIRV's. Up to ten warheads per missile are contemplated. Assuming that ten warheads per missile are used, and there are 16 missiles per submarine, there will be 160 warheads available in a single Poseidon submarine. By Defense Department criteria just two such submarines constitute a massive deterrent.

The effectiveness of this SLBM (Submarine Launched Ballistic Missile) deterrent is dependent on the continuing mobility and invulnerability of the nuclear submarine. These factors will be compromised only if the U.S.S.R. develops an anti-submarine technology capable of detecting and continuously tracking all missile submarines in transit and on station. Rear Admiral Levering Smith, director of the U.S. Navy's strategic systems project, states that "he is quite positive that the Polaris system will remain relatively invulnerable for another forty years. He knows of no new Soviet anti-submarine warfare methods."

We note that from the standpoint of the arms race the SLBM is mainly a defensive weapon since it is neither highly accurate nor powerful and so would be ineffective against hardened sites.

³⁰ R. Lapp, ref. 8.

³¹ Another comparison cost is roughly \$10 billion to deploy the present Minuteman force.

³² The proposal by the AEC to build production facilities for these warheads was announced in 1967; the cost was \$32 million.

LEGISLATIVE PROGRAM

Mr. DIRKSEN. Mr. President, I ask the distinguished majority leader about the program for tomorrow and also tonight.

Mr. MANSFIELD. It is my understanding that today, after the general debate on the pending measure is disposed of, the distinguished Senator from West Virginia intends to call up the supplemental conference report.

For tomorrow, we will continue on the debate.

ORDER ADJOURNMENT UNTIL 11 A.M., TOMORROW

Mr. MANSFIELD. Mr. President, I ask unanimous consent at this time that when the Senate completes its business this evening, it stand in adjournment until 11 o'clock tomorrow morning.

The PRESIDING OFFICER (Mr.

HUGHES in the chair). Without objection, it is so ordered.

Mr. YARBOROUGH. Mr. President, will the Senator yield for an inquiry?

Mr. MANSFIELD. I yield.

Mr. YARBOROUGH. Will committees be permitted to meet until 12 noon tomorrow?

Mr. MANSFIELD. Yes.

ORDER FOR RECOGNITION OF SENATOR HOLLINGS ON TOMORROW

Mr. MANSFIELD. Mr. President, I ask unanimous consent that the distinguished Senator from South Carolina (Mr. HOLLINGS) may be recognized for not to exceed 40 minutes after the disposition of the Journal on tomorrow.

The PRESIDING OFFICER. Without objection, it is so ordered.

ORDER FOR ADJOURNMENT FROM THURSDAY, JULY 10, UNTIL 11 A.M., FRIDAY, JULY 11, 1969

Mr. MANSFIELD. Mr. President, I ask unanimous consent that when the Senate completes its business tomorrow, it stand in adjournment until 11 o'clock on Friday morning, July 11, 1969.

The PRESIDING OFFICER. Without objection, it is so ordered.

ORDER FOR RECOGNITION OF SENATOR CHURCH ON FRIDAY

Mr. MANSFIELD. Mr. President, I ask unanimous consent that after the disposition of the Journal on Friday, July 11, the distinguished Senator from Idaho (Mr. CHURCH) be recognized for not to exceed 1 hour.

The PRESIDING OFFICER. Without objection, it is so ordered.

Mr. YARBOROUGH. Mr. President, on Friday, will committees be permitted to meet during the 1 hour when the Senator from Idaho is recognized?

Mr. MANSFIELD. Yes.

Mr. DOMINICK. Subject to the right, however, of an objection—through the period for the transaction of routine business?

Mr. MANSFIELD. Yes. That is all the Senator is talking about.

Mr. HOLLAND. Will there be a period for the transaction of routine business?

Mr. MANSFIELD. Both mornings.

Mr. HOLLAND. The two Senators from Florida wish to introduce a bill at that time. It may take 15 minutes.

Mr. MANSFIELD. Fine.

MESSAGE FROM THE HOUSE

A message from the House of Representatives by Mr. Hackney, one of its reading clerks, announced that the House had agreed to the report of the committee of conference on the disagreeing votes of the two Houses on the amendments of the Senate to the bill (H.R. 11400) making supplemental appropriations for the fiscal year ending June 30, 1969, and for other purposes; that the House receded from its disagreement to the amendments of the Senate numbered 4, 11, 13, 16, 27, 29, 31, 33, 38, 39, 43, 46, 51, 53, 54, 55, 56,

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58, 60, 62, 87, 91, and 92 to the bill and concurred therein; and that the House receded from its disagreement to the amendments of the Senate numbered 6, 7, 8, 40, 42, and 90 to the bill and concurred therein, severally with an amendment, in which it requested the concurrence of the Senate.

ENROLLED BILLS SIGNED

The message also announced that the Speaker had affixed his signature to the following enrolled bills:

S. 1647. An act to authorize the release of 100,000 short tons of lead from the national stockpile and the supplemental stockpile; and

H.R. 3689. An act to cede to the State of Montana concurrent jurisdiction with the United States over the real property comprising the Veterans' Administration Center, Fort Harrison, Mont.

AUTHORIZATION OF APPROPRIATIONS FOR FISCAL YEAR 1970 FOR MILITARY PROCUREMENT, RESEARCH AND DEVELOPMENT, AND FOR THE CONSTRUCTION, OF MISSILE TEST FACILITIES AT KWAJALEIN MISSILE RANGE, AND RESERVE COMPONENT STRENGTH

The Senate resumed the consideration of the bill (S. 2546) to authorize appropriations during the fiscal year 1970 for procurement of aircraft, missiles, naval vessels, and tracked combat vehicles, and research, development, test, and evaluation for the Armed Forces, and to authorize the construction of test facilities at Kwajalein Missile Range, and to prescribe the authorized personnel strength of the Selected Reserve of each Reserve component of the Armed Forces, and for other purposes.

Mr. FULBRIGHT. Mr. President, I do not wish to detain the Senator much longer. I think he misunderstood the point I was trying to make.

Actually, the hearings I am speaking of were not designed to try to find out what the Russians' political position is today, or the intrigue and gossip with the Kremlin, or even in the White House and in our own Government.

The point of the hearings was to try to understand what it is that has afflicted us and other people over the years in our ability to come to agreements which would avoid the creation of war.

We have had CIA representatives at our committee. We have had them on two or three occasions, as the Senator knows. Personally, I think they are probably the best information about the Russians in this area—not in the area I am speaking of—of any of the people the Senator has spoken of. When he mentions people like Fainsod, and so forth, they are experts, such as they are, with very limited personal acquaintance and knowledge in Russia. That is no fault of their own.

I have been told by Ambassador Llewellyn Thompson, as a matter of fact, that Senator ELLENDER, a distinguished Senator of this body, has seen more of Russia and knows them better than anybody in the State Department, more than

Llewellyn Thompson himself. Llewellyn Thompson told me that Senator ELLENDER was allowed to go places and to see factories and sites all over Russia that they would not allow Ambassador Thompson himself to see. In effect, Senator ELLENDER saw more of Russia than one of our Ambassadors who had been there on two tours of duty.

But this is not what I am talking about. I think it is a most unusual phenomenon that two great countries, we and the Russians, are unable—and it is not the first time—to come to some kind of *modus vivendi*. We cannot come to where we are able to stop this expenditure of our funds. In this country it amounts to \$80 billion this year, and we have created a situation, in the richest country in the world, that now threatens us with a form of bankruptcy—that is, in the sense of such high interest rates and such a shortage of credit that we are verging upon the creation of a panic. Something is wrong.

What I was trying to get at is what it is that makes these countries, the Russians as well as ourselves, take postures which make it almost impossible to come to an agreement. This year we are spending, in this budget, approximately \$80 billion. The Russians, to the best estimate of the CIA, are spending the equivalent in purchasing power of \$60 billion. It is a lot more than either one of these countries should be spending on arms.

What I am getting at is not how they devised their budget and all the other superficial and other arrangements they make. I am trying to find out why two great communities act like such fools. I do not believe anybody has studied it.

As a matter of fact, my committee had before it an anthropologist who said that in World War II this country sponsored a very intensive study of the Japanese with respect to what makes them tick, why they feel as they do about the Emperor, why they feel as they do about one another, how they feel about big business, and so forth. The researchers did a good job in that study and they made recommendations to General MacArthur which our Government followed, and which were beneficial and contributed to the American success in that operation.

I asked our witness: "Is there anybody to your knowledge making similar studies about the Russians?" He said, "No." That is the point I was making. We do not make a serious effort to understand the motivation of the Russians when we consider the kinds of programs we are discussing here today.

The CIA is the one Government agency that I have seen that has given me some hope that we have some people who are seriously trying to understand the Russians. I do not see anybody else who is trying to understand them. All we are doing is following the traditional way of dealing with possible enemies, by building more and more arms. Apparently it is the easiest thing to do although it is more expensive. That is all we seem to know how to do: More arms. What we are doing is not designed to bring about the kind of agreement the Senator from Kentucky (Mr. COOPER) spoke about a moment ago.

Mr. STENNIS. Mr. President, will the Senator yield to me briefly.

Mr. JACKSON. I yield.

Mr. STENNIS. Mr. President, I shall not elaborate. I think the Senator's speech and his discussion were outstanding. He is always outstanding in this field or in any other field he undertakes to become informed in. He has made a real contribution. Later I shall comment on certain paragraphs of his speech.

Mr. LONG. Mr. President, will the Senator yield?

Mr. JACKSON. I yield.

Mr. LONG. Mr. President, I compliment the Senator on his fine presentation. It has been my privilege during my service in the Senate to serve on the Committee on Armed Services and the Committee on Foreign Relations. It is very unfortunate that the Committee on Foreign Relations seems to have decided it should be the Committee on Armed Services. Their functions are entirely different. The function of the Armed Services Committee is to keep this country so strong that we can defend ourselves. Is that correct?

Mr. JACKSON. The Senator is correct.

Mr. LONG. The function of the other committee is to try to get along with other people.

I might say there was a time when I was on the Committee on Finance and the Committee on Foreign Relations. There were six members from the Committee on Foreign Relations who served on the Committee on Finance. The change of heart they had when they left that committee room was absolutely beyond belief. Six Senators would vote and then walk across the square to the Committee on Finance and be as tight as Dick's hatband because the whole thinking of the other committee is different.

The Committee on Foreign Relations would spend money and give it all away, with no feeling of responsibility; but the philosophy of the Committee on Finance is that we must pay for things, and we do not give away anything unless we get something in return. The difference in point of view was absolutely fantastic. Six Senators would walk across that square and vote diametrically in opposition to the way they voted in the Committee on Foreign Relations.

Finally, this Senator began to feel as if he were suffering from schizophrenia. Therefore, I resigned from the Committee on Foreign Relations so I could think one simple way: if I am going to pay something, I want to get something. If I do say so, I have been very happy with being on the Committee on Finance and the Committee on Commerce where one always thinks in terms of—"Let me see. Is this a good thing for Louisiana; or is this a good thing for America?"

I read this statement by Dick Goodwin. He said our biggest mistake was when we provided the Army with equipment to fight a war. He said that is why we are in the war in Vietnam and that if we had no weapons we could not fight and, therefore, there would be no war.

The logical extension of that philosophy would be that since we would have no weapons and no defense, we would just about have to apply for annexation

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to the Soviet Union, and, in that way, avoid war.

Frankly, I think we should defend ourselves and we should have the strength and courage that goes with pride in our country. I think the answer is that we should be as strong as the other fellow. I take it that is the burden of the Senator's argument. We should be able to defend ourselves. As I understand it, the Senator is not saying we should overkill the other man, but just be able to defend American homes.

Mr. JACKSON. The basic problem we face is not new. It is the age-old problem of preserving and nourishing individual liberty. From time to time, an adversary has come to the fore on the world scene, in the form of a totalitarian society such as the Nazi dictatorship in World War II, or as we face today in the form of Soviet imperialism. The problem is basically, as I see it, the question of whether or not we are willing to do the things necessary to preserve and encourage individual liberty.

Mr. LONG. Mr. President, will the Senator yield further?

Mr. JACKSON. I yield.

Mr. LONG. It appears that what was said by Magsaysay in the Philippines is correct. He said, "Here are two things, my clenched fist and my open palm. You can shake my hand or if you want to fight I will fight you." That is the approach of Americans. We never had a war with the Soviet Union and there is no reason why we should. However, the best way to assure there will be no fighting is that we stay strong enough to defend ourselves.

Mr. JACKSON. Mr. President, I wish to conclude by saying what I said several times during my prepared remarks. I do not think there is any greater priority than the requirement to try to reach agreement with the Soviet Union to limit arms. Of course, this agreement has to be enforceable. I feel very deeply that we have the best chance of reaching an agreement from a position of strength, and if anyone has any doubt about how to negotiate with the Soviets, ask the Czech people.

Mr. YARBOROUGH. Mr. President, will the Senator yield to me for 1 minute in light of what the Senator from Louisiana has just said?

Mr. JACKSON. I yield.

Mr. YARBOROUGH. Mr. President, what the distinguished Senator from Louisiana said reminds me of certain expenditures we are making, and I think that in our debates on these different points we should bear in mind the question of national resources.

The budget for January called for \$5.2 billion in ammunition for 1 year in Vietnam. I thought there were 250,000 Vietcong and North Vietnamese soldiers there, but I checked with the distinguished Senator from Missouri (Mr. Symington), and he checked with the Department of Defense, and we are advised that there are 240,000 North Vietnamese and Vietcong soldiers in South Vietnam rather than 250,000.

Mr. President, assuming there are 240,000 North Vietnamese and Vietcong combat troops in South Vietnam, if one were to take \$5.2 billion which was asked

for ammunition alone for 1 year, that would be \$21,666.66 for ammunition alone for 1 year to shoot at each Vietcong and North Vietnamese soldier in South Vietnam.

If one were to take the estimated cost of the war of \$3 billion a month or \$36 billion a year and divide it by 240,000, being the number of North Vietnamese and Vietcong troops in South Vietnam, that would be \$150,000 a year to fight each Vietcong and North Vietnamese soldier in South Vietnam.

However, on schools we have requested a budget of \$2.3 billion for all elementary and secondary education for 52 million American schoolchildren.

That figures out to \$44 per year for schoolchildren in America, to educate them. In other words, \$44 for 52 million American schoolchildren, and \$21,666.66 a year just for ammunition to shoot at each Vietcong in Vietnam. If there is a more unsound, economic, domestic political policy, I cannot imagine what it would be. I think it is a piece of folly what we have done and are doing.

I do not wish to prolong this discussion. The distinguished Senator from Washington has said that he has yielded the floor but the Senator from Louisiana (Mr. Long) went into this question of priorities and throwing away money, and I thought I would add that footnote as to how we are really throwing it away.

Mr. PERCY. Mr. President, it would be my intention to make a few comments on the colloquy now going on, and then to yield to the distinguished Senator from Kentucky (Mr. Cooper) for the purpose of introducing an amendment; then to follow it up with some comments on a very important agreement reached with the West German Government today by the administration. But before doing that, I should like to yield to my friend from Arizona who has been patiently waiting for what he tells me will be a 30-second comment.

Mr. GOLDWATER. Mr. President, I thank the distinguished Senator from Illinois for yielding to me.

Mr. President, there was some discussion on the floor a short time ago about the Hudson Institute and the Lincoln Laboratory of MIT.

I have acquired some information which I think is needed and will be of interest to the Senate.

On the Hudson Institute, the percent of the budget which is defense funded for the fiscal year ending June 1968 is as follows:

Total budget \$1.36 billion; nongovernment \$370,000, or 27 percent; Department of Defense \$950,000, or 69 percent; other Government agencies \$40,000 or 3 percent. In the case of the Lincoln Laboratory at MIT, 100 percent of the budget is Government funded; 99 percent from the Department of Defense; and 1 percent from NASA, the National Science Foundation, and the Department of Health, Education, and Welfare.

Once more I thank the Senator from Illinois very much for yielding to me.

AMENDMENT NO. 68

Mr. PERCY. Mr. President, I yield at this time to the distinguished Senator from Kentucky (Mr. Cooper).

Mr. COOPER. Mr. President, I ask unanimous consent that I may submit an amendment, with the understanding that the Senator from Illinois (Mr. Percy) will not lose his right to the floor.

The PRESIDING OFFICER. Without objection, it is so ordered.

Mr. COOPER. Mr. President, I submit an amendment to S. 2546 on behalf of the Senator from Michigan (Mr. Hart) and myself. I ask that it be printed, and that it also be printed in the Record.

The PRESIDING OFFICER. Without objection, it is so ordered.

The Chair would inquire of the Senator from Kentucky, does he wish to call it up at this time?

Mr. COOPER. No, Mr. President.

The text of the amendment is as follows:

At the end of the bill add a new section as follows:

"Sec. 402. Funds authorized to be appropriated by this Act or any other Act for the acquisition of an antiballistic missile system may be used only for research, development, testing, evaluation and normal procurement incident thereto, and may not be used for the deployment of an antiballistic missile system or any part or component thereof or for the acquisition of any site or preparation of any site for the deployment of any such system."

The PRESIDING OFFICER. The amendment will be received and will lie on the table.

Mr. PERCY obtained the floor.

Mr. GORE. Mr. President, will the Senator from Illinois yield for a question?

Mr. PERCY. I am delighted to yield to the Senator from Tennessee for a question.

Mr. GORE. Mr. President, has the Senator from Illinois noticed the shift in strategy, emphasis and the amended justification which has appeared yesterday and today?

Before the Senator answers that question, let me bring to his attention that when President Nixon appeared on television before the American people to announce his position with respect to the ABM issue, his principal reason given for recommending deployment of the ABM was that it was necessary in order to preserve the integrity of our deterrence.

When Secretary of Defense Laird appeared before the Armed Services Committee and the Committee on Foreign Relations, he said that deployment of the ABM is necessary "in order to preserve the integrity of our deterrents."

Now yesterday, in public comment, the able and distinguished Senator from Mississippi (Mr. Stennis), chairman of the committee, has put principal emphasis upon another point.

Both he and the Secretary of Defense have abandoned advancement of the earlier position.

Now, today, the distinguished Senator from Mississippi says that it is necessary to improve our bargaining position with the Soviets.

Today, the distinguished Senator from Washington (Mr. Jackson) poses his remarks on that point. The President has asked for it, he said; we must do it to strengthen our bargaining position with the Soviets.

We are back to the old canard of arming in order to parley. No longer is it ad-

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vanced that deployment of the ABM is necessary in order to preserve the integrity of our deterrence.

Mr. President, if it is not necessary, then who wants this thing?

This basic point is no longer advanced. Read the colloquy now published by Secretary of Defense Laird. He retreated from that position. The Senator from Mississippi has retreated from that position. The Senator from Washington has now retreated from that position.

Now a new position is being taken, not that it is necessary in order to preserve the integrity of our deterrence, not that it is necessary for our defense, but that it will strengthen our bargaining position with the Russians.

Has not the Senator noticed that shift in emphasis?

Mr. PERCY. I had noticed that. I should make comment on it before we leave tonight, if I am able to make a few remarks. But right now I can classify such logic, most respectfully, as pure hogwash.

Mr. STENNIS and Mr. JACKSON addressed the Chair.

Mr. PERCY. Mr. President, I have been asked to yield to my distinguished colleague from New York, who has been waiting quite some time to make a short comment, and then I would be glad to yield to the Senator from Mississippi.

Mr. JACKSON. Mr. President, as long as the two Senators just referred to are on the floor and standing on their feet, I think that in all fairness, we should be heard.

Mr. PERCY. I am happy to yield to the Senator from Mississippi.

Mr. STENNIS. Mr. President, I do not want to prolong this argument on the ABM, but the Senator from Tennessee (Mr. GORE) is mistaken when he states he has noticed a change in my position. I say that with all respect to him. There is no change in my position about the ABM as a deterrence, nor is there any change in my thought that the President of the United States is going to negotiate.

I would hope he would not have the rug pulled out from under him before he speaks to the Russians by any Republican, Democrat, or anyone else—it does not make any difference who it might be. That is just commonsense. I have said that since January, somewhere along there. I continue to say that because that is my belief. We do not have to read any books to find that out. I thank the Senator from Illinois very much for yielding.

Mr. JACKSON. Mr. President, will the Senator from Illinois yield?

Mr. PERCY. I yield.

Mr. JACKSON. I want to say exactly the same thing. I have not changed my position regarding the ABM. I think it is very clear that it is needed to protect our deterrence. The fact that I relate it to negotiations at this time, I think, is most pertinent. It is important that the President of the United States, as a representative at the negotiating table, does not have the rug pulled out from under him. That is the way it will be interpreted, if we deny funds for ABM at this time.

That is my position, and I have not changed my views.

Mr. LONG. Mr. President, will the Senator from Illinois yield?

Mr. PERCY. Mr. President, I could comment further on that same point, but right now I yield to my distinguished colleague from New York (Mr. JAVITS).

Mr. JAVITS. Mr. President, there are two observations I should like to make on the remarks which have just been made by my colleagues on the question on negotiation. One is the dimension, which has not been mentioned sufficiently in debate, and I hope it will have the attention of all Members of the Senate; namely, that it is not so much what we can expect from the negotiators as they stand now, but what we can expect from them when they actually are in negotiation. It is my judgment, as one Senator—and I think there is a great deal of opinion on this subject—that the dimension of the negotiations will be very much more serious in trying to come to a big rather than a small agreement, from our deployment of Safeguard. That is a critically important point because of the impact on others.

If we are there with our hands for the moment in the cookie jar; that is, they have some kind of ABM and we have some kind of ABM, the result will be a mouse or the whole of the negotiations may amount to preventing atomic weapons on the seabed or something like that. We have got to put on an abrasive attitude toward committing ourselves not to deploy, and then we will be in there fighting for a big agreement through negotiation.

That is the very atmosphere and attitude that negotiations require if they are really going to meet what the world has a right to expect. Otherwise we are going to have people, as if in the grocery business, all of whom may have some kind of atomic weapons, arriving at little agreements, as a result of little "buy this" negotiations, and letting the press think they have done something big.

I think the greatest argument against deployment is that then we are really building a fire under our negotiators to do something appreciable, because we are running risks. The Senator from Washington is right, we are running risks. As the Senator from Kentucky (Mr. COOPER) has said, that is the very reason why we should do what we suggest be done, because the running of risks will enable us to get something big rather than something miniscule, which will be the case if we go on this way, and we will settle nothing until we get an atomic holocaust.

As the Senators from Michigan and Kentucky have invited Senators to ask to join them, I myself have the honor, with the permission of the Senate, to ask unanimous consent that I may be included as a cosponsor of the amendment.

The PRESIDING OFFICER. Without objection, it is so ordered.

Mr. MANSFIELD. Mr. President, will the Senator yield?

Mr. PERCY. I yield.

Mr. MANSFIELD. Mr. President, there has been a great deal of talk about negotiating from strength. The ABM sys-

tem is supposed to give us strength 6 or 8 years from now.

There has been some talk that the Soviet Union exceeds us in ICBM's, the Minuteman and Titan. I do not think that is applicable. I say that most respectfully, although I do admit that by the end of this year, according to our best intelligence estimates, they may be 25 or 30 ahead of us as far as ICBM launchers are concerned.

As far as sea launchers are concerned, at the end of last year there were 656 Poseidon missiles, compared with 45 missiles of similar type on Soviet submarines.

The third is in the intercontinental bombers, the B-52 and the B-58. This country had 645, and the Soviets had 150 of their bombers. I think the Soviet figure still would not exceed that, because it had gone down from 155 the preceding year.

So if we are talking about strength, we have it, and they know we have it.

Mr. PERCY. Mr. President, I ask unanimous consent to join as a cosponsor of the amendment submitted by the Senator from Kentucky and the Senator from Michigan.

The PRESIDING OFFICER. Without objection, it is so ordered.

Mr. PERCY. Mr. President, I yield to the Senator from Montana.

Mr. MANSFIELD. Mr. President, I ask unanimous consent that I may be a cosponsor of the pending Cooper-Hart amendment.

The PRESIDING OFFICER. Without objection, it is so ordered.

Mr. CRANSTON. Mr. President, will the Senator yield?

Mr. PERCY. I yield.

Mr. CRANSTON. Mr. President, I ask unanimous consent that I may join in the same manner.

The PRESIDING OFFICER. Without objection, it is so ordered.

Mr. GORE. Mr. President, will the Senator yield?

Mr. PERCY. I yield.

Mr. GORE. Mr. President, I make the same request.

The PRESIDING OFFICER. Without objection, it is so ordered.

Mr. PERCY. Mr. President, I believe the debate this afternoon, the colloquy that followed the speech of our distinguished colleague from Washington, was extremely valuable. I think it is very important that the colloquy followed because of the very grim picture that was painted by the Senator from Washington (Mr. JACKSON) and the grim picture that was painted of the position of my distinguished friend and our former colleague in the House, Melvin Laird, which, if left unclarified, might cause some people to believe that we should erect an iron curtain; in fact, that we should triple-plate it; that the situation was so critical that we should insulate and isolate ourselves.

Yet we know that is not the interpretation the Secretary of Defense placed on it. In the concluding comment made by the distinguished Senator from Washington, he clarified completely that he did not intend that at all; that he himself earnestly hoped we could find a negotiated settlement of the arms race now going on; that we could find a way to deescalate the danger and the terror along

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the path on which the two nations are now proceeding.

I believe that this is the interpretation which all of us would like to place on these remarks, remarks the Senator had every right to make. He is not speaking for the U.S. Government or the administration. He is speaking as one Senator. There are people who would agree with every word in his speech.

The intention in this country, on the part of every President we have had in our time, whether Democrat or Republican, is to bring down the curtain, to perforate it, to bring about a thaw in the cold war, to try to normalize in every way our relations with the Soviet Union. That was the policy of President Johnson, President Kennedy, and President Eisenhower before them, and it is certainly the policy today of President Nixon. I do not think anyone would say that President Nixon is naive about communism or the Soviet Union, or their intention or their capability. He is alert to all of that. He has been a lifetime student of the Communist movement.

On the other hand, President Nixon has taken the initiative and he has set the tone for this country and the hope for the country in saying:

Let us work toward these negotiations. We are willing to start them as of July 31, the end of this month.

Certainly he has full expectation that those talks will be underway very early in August.

I do not think any one of us could say that the Soviet Union will negotiate an agreement with us that is just in our interest and not in their interest. No one would believe that they would, or even, perhaps, should. We are not unaware of the fact that we cannot hope to have an agreement with the Soviet Union unless it also serves the Soviet interest.

We have a coincidence of interests. Faced with a coincidence of interests, we have the opportunity for agreements. That was how we achieved an agreement on Austria. That was how we achieved an agreement on the testing of atomic weapons. We had that same coincidence of interests when we agreed on a non-proliferation treaty. It is hoped that we will have many more bases of accord in the future.

I would simply say that there is no question in anyone's mind that we must have a credible deterrent. In this respect I agree completely with the distinguished Senator from Tennessee. He has indicated, and I would indicate, that a credible deterrent depends upon two principal factors: First, the power to retaliate against anyone who dares to strike against us and, second, the will to use that power; and let no nation have any question about either point, the first or the second. We have the power. We have the will to use that power if attacked and if the free world is endangered by any nation.

Having said that, I think we can carry on this debate on the military procurement bill before us.

I think the way we carry this debate on will be exceedingly important. It is important because the Nation is watching us. The Nation is divided on many

issues. People are settling these issues in different ways. We are going to settle this issue with reason, not emotion. We are going to resolve our differences because we are 100 men with this great responsibility in this Chamber, equally divided, roughly, on one very important part of the military procurement authorization bill. But we are going to approach this problem by trying to analyze it, look at the conditions, look at the adversary, or the potential adversary, and look at and weigh all the alternatives.

I would like to say that I think it is with great pride that all of us will have this debate led by the distinguished chairman of the Armed Services Committee, the Senator from Mississippi (Mr. STENNIS).

I think we all have a good feeling about having that committee under his chairmanship, because he is a man of great intelligence, a man of utter fairness, as demonstrated time and again in his relationship to his colleagues, and a man of absolute integrity. It would be hard to fill the shoes, in this job, of Senator RUSSELL; but I think all of us, unanimously, including Senator RUSSELL himself, would feel that no one is better qualified; and in this instance, the national interest, the seniority system of the Senate, and the great ability of the distinguished Senator now holding the chairmanship all coincide.

I myself am very proud to have had the privilege, over the past 2½ years, of working with the Senator who will lead those who oppose the ABM deployment at this time. Senator COOPER, a distinguished Senator from a sister State of Illinois, has been a friend of mine for many years. I think he embodies the qualities which citizens want and deserve in their representatives. He is beloved in his own State; he is respected throughout the country. He is respected by every Member of this body, and by the President of the United States.

I have seen him study this issue as I have never seen anyone study any issue before. I have sat alongside him for well over a year now, as he has interrogated experts in the field of intelligence, the military field, and the appropriate scientific fields, to try to discover what the truth of this matter is.

He is a man of great judgment; and I think it is a remarkable thing that the battle will be headed by the two men probably best qualified to oppose each other. Each of them has come to a different conclusion after weighing the same set of facts. This is perhaps why the administration admitted, when they made the decision to go ahead with an ABM system, that it was a marginal decision.

It is a very difficult decision. We happen to think that we have the votes to win, and we will win in the effort to delay deployment, for a number of reasons; but we respect the judgment of those who take a different position than we do.

I should like to make a few comments that I put together this morning to answer, to a degree, the points that have been raised by the distinguished Senator from Washington.

The issue before the Senate regarding

the anti-ballistic missile system is between those who would start ABM deployment now and those who would continue research and development, testing, and evaluation to produce a more workable system than is now available if it should ever become necessary to deploy that system.

By continuing research, development, and testing, by not beginning deployment in the United States now, we can make the deployment decision later. That decision can be based on whether we can develop a system that will work and on what we learn of Soviet intentions at the forthcoming nuclear arms talks.

Proponents of starting ABM deployment now say it would strengthen the President's hand in talks with the Soviet Union. I would simply, respectfully, say that in my judgment this is hogwash.

The President will be in a strong position if the Congress orders continued testing, research, and development to make the now-vulnerable Safeguard system really effective. Hasty deployment of a highly vulnerable ABM system cannot possibly increase the credibility of our military defenses.

The Safeguard proposal for beginning deployment at sites in Montana and North Dakota will require early installation of today's vulnerable missile site radars—MSR's—and construction of ABM sites where realistic testing really cannot occur. It would freeze the system in an ineffective state.

It would make far more sense to redesign the radars, to test them at Kwajalein, and to deploy a full system out there where intercepts of nonnuclear missiles can be tested.

I am not a technician nor a scientist; but I was down here some 25 years ago as a procurement officer for the Navy. I spent some 25 years as a defense contractor. I have worked with the military over a period of many years, including 3 years in military service.

The situations I fear most, and the times I have gotten into the deepest trouble as an industrialist or as a procurement officer, have been when we rushed ahead with a system that was not yet ready for production. We invariably delayed, in the end, deployment or production. We delayed and frustrated the objective we were trying to achieve, in our haste to put into production something that was untested.

Proponents of immediate deployment contend that a year's delay will make it impossible to catch up with the proposed schedule of putting two sites in operation by the end of 1973 and making the whole system operational by 1975.

This is untrue. If we do not begin deployment now, but rather—and I for one would be willing—begin production of long leadtime components, we can at relatively small cost start deployment—should it later appear advisable—a year from now and still meet the Pentagon's schedule.

In my dedication to the security and national interest of the United States—and I know that my dedication is matched by the dedication of every other Member of the U.S. Senate—I will support, and I know every other Senator will

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support, whatever level of military spending seems required.

But I think the word "sufficiency," as used by the President of the United States, was one of the most significant words yet contributed to the vocabulary of this dialog.

I have not been convinced that deployment of the ABM will yield any net gain in national security. The fact is that this system in its present stage of design and development—even if approved by the Congress—will probably never be fully deployed because it has yet to be perfected as a weapons system. We need lose no time as we conduct arms talks with the Soviet Union, because we can use that time for development of less expensive, smaller radars which can be better defended than the present vulnerable design permits.

The main reason cited for ABM deployment is to deny the Soviets a preemptive first-strike capability. The fact is that it would be sheer lunacy for the Russians to attack the United States with nuclear weapons even without us having the ABM because:

First. The underwater Polaris fleet remains ready to strike a devastating response.

Second. At any time about 250 of our intercontinental bombers are on 10-minute alert, and their air-to-ground nuclear rockets would be part of the retaliatory strike.

Third. It is impossible that our entire Minuteman Titan force could be wiped out with one blow.

These are facts of which the biggest, rashest hawk in the Kremlin is well aware.

In order for the ABM to make sense, the Soviets would have to believe: First, they could with a sudden attack wipe out all our nuclear forces if we did not have it; and, second, our ABM would preserve enough of our nuclear forces intact to make any such Soviet attack suicidal.

However, the present ABM system is too vulnerable to provide such protection, and our overall missile forces are sufficiently protected to maintain a devastating second-strike capability without the ABM.

On the eve of the arms talks with the Soviet Union, let us continue—even accelerate—the research, development, and evaluation process. Let us also give ourselves a reasonable period of time to determine, in the words of Secretary of State Rogers:

If the Russians want to go out of the ABM business.

Then we can do the same same.

I urge that we do nothing that would in any way frustrate the success of these negotiations, nor do anything that would in any way appear to look cynically upon such negotiations, which I truly believe are in our common interest.

BALANCE OF PAYMENTS

Mr. PERCY. Mr. President, I want to commend the administration for its announcement today of a new 2-year offset arrangement with Germany to help defray U.S. military balance-of-payments

costs for maintaining U.S. troops in Germany. The new agreement goes a long way toward correcting the absolutely scandalous arrangements that have been concluded in recent years under which, on very short-term loans, at prevailing market rates of interest, we are paying interest on money to defend and to provide for the defense of Western Europe.

Speaking as one Senator, I think that those arrangements have been simply impossible to continue. And I think they would have imperiled our whole ability to support our level of forces in Europe.

The new 2-year offset arrangement is for \$1,513 million which represents around 80 percent of the total U.S. balance-of-payments costs in Germany. Sixty-one percent of the total offset will be in the form of purchases in the United States by Germany for a total of \$925 million. The other \$595 million will take the form of other financial transactions. The largest single other item is that Germany will buy \$250 million of U.S. Treasury bonds with a 10-year maturity at 3½ percent. This represents a considerable advance over past offset loans where interest rates were at prevailing market rates of interest. Even more important is that Germany is blocking interest on its past loans to the United States and leaving it in the U.S. Treasury. The \$32.5 million of interest will be applied to military purchases in the United States.

In addition, Germany is buying up \$118 million of Eximbank and Marshall Plan debts owed to the United States; is prepaying \$44 million of other German debts to the United States; and is setting up a special fund of \$150 million for German investment in the United States.

It is my understanding from the Under Secretary of the Treasury on the telephone this afternoon that that is the only part of the financial arrangement that will carry commercial interest rates.

This new agreement is a major step toward creating a sounder financial basis for U.S. expenditures in NATO in that it covers 80 percent of all our balance-of-payments expenses, primarily using purchases.

We must still strive for a 100-percent offset; an offset that involves only purchases and not loans. If loans are to be used, we must be absolved of any interest costs.

This is the principle that I was striving for when I presented a plan to the NATO North Atlantic Assembly in June for a multilateral automatic offset arrangement for all military expenditures within NATO. The principle is that no country should gain or lose on the military balance-of-payments account as a result of its commitment to the common defense of NATO.

The administration has taken a big step toward this goal, and I am encouraged that in the future we shall be able to arrive at an agreement that will automatically offset military expenditures 100 percent through the use of purchases in the United States. This would also eliminate the agonizing, and I would say disturbing, and some would say humiliating,

bilateral negotiations that endanger German-American relations.

As rapporteur—working chairman—of the Balance of Payments Subcommittee of NATO, I plan to continue my work toward this goal.

I know of no greater threat to the continuation of our current U.S. troop level in Europe than the balance-of-payments crisis that we face today. We must continue our efforts until we reach a total offset on our NATO military balance-of-payments account.

Mr. President, I yield the floor.

SECOND SUPPLEMENTAL APPROPRIATIONS BILL, 1969—CONFERENCE REPORT

Mr. BYRD of West Virginia. Mr. President, I submit a report of the committee of conference on the disagreeing votes of the two Houses on the amendments of the Senate to the bill (H.R. 11400) making supplemental appropriations for the fiscal year ending June 30, 1969, and for other purposes. I ask unanimous consent for the present consideration of the report.

The PRESIDING OFFICER. The report will be read for the information of the Senate.

The assistant legislative clerk read the report.

(For conference report, see House proceedings of July 8, 1969, p. H5620, CONGRESSIONAL RECORD.)

The PRESIDING OFFICER. Is there objection to the present consideration of the report?

There being no objection, the Senate proceeded to consider the report.

The PRESIDING OFFICER. The Senator from West Virginia is recognized. Mr. MUNDT. Mr. President, will the Senator yield?

Mr. BYRD of West Virginia. I yield.

Mr. MUNDT. Mr. President, I think we should have a short quorum call.

Mr. BYRD of West Virginia. I agree. Mr. President, I ask unanimous consent that I may put in a brief quorum call without losing my right to the floor.

The PRESIDING OFFICER. Without objection, it is so ordered.

Mr. BYRD of West Virginia. Mr. President, I suggest the absence of a quorum.

The PRESIDING OFFICER. The clerk will call the roll.

The bill clerk proceeded to call the roll.

Mr. BYRD of West Virginia. Mr. President, I ask unanimous consent that the order for the quorum call be rescinded.

The PRESIDING OFFICER. Without objection, it is so ordered.

Mr. BYRD of West Virginia. Mr. President, the grand total of the budget estimates of new obligational authority considered in connection with this bill was \$4,814,305,334. The House version of the bill recommended \$3,783,212,766, and the Senate version of the bill recommended appropriations of \$4,459,669,644. The Senate will recall that subsequent to the House committee consideration of the bill, supplemental emergency requests submitted directly to the Senate amounted to a figure in excess of \$450 million. The final bill agreed to in conference is in the amount of \$4,352,357,644. This is a reduction under the total

Senate

WEDNESDAY, JULY 9, 1969

The Senate met at 11 o'clock a.m. and was called to order by the President pro tempore.

The Chaplain, the Reverend Edward L. R. Elson, D.D., offered the following prayer:

Almighty God, creator, preserver, redeemer and judge, infuse our hearts and minds with Thy higher wisdom that we may measure these days against the long years yet to come, and to judge our daily actions by Thy divine decrees. Invest our deliberations and our decisions with eternal meanings, that generations to follow may call us "blessed." Pour out Thy blessing upon this land that we may present unto Thee a nation cleansed, and redeemed. Equipped with righteousness and justice, with grace and generosity, may we have a part in Thy great redemption and at last establish the peace of Thy kingdom. Amen.

THE JOURNAL

Mr. MANSFIELD. Mr. President, I ask unanimous consent that the reading of the Journal of the proceedings of Tuesday, July 8, 1969, be dispensed with.

The PRESIDENT pro tempore. Without objection, it is so ordered.

LIMITATION ON STATEMENTS DURING TRANSACTION OF ROUTINE MORNING BUSINESS

Mr. MANSFIELD. Mr. President, I ask unanimous consent that statements in relation to the transaction of routine morning business be limited to 3 minutes.

Mr. DOMINICK. Mr. President, reserving the right to object—and I shall not object—I wonder if it is possible to get consent to go beyond 3 minutes.

Mr. MANSFIELD. Oh, yes.

Mr. DOMINICK. I have a 7- or 8-minute speech.

Mr. MANSFIELD. Surely.

Mr. DOMINICK. I have no objection.

The PRESIDENT pro tempore. Without objection, it is so ordered.

EXECUTIVE SESSION

Mr. MANSFIELD. Mr. President, I ask unanimous consent that the Senate go into executive session to consider the nomination of George H. Goodrich, of Maryland.

There being no objection, the Senate proceeded to the consideration of executive business.

The PRESIDENT pro tempore. The nomination will be stated.

DISTRICT OF COLUMBIA COURT OF GENERAL SESSIONS

The assistant legislative clerk read the nomination of George H. Goodrich, of

Maryland, to be an associate judge of the District of Columbia court of general sessions for the term of 10 years.

The PRESIDENT pro tempore. Without objection, the nomination is considered and confirmed.

Mr. MANSFIELD. Mr. President, I ask unanimous consent that the President be immediately notified of the confirmation of this nomination.

The PRESIDENT pro tempore. Without objection, it is so ordered.

LEGISLATIVE SESSION

Mr. MANSFIELD. Mr. President, I move that the Senate resume the consideration of legislative business.

The motion was agreed to, and the Senate resumed the consideration of legislative business.

ORDER OF BUSINESS

Mr. STENNIS. Mr. President, will the Senator yield?

Mr. MANSFIELD. I am delighted to yield.

The PRESIDENT pro tempore. The Senator from Mississippi is recognized.

Mr. STENNIS. I thank the majority leader for yielding to me.

Mr. President, speaking as chairman of the committee, it is my concept that it is the committee's duty on the pending matter, the military authorization bill, to do everything possible to get this matter fully presented to the jury, so to speak—to the Senate.

The bill contains many major matters of far-reaching importance that go to the vitals of our security.

Second, I have a very strong feeling about the debate being conducted in open session as much as possible; and only with respect to classified matters that I thought were of the utmost importance would I think of anything other than an open session.

Third, if we can avoid going over the same matter a second time in closed session, I think we should do so.

So, in an effort to continue getting this bill fully presented, not only from my viewpoint, but also from that of all other members of the committee, I believe it would be better now to proceed in this manner: that the Chair have it understood that the Senator from Maine (Mrs. SMITH), who is the ranking minority member of the Committee on Armed Services, will be recognized soon today, to present her views on the bill as a whole. This would further present the picture as we developed it in the committee; that then the two subcommittee chairmen, the Senator from Nevada (Mr. CANNON) and the Senator from New Hampshire (Mr. MCINTYRE), and the minority members of those subcommittees be given an op-

portunity to present their views. Of course, this would all be in open session.

I am not attempting to lay out any pattern for the Chair. I am simply making known the purpose and desires of the committee in presenting this bill.

Mr. MANSFIELD. Mr. President, will the Senator yield?

Mr. STENNIS. I yield. I have discussed this matter briefly with the majority leader.

Mr. President, will the Senator from Montana yield, to permit me to make one additional point?

Mr. MANSFIELD. I yield.

Mr. STENNIS. I wish to emphasize that to make the debate meaningful on matters that ought to be heard in a closed session, I shall judge later as to when I shall ask for a closed session. But I express the hope now, and say for my own part, that it is my hope that we will try to consolidate such matters in one closed session.

Mr. MANSFIELD. That is fair enough. So the Senate is on notice that there will not be a closed session today.

Mr. President, I ask unanimous consent that the order entered yesterday to that effect be rescinded.

The PRESIDENT pro tempore. The Chair is advised by the Parliamentarian and the journal clerk that no order to that effect has been entered.

Mr. MANSFIELD. That is correct; it was an understanding.

The PRESIDENT pro tempore. Then the understanding is withdrawn.

Mr. DIRKSEN. Mr. President, will the Senator yield?

Mr. MANSFIELD. I yield.

Mr. DIRKSEN. Mr. President, I think that in this dialog it should be abundantly clear to all that, if there are minority Senators who believe they have matters that ought to be presented in a closed session, they will not be precluded from making that request. Of course, any Senator can so move.

The PRESIDENT pro tempore. The Chair thinks he should make an observation. The rule of recognition in the Senate provides that "the Presiding Officer shall recognize the Senator who shall first address him." It is in the discretion of the Chair to recognize Senators under this rule.

By tradition and through custom that has existed for many years, the Chair does, as a rule, give priority of recognition first, to the majority leader; second, to the minority leader; then to the Senator who is in charge of a bill; and next to the ranking minority member of the committee or other Senators concerned with presenting the bill. I know of no rule or custom at present that goes beyond that practice.

Every member of the committee—indeed, every Member of the Senate—who wishes to have an opportunity to do so,

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in the present status of the case, will be afforded an opportunity to speak to his heart's content on this particular issue.

Every Senator who wishes to speak will be recognized in due season, unless the Senate, by unanimous consent, limits debate and precludes him from doing so.

Mr. DIRKSEN. I was addressing my remarks particularly to rule XXXV, under which a Senator can move for a closed session. If his motion is seconded, the rule is automatically invoked by the occupant of the Chair.

The PRESIDENT pro tempore. That, of course, is correct. But any Senator may be recognized, and it might be that before a single word were said in debate in closed session, a motion could be made to return to open session. If a majority of the Senate so desired, they could return to open session.

Mr. STENNIS. Mr. President, will the Senator yield to me?

Mr. MANSFIELD. I yield.

Mr. STENNIS. Mr. President, it is not necessary to say this but I wish to kill any kind of inference that anyone has brought in that I was trying to exclude anyone. The rules speak for themselves. The Chair has so well stated the custom of the Senate about recognition and I think that is the correct rule. I was merely undertaking to explain to the Senate as a body what the committee was trying to do in presenting the bill.

Several Senators addressed the Chair.

The PRESIDENT pro tempore. Does the Senator from Montana yield and, if so, to whom?

COMMITTEE MEETINGS DURING SENATE SESSION

Mr. MANSFIELD. Mr. President, I ask unanimous consent, in view of the changed situation, that all committees of the Senate be permitted to meet during the session of the Senate today and I ask that attaches notify the committees that are in session to that effect.

The PRESIDENT pro tempore. Without objection, all committees of the Senate will be permitted to meet during the session of the Senate today.

The Senator from Montana has the floor.

ORDER OF BUSINESS

Several Senators addressed the Chair.

The PRESIDENT pro tempore. The Chair understands that the Senate is operating under the 3-minute rule.

Mr. MANSFIELD. Mr. President, I ask unanimous consent that I may proceed for 2 additional minutes.

The PRESIDENT pro tempore. The Senator from Montana requests that he may proceed for 2 additional minutes. Without objection, it is so ordered.

Mr. TOWER. Mr. President, will the Senator yield for a question?

The PRESIDENT pro tempore. Does the Senator from Montana yield to the Senator from Texas?

Mr. MANSFIELD. I yield.

Mr. TOWER. Mr. President, I would like to ask the distinguished majority leader, in view of this development now, it is possible, is it not, that the closed session would come on tomorrow?

Mr. MANSFIELD. Not necessarily. I would not think so. I think there will be some open discussion first and very likely the closed session will not come tomorrow. What I say is subject to change.

Mr. TOWER. I wish to propound a further question.

Mr. MANSFIELD. Yes.

Mr. TOWER. At the time the motion is made to close the doors will there be propounded a request relative to the presence of staff members on the floor?

Mr. MANSFIELD. There will, indeed.

Mr. TOWER. I would like to serve notice to the Senate that it is my current intent to raise an objection to any staff members being allowed on the floor during the time when the doors are closed.

Mr. MANSFIELD. For the information of the Senate, I have discussed this matter with the distinguished chairman of the committee, the Senator from Mississippi (Mr. STENNIS), and the distinguished minority leader (Mr. DIRKSEN) on the basis of precedents. There were four staff members outside of the regular members of the Committee on Armed Services who were permitted on the floor at the time of the last closed hearing. If this is going to get out of hand I think the only way to face up to it would be that no staff members, not even from the committee, be allowed because if each Senator is going to ask that his staff member be present I think the need for a closed session goes out the window because we have a hard enough time keeping our own mouths closed. If we get them in here the roof is going to blow off.

If this matter gets out of hand there will be no staff members allowed and that is the way rule XXXV reads. It refers to closed sessions as affecting Senators only.

The PRESIDENT pro tempore. The Chair would ask the clerk to read part 2 of rule XXXVI, which relates to this matter. There has been a good deal of discussion about who should be allowed on the floor. This rule very clearly establishes who shall be allowed on the floor.

The assistant legislative clerk read as follows:

RULE XXXVI EXECUTIVE SESSIONS

2. When acting upon confidential or Executive business, unless the same shall be considered in open Executive session, the Senate Chamber shall be cleared of all persons except the Secretary, the Chief Clerk, the Principal Legislative Clerk, the Executive Clerk, the Minute and Journal Clerk, the Sergeant at Arms, the Assistant Doorkeeper, and such other officers as the Presiding Officer shall think necessary; and all such officers shall be sworn to secrecy.

Mr. TOWER. Mr. President, a parliamentary inquiry.

The PRESIDING OFFICER. The Senator will state his parliamentary inquiry.

Mr. TOWER. Mr. President, when the rule refers to officers of the Senate that would mean they would have to be officers of the Senate and could not be individual staff members. Is that correct?

The PRESIDENT pro tempore. Unless it was in the discretion of the Presiding Officer who could permit them under the language of this rule. But it has never been the custom or practice to allow it and the present Presiding Officer would

not permit the presence of any attachés, particularly if objection was made, and the Senator from Texas has indicated he would object.

Mr. GOLDWATER. Mr. President, will the Senator yield?

Mr. MANSFIELD. I yield.

Mr. GOLDWATER. Mr. President, I wish to make one comment with respect to this possible request for advisers to be on the floor from the committees other than the Committee on Armed Services.

I think it is proper, if it could be allowed, to have experts from the Committee on Armed Services, but the Foreign Relations Committee has been holding hearings in the field of armed services, and they are unalterably opposed to many things that the Committee on Armed Services is for.

I think it would be a big mistake to allow people on the floor who come with a prejudiced or prejudged view on the matter of weapons, ABM's and so forth. It is the job of the Committee on Armed Services to present the case and not the Foreign Relations Committee. I may be wrong, but I do not think I am.

Mr. MANSFIELD. Mr. President, I ask unanimous consent that I may be recognized for 2 minutes.

The PRESIDENT pro tempore. The Senator from Arizona can yield to the Senator from Montana.

Mr. MANSFIELD. Mr. President, will the Senator yield to me?

Mr. GOLDWATER. I yield the floor.

The PRESIDENT pro tempore. The Senator from Arizona has taken his seat.

Mr. MANSFIELD. One of the difficulties in this body with respect to the committee system concerns the infringement of authority and responsibility. Sometimes the line is drawn pretty thin, and it is hard to say where it lies. Nowadays, because the field of defense is so overlapping, it becomes increasingly difficult to determine where the responsibility of one committee begins and the responsibility of another committee ends. It is overlapping, it is a difficult question, and it goes beyond the committees here involved. I recall that the chairman of the Committee on Foreign Relations has had questions raised about certain hearings held by the Committee on Government Operations, which were in the field of foreign policy.

Mr. GOLDWATER. I am looking at it from a technical standpoint. The expertise in this matter is in the Committee on Armed Services and not in some other committee.

I am very happy that the distinguished Senator from Mississippi refrained from holding hearings on foreign policy. I think that is the job of the Committee on Foreign Relations.

Mr. MANSFIELD. Sometimes the two committees work together on a full committee or subcommittee basis. So far as expertise is concerned, there is enough expertise on the other side, on the anti-ABM side, that should be given consideration. With that in mind, I had a discussion on my own initiative with the distinguished minority leader to the effect that there should be equal distribution respecting staff floor privileges so that the same number of attachés or administrative assistants would be available on

each side. In that way no advantage could be achieved one way or the other.

I wish to express my deep personal thanks to the distinguished Senator from Mississippi for what he had to suggest when this matter was brought to his attention, when it seemed it might get out of hand. He stated that as far as he was concerned, he would be glad to bear the load himself and not have the two men from the Committee on Armed Services on hand.

Mr. GOLDWATER. The chairman can do that—

The PRESIDENT pro tempore. The time of the Senator from Arizona has expired.

Mr. GOLDWATER. Mr. President, I ask unanimous consent that I may proceed for 2 additional minutes.

The PRESIDENT pro tempore. Is there objection? The Chair hears none, and it is so ordered.

Mr. GOLDWATER. The problem that comes up in my mind is, Where do we put an end to this? If the Committee on Armed Services is allowed one for the majority side and one for the minority side and the Committee on Foreign Relations is allowed one, because I do not think there is any minority side to it, then some other Member comes up and says, "I have got an interest in this. I have done a great deal of studying on it. I have a brilliant young man who has spent the past 3 weeks studying this matter and I think he should be on the floor. If we start that, then I suggest that everyone is entitled to have some expert behind him.

Mr. MANSFIELD. I tend to agree with the Senator that we will end up by having no "experts" or none in an unofficial capacity on the floor. Perhaps that is the best way to handle the situation. Certainly, Senators are supposed to have mature judgment and a grasp of the subject which they are discussing in this Chamber. They should be prepared to undertake that responsibility to the full and take it unto themselves, solely, if necessary.

Mr. GOLDWATER. I thank the Senator.

S. 2570—INTRODUCTION OF A BILL PROVIDING FOR THE TERMINATION OF JET AIRCRAFT OPERATION AT WASHINGTON NATIONAL AIRPORT

Mr. DOMINICK. Mr. President, I ask unanimous consent that I may proceed in the morning hour for not to exceed 10 minutes.

The PRESIDENT pro tempore. Without objection, it is so ordered.

Mr. DOMINICK. Mr. President, I introduce a bill concerning aviation problems at the Nation's Capital. Specifically, my bill proposes to phase out the use of jet planes at Washington National Airport, transferring these plane operations to Dulles and Friendship International Airports.

The PRESIDENT pro tempore. Without objection, the bill will be received and appropriately referred.

The bill (S. 2570) to provide for the termination within 18 months of the use of Washington National Airport by jet

aircraft, and to develop a plan for high-speed surface transportation connecting the city of Washington with Dulles International Airport and Friendship International Airport, introduced by Mr. DOMINICK, was received, read twice by its title, and referred to the Committee on Commerce.

Mr. DOMINICK. Mr. President, I fully recognize that jets have been using Washington National regularly since they were first permitted at that airport in April 1966. During the ensuing 3 years or so, the operations involving jet planes have become rather deeply entrenched. Recognizing that to cause a withdrawal of such plane operations overnight would create an undue hardship on the carriers involved, I am proposing a gradual phaseout to cover perhaps 18 months from the time of enactment. I think this is only fair.

But I insist that the jets have got to go from Washington National.

This is not a snap judgment on my part, because I have been considering this situation for 3 years. Back in June 1966, I called the attention of the Senate to the problem that jet operations at Washington National were creating for the people of the metropolitan area.

At that time, I had written to Gen. William F. McKee, Administrator of the Federal Aviation Agency, protesting the jet operations at the airport. I based my protest on four criteria:

First, that the congestion of traffic at this busy air facility was made worse by the advent of jet operations.

Second, that the noise level had become particularly acute, especially in certain areas of the Metropolitan Washington region. With the coming of warm weather, resulting in open windows and increased outdoor activity, the frequent noise problem became all the worse.

Third, that the opening of Washington National to jet planes resulted in a transfer of activity from underutilized Dulles International Airport, which was designed and located to accommodate jets, to Washington National, which was not designed for them, and certainly not located with the jet in mind.

Finally, I pointed out that the use of jets at the close-in airport made use of this facility by general aviation less feasible.

There is, however, still another source of irritation and complaint which has grown steadily worse since the advent of jet aircraft at National. I refer to the sooty exhaust plume which is emitted from these jets as they land and take off over our city.

According to a report from the Secretary of Health, Education, and Welfare, pursuant to the Air Quality Act of 1967, aircraft operating out of Washington National Airport dumped an average of 17.6 tons of pollutants into the air over Washington every day during 1967. With the sharp increase in traffic at National since that time, a new measurement today would undoubtedly show a sharp increase in the amount of pollution being generated by this increased traffic.

Commercial air carriers alone conducted 238,224 landings and takeoffs at Washington National in 1968. Multiply that number of takeoffs and landings by

the average pollution emission of these aircraft and we reach the startling result that air carriers using Washington National Airport last year dumped 10,553 tons of pollution on the Nation's Capital.

Probably the most apparent objection by the people of the metropolitan area is, and has always been, their subjection to the noise bombardment every few minutes during heavy traffic periods. Here is what the Washington Post of April 26, 1966, had to say about the introduction of jet planes at Washington National Airport:

NOISE COMPLAINTS CONTINUE IN 2D DAY OF JET SERVICE AT NATIONAL AIRPORT

National Airport continued to be deluged by noise complaints yesterday while some airline officials, far from complaining, were citing increased passenger business as justification for bringing in the jets.

The Federal Aviation Agency received 223 telephone calls as of late yesterday afternoon complaining about airplane noise. The figure for Sunday, the first day of regularly-scheduled jet service at National, was 176.

The vast majority of complaints, according to the FAA, have come from the Georgetown and Foxhall areas. A few have come from neighborhoods south of the airport.

The jetliners landed mostly from the north and took off heading south on Sunday, so complaints from Georgetown and Foxhall mostly concerned landings.

The wind shifted yesterday, which meant the pattern was reversed with most take-offs heading north. The new jets' highly touted steep-climb capability apparently did not convince Georgetown and Foxhall residents that they were quieter than their predecessors.

Meanwhile, an American Airlines spokesman said that four of the company's six jet flights to Chicago on Sunday were "completely sold out, one was 80 per cent full and the last, the 10 p.m. flight, had 40 passengers. We had a much better day than usual to Chicago."

Eastern Air Lines reported 4740 passengers Sunday. A spokesman said business was up 5 to 7 per cent Sunday and was slightly better yesterday.

United Air Lines reported an 8 per cent over-all increase in passenger traffic.

An FAA spokesman said half of the complaints during the past 48 hours did not mention jets specifically, but just objected to "noise."

He also said, somewhat cheerfully, that there were 14 complimentary calls Sunday and 21 yesterday.

One caller objected to a twin-engine plane flying over the prohibited area between the Capitol and the Potomac. The National tower said they had not controlled the plane and had not even seen it. But the call prompted a careful records check. It was from the White House.

Mr. President, as I mentioned before, Washington National Airport was neither designed nor located to take on jet traffic. We have no less than the word of a former Federal Aviation Administrator on this.

During hearings on Washington, D.C., airports held in 1963 before the House Subcommittee on Transportation and Aeronautics of the Interstate and Foreign Commerce Committee, Administrator Najeeb Halaby was replying to a comment of Congressman FRIEDEL on the use of Friendship Airport. Administrator Halaby, referring to his predecessor at the Federal Aviation Agency, told the subcommittee:

Mr. Chairman, it occurs to me, in a sense the Federal Aviation Agency diverted traffic to Friendship Airport and gave it this great surge of traffic in the first 3 years of the jet age. If the Federal Aviation Administrator had wished to hurt, to be unjust to Friendship, he would have built up Washington National as a jet airport, and monopolized all the traffic. He didn't do that, sir. He refused the jets in there because Washington National is not built, designed, or set up for jet traffic. Therefore, the Congress built a new airport, in its wisdom.

Administrator Halaby, later in the same hearings, reiterated this specific point while commenting on the buildup of traffic at Friendship brought on by the jet plane. He told the subcommittee:

Then the jet came in and for the simple, artificial reason that the jet could not properly be accommodated by the Washington National Airport at Gravelly Point, they got an airfall, or windfall of flights into Friendship.

J. B. Hartranft, Jr., in a statement to the subcommittee on behalf of the Aircraft Owners & Pilots Association pointed out that Dulles was designed to serve jet traffic, while Washington National was not.

Mr. President, I insist that it is highly incongruous to foist jet traffic on overcrowded Washington National, which is not designed for such planes, while not doing everything possible to utilize Dulles, and perhaps Friendship, more since they are fully prepared for jet planes.

The maddening congestion which exists at Washington National not only tries the patience of passengers and employees alike, but is a serious hazard to the residents of Washington. Congestion is so bad lately that at times the shuttle flights between Washington and New York have been delayed from 1 to 2 hours in both directions. And under such conditions, a midair collision could result in losses of life and property damage of catastrophic proportions.

A statistical comparison of operations at Washington National with Dulles tells the full story.

During 1968, the total volume of non-military traffic at Dulles was:

[Takeoffs and landings]	
Air carriers.....	58,876
General aviation.....	98,128
Total.....	157,004

For 1968, the nonmilitary volume at Washington National was:

[Takeoffs and landings]	
Air carriers.....	238,224
General aviation.....	104,939
Total.....	343,163

So there we have it, specifically spelled out. Over twice as many operations crowded in at Washington National than at Dulles. And Dulles is handling a volume which is far below its capacity.

An Editorial Research Reports study, "Airport Modernization," published February 22, 1967, emphasized the point of deliberately underutilizing Dulles while overloading Washington National. The study declared that:

Dulles International, which opened in 1962, was intended to be the nation's first

jet-age airport. Located 26 miles west of Washington, Dulles in its 4½ years of operation has remained a jet-age white elephant, operating at a loss and accommodating only a fraction of the passenger traffic it is capable of handling. In part, this is due to the convenience of National in contrast to the 45-minute motor coach ride, at \$2.50 per person, to Dulles; cab fare to the city is \$13. The airlines serving Washington failed to shift sufficient flights from National to Dulles because of these factors. As a result, in fiscal 1965 National accommodated 6.5 million passengers while Dulles recorded a total of only 863,000 passengers.

Dulles suffered still another blow when the FAA decided in April 1966 to allow small jets to use National. Almost immediately National was serving 18,000 additional passengers a day, while Dulles was serving 15,000 fewer. Overloading of terminal facilities created chaos at National. Consequently, authorities ordered the airlines to limit combined operations to 40 flights an hour in order to cut the number of passengers crowding into the terminal, and a number of flights were shifted back to Dulles. Nevertheless, during calendar 1966 National served almost 8 million passengers while Dulles served 1.2 million.

Reports that consideration was being given to a \$200 million expansion of National to make it possible for larger jets to use the field provoked three dozen citizen groups to organize a campaign to phase aircraft operations out of the Potomac River airport altogether by 1970. FAA officials tried to damp down complaints about noise by requiring pilots in good weather to reduce power at 1,500 feet and follow the Potomac or Anacostia rivers until their planes reached the 3,000-foot level. But pilots contend that reduction of power is not safe, and citizens insist that the noise is not measurably reduced. An FAA study issued January 26 asserted that noise from the jets was no greater than from propeller craft, but the study convinced neither the irate residents nor the citizens' Committee Against National.

The President recently submitted a message to Congress outlining the problems of air transportation in the Nation. In it the President cautioned:

Existing jet ports are adding to the noise and air pollution in our urban areas . . . These important social and conservation considerations must be taken into greater account in future air systems development.

I think this is indicative of a growing awareness that jet aviation is a significant contributor to our urban air pollution problem, as well as the noise problem. And, recognizing the proximity of Washington National Airport to the city, this caution applies to that air facility. (At this point Mr. HOLLINGS took the chair as Presiding Officer.)

Mr. DOMINICK. Mr. President, the main attraction at Washington National, of course, is its proximity to the downtown area. In other words, the time-distance factor involved in transportation to and from the facility at Washington National compared to that for travel to and from Dulles Airport places the latter at a disadvantage.

In order to make Dulles more attractive to both carriers and travelers, and incidentally to realize a more equitable return on the obviously large investment at Dulles by way of utilization, we must plan and construct some means of rapid transit to connect the downtown area with the airport.

The problem of travel to and from airports has become a general one since

today's airport must be located at a considerable distance from the central city, as is the case of Dulles. In his message on the problems of air transportation, the President recognized that travel between the airport and the city required special attention, and he therefore stated:

Most important, government at all levels, working with industry and labor, must see to it that all aviation equipment and facilities are responsive to the needs of the traveler and the shipper and not the other way around. Transportation to airports, whether by public conveyance or private vehicle, is as much a part of a traveler's journey as the time he spends in the air, and must never be viewed as a separate subject. A plane travels from airport to airport, but a person travels from door to door. I have directed the Secretary of Transportation to give special attention to all the components of a journey in new plans for airports and airports improvements.

This is exactly what I have in mind, and what I am recommending for Dulles. Such a facility has already been built and placed in service at Cleveland. It was built with the assistance of Federal funds, and appears to be a success. It could serve as a model to serve other cities as a rapid transit link with their airports. The Cleveland facility is a rail transit line.

There are other possible types of rapid transit facility which could be adapted to serving Dulles and other major airports.

One possibility would be the use of a combination bus and monorail system. The bus would travel between the center city and the airport at high speed by suspension using an overhead monorail device. Then at either end of the trip, the bus would disengage from the monorail and travel conventionally. This system would combine the features of high speed for the city-airport trip with full flexibility while in the city and also at the airport.

A regular monorail system operating between the city and the airport would greatly aid the problem of travel to and from Dulles, if the bus-monorail plan would delay such a program or be considered not feasible. The George Washington Parkway, beltway, and Dulles express road affords the right of way needed for a monorail system.

But whatever the system decided upon, high-speed transportation to Dulles International Airport will aid materially in having this excellent terminal achieve its potential.

Mr. President, the people of Washington have waited patiently, and in vain, for relief from the evils that jet operations at Washington National thrust upon them. I fear that the situation will not correct itself, and that it will continue to grow worse. It is evident that only through specific legislation will a solution be found. The bill I am introducing is designed to accomplish this. It is my sincere hope that we act on this matter with all the haste and concern the situation demands.

Mr. President, I just want to say two things quickly.

I tried my living best to get General McKee to take some action on this matter. I do not know how long it was and how many letters I wrote and how many

tional program for farmers, and for other purposes.

The PRESIDING OFFICER. Without objection, it is so ordered.

§S. 2561

Mr. SCOTT. Mr. President, I ask unanimous consent that, at its next printing, the name of the Senator from Wyoming (Mr. HANSEN) be added as a cosponsor of the bill (S. 2561) to incorporate Pop Warner Little Scholars, Inc.

The PRESIDING OFFICER. Without objection, it is so ordered.

DISPOSITION OF FUNDS APPROPRIATED TO PAY A JUDGMENT TO CERTAIN INDIANS—AMENDMENT

AMENDMENT NO. 67

Mr. HARRIS submitted an amendment, intended to be proposed by him, to the bill (S. 885) to authorize the preparation of a roll of persons whose lineal ancestors were members of the Confederated Tribes of Weas, Piankashaws, Peorias, and Kaskaskias, merged under the treaty of May 30, 1854 (10 Stat. 1082), and to provide for the disposition of funds appropriated to pay a judgment in Indian Claims Commission Docket No. 314, as amended, and for other purposes, which was referred to the Committee on Interior and Insular Affairs and ordered to be printed.

AGM

AUTHORIZATION OF APPROPRIATIONS FOR FISCAL YEAR 1970 FOR MILITARY PROCUREMENT, RESEARCH AND DEVELOPMENT, AND FOR THE CONSTRUCTION OF MISSILE TEST FACILITIES AT KWAJALEIN MISSILE RANGE, AND RESERVE COMPONENT STRENGTH—AMENDMENT

AMENDMENT NO. 68

Mr. COOPER. (for himself, Mr. HART, Mr. JAVITS, Mr. MANSFIELD, Mr. PERCY, Mr. CRANSTON, Mr. GORE, Mr. WILLIAMS of New Jersey, Mr. FULBRIGHT, Mr. SYMINGTON, and Mr. MONDALE) submitted an amendment, intended to be proposed by them, jointly, to the bill (S. 2546) to authorize appropriations during the fiscal year 1970 for procurement of aircraft, missiles, naval vessels, and tracked combat vehicles, and research, development, test, and evaluation for the Armed Forces, and to authorize the construction of test facilities at Kwajalein Missile Range, and to prescribe the authorize personnel strength of the Selected Reserve of each reserve component of the Armed Forces, and for other purposes, which was ordered to lie on the table and to be printed.

(The remarks of Mr. COOPER when he submitted the amendment appear later in the RECORD under the appropriate heading.)

Mr. McGOVERN subsequently said: Mr. President, I ask unanimous consent that my name be added as a cosponsor to the amendment to S. 2546 offered by the gentleman from Michigan (Mr. HART) and the gentleman from Kentucky (Mr. COOPER) relating to deployment of and the acquisition of sites for an antiballistic missile system.

The PRESIDING OFFICER. Without objection, it is so ordered.

Mr. BYRD of West Virginia subsequently said: Mr. President, at the request of the distinguished Senator from Massachusetts (Mr. KENNEDY), I ask unanimous consent that, at its next printing, his name be added as a cosponsor of the Cooper amendment to the bill (S. 2546).

The PRESIDING OFFICER. Without objection, it is so ordered.

NOTICE OF HEARINGS

Mr. BIBLE. Mr. President, I wish to announce that hearings have been scheduled before the Subcommittee on Parks and Recreation of the Committee on Interior and Insular Affairs on three bills to establish national historic sites in recognition of three of our great Presidents. They are:

S. 2000, to establish the Lyndon B. Johnson National Historic Site;

Senate Joint Resolution 26, to provide for the development of the Eisenhower National Historic Site at Gettysburg; and

S. 560, to provide for the establishment of the William Howard Taft National Historic Site.

The hearings will be held in room 3110, New Senate Office Building on Tuesday, July 29, 1969, commencing at 10 a.m.

Anyone desiring to testify on any of these proposals should advise the staff of the Senate Committee on Interior and Insular Affairs.

NOTICE CONCERNING NOMINATIONS BEFORE THE COMMITTEE ON THE JUDICIARY

Mr. EASTLAND. Mr. President, the following nominations have been referred to and are now pending before the Committee on the Judiciary:

Farley E. Mogan, of Oregon, to be U.S. marshal for the district of Oregon for the term of 4 years, vice Eugene G. Hulet;

John O. Olson, of Wisconsin, to be U.S. attorney for the western district of Wisconsin for the term of 4 years, vice Edmund A. Nix.

On behalf of the Committee on the Judiciary, notice is hereby given to all persons interested in these nominations to file with the committee, in writing, on or before Wednesday, July 16, 1969, any representations or objections they may wish to present concerning the above nominations, with a further statement whether it is their intention to appear at any hearing which may be scheduled.

THE FAILURE OF VETERANS TO UTILIZE THE COLD WAR GI BILL IS A NATIONAL TRAGEDY

Mr. YARBOROUGH. Mr. President, one of the great disappointments of a democracy is when a law is passed for the benefit of the people, but the people who could benefit from it remain ignorant or unaware of the law and its potential.

One such disappointment is the cold war GI bill, which I sponsored and after

a long fight was finally enacted by the 89th Congress. The disappointment arises from the excruciating fact that only one out of 10 of the returning Vietnam veterans, who have not completed high school, have made use of the high school entitlement. This matter is discussed in a thoughtful editorial appearing in the San Francisco Examiner recently.

I have long felt that the Veterans' Administration is not doing an adequate job of informing these returning veterans of the opportunities available to them under the cold war GI bill. The editorial discusses the matter of utilization and poignantly focuses on this problem.

I ask unanimous consent that the editorial, entitled "GI Benefits," published in the San Francisco Examiner of June 7, 1969, be printed in the RECORD.

There being no objection, the editorial was ordered to be printed in the RECORD, as follows:

GI BENEFITS

At a time when anti-poverty programs are being drastically curtailed it is ironic, to say the least, that so few eligibles are taking advantage of the solid economic elevator provided by the GI Bill of Rights. Figures made available by the Veterans Administration indicate that something is shockingly wrong somewhere.

After World War II, some 50 percent of veterans availed themselves of the GI bill help to get more education—the best possible route out of poverty and third-rate jobs. As of the first of this year, however only 19 percent of eligible Vietnam veterans were using the bill to get more training at colleges, vocational schools or on-the-job programs.

What is especially disturbing about the lowered figure is that an estimated 500,000 of the 2.7 million Vietnam veterans thus far discharged do not have even high school diplomas. Yet of the 500,000 only 21,000 today are taking advantage of a special high school subsidy.

Sen. Ralph W. Yarborough (D-Tex.), calling the situation a "tragedy," blames the VA for "not doing anything to get these men into school." He said the VA, despite the fact that the GI bill is virtually open-ended in funding, is soft-pedaling the education opportunities in order to hold down its budget. The VA vehemently denies the charge.

We simply do not know who or what is responsible, but we agree the situation is tragic—and inexcusable. Perhaps the VA, as it claims, is "doing more than ever" to inform returning veterans of all their GI bill benefits. Obviously much more must be done. Returning veterans in need of further education somehow must be persuaded to take wider advantage of the opportunities available, not merely "informed" of them.

DR. JOHN N. KNOWLES

Mr. DOLE. Mr. President, I do not know Dr. John H. Knowles, but I agree with the opinion expressed in the Tuesday, July 8, issue of the Evening Star, that the decision not to appoint him as an Assistant Secretary of Health, Education, and Welfare was apparently a proper one.

I doubt whether many Senators really had strong feelings for or against Dr. Knowles, and would also guess that his nomination would have been confirmed had his name been submitted and that I would have perhaps voted for its confirmation.

In retrospect, since Dr. Knowles is now becoming a spokesman not for medicine, but for what he considers to be the political ills of this country, I, for one, am thankful that he was not appointed. Apparently, Dr. Knowles is not content to concern himself with medicine, but he now poses as an expert on school guidelines and appears to have become an instant political analyst.

At any rate, I believe the editorial in the Evening Star, "Telling It Like It Isn't," will be of interest, I ask unanimous consent that it be printed in the RECORD.

There being no objection, the editorial was ordered to be printed in the RECORD, as follows:

TELLING IT LIKE IT ISN'T

Dr. John H. Knowles, recently turned down by the President for the nation's top health post, says he "likes to speak out and tell it like it is."

He was talking in that context about Medicaid, which he called the "lousiest waste of taxpayers' money and the most ill-conceived program which ever came down the chute."

Being a medical man and a hospital administrator, Dr. Knowles may be qualified to pass judgment on Medicaid. But when he undertakes to diagnose the performance of the President, he not only fails to tell it like it is, he talks like a diagnostician who has never even seen a political medical school.

According to the Associated Press, Dr. Knowles told a Boston television audience on Sunday that the White House under President Nixon "is in the grip of the arch conservatives and progress is at a complete standstill." He went on to say that the influence of conservative pressure groups on the President is "absolutely catastrophic."

This doesn't sound like the pronouncement of a physician whose professional training should make him wary of hyperbole. Neither does it make any sense.

Let's take a look at the political record. Dr. Knowles says he sees Mr. Nixon as a man "who's got his finger on the pulse of 51 or 52 percent of the people involved in a conservative backlash—a swing to the right."

Last November the Nixon winning margin was about 43.4 percent of the total vote. If the latest Gallup poll is accurate, however, 63 percent of the people today approve of the way the President is handling his job. Only 16 percent disapprove, the others being listed among the "no opinions."

This massive expression of approval is hardly what one would expect in the case of an administration which, in a little more than five months, turned in a performance which is "absolutely catastrophic." Nor do the extravagant comments by Dr. Knowles reflect any mature understanding of the fact that Nixon, in contrast to Hubert Humphrey, campaigned as a relatively conservative White House aspirant.

All of which leads us to something of a word-eating reflection: Politics aside, maybe the President was right in deciding that it was better to leave Dr. Knowles in charge of the Massachusetts General Hospital than to name him as Assistant HEW Secretary for Health and Scientific Affairs.

THE PESTICIDE PERIL XXII

Mr. NELSON. Mr. President, an article by Hunter James, published in the Sunday Baltimore Sun, reviews the current controversy over the use of the persistent pesticide, DDT.

The article traces DDT from its initial development and use as a killer of

malaria, typhus, cholera, and Rocky Mountain spotted fever to its present threat as a killer of wildlife, fish, and potentially man. DDT has been linked to cancer, and some authorities predict an epidemic-like outbreak of DDT-related cancers within the next 10 to 30 years.

Mr. James reports:

The fear among scientists is not just that the cumulative effects of DDT may one day manifest themselves in horrible ways, but that the damage may be irreversible.

Most action responding to this alarming threat has been on the State level. Some States have banned its use outright, and many other State legislatures are presently considering similar proposals.

Alternatives to DDT are being studied. It appears that biological control—such as the use of natural predators—is one of the most effective and safe.

I ask unanimous consent that the article be printed in the RECORD.

There being no objection, the article was ordered to be printed in the RECORD, as follows:

DDT—PERSISTENT PROTESTS, A LITTLE ACTION, GROWING THREAT

(By Hunter James)

A single-engine crop duster comes clattering down over the summer landscape. A cloud of DDT billows down, covers the young plants with a noxious dusty film, drifts with the wind across the surrounding fields and roadsides or into the nearby woods, killing the grasshoppers and junebugs as well as the boll weevils and tobacco worms.

And goes on killing them all summer long.

The deadly and lasting effectiveness of DDT has worried scientists since the day it came into general use. Unlike less potent insecticides, it does not break down and dissipate readily. It gathers over long periods in the soil and water, on the leaves of growing things, and in the fatty tissues of animals and man—and its effect is cumulative. That's what makes it so economical to use and also why it poses a threat to human life.

The threat has only recently become tangible enough to cause widespread alarm. And there are still those who believe that the good of DDT outweighs the bad.

SILENT SPRING

Invented in Sweden a quarter of a century ago, the compound has helped make American farms the most productive in the world. It has also been used to knock out malaria, typhus, cholera, Rocky Mountain spotted fever and other serious diseases.

But the clamor against DDT and its derivatives is big and growing. It began seven years ago with the publication of Rachel Carson's "Silent Spring," a book now regarded as an almost-classic statement on the subject of pesticide poisoning. Miss Carson cited massive kills of frogs, snakes and birds as evidence of the damage DDT can cause. The long-term effects are quite different, but just as deadly. In the American bald eagle, for example, the poison manifests itself in the reproductive process. Eggshells become too thin to protect the young, and for that reason the bald eagle and other magnificent species—peregrine falcon, osprey and others—rapidly are becoming extinct.

In man the effect may be even more subtle, even more dangerous. Numerous studies have linked DDT to cancer. The relationship has not been definitely established, but most scientists feel there is more than enough evidence to justify banning the stuff. Some authorities, including Dr. W. C. Hueper, former director of the Nation-

al Cancer Institute, believe there could well be an epidemic-like outbreak of DDT-related cancers within the next 10 to 30 years.

NELSON LEGISLATION

Last March, the Food and Drug Administration helped focus attention on the pesticides problem with a seizure of more than 21,000 pounds of coho salmon from warehouses in Wisconsin and Minnesota. A sample of the same batch of fish, taken from Lake Michigan, had been found to contain DDT residues of 12 to 19 parts per million, far higher than what had been found before and almost three times as high as the federal tolerance for beef.

The seizure brought prompt action from Robert Finch, Secretary of Health, Education, and Welfare. Despite opposition from five Republican governors in the Great Lakes region, he set a relatively stringent tolerance level for fish: five parts per million. Surprisingly, it was the first time there had been a limit of any kind. Mr. Finch also appointed a committee to investigate the pesticide menace and report back in six months with recommendations for bringing it under control.

Senator Gaylord Nelson (D. Wis.), more alarmed than his state's governor (one of the five opposing Secretary Finch's action) took the occasion to introduce legislation permanently outlawing the use of DDT. The frightening thing to him was that the pesticide residues in the fish had "probably traveled hundreds of miles through the air, water and soil" and had been "consumed through the normal food chain of up to a half-dozen organisms."

The senator is among those who believe that Miss Carson may have understated her case in "Silent Spring." Yet he has little hope that his bill will pass. He introduced a similar measure last year and the year before. Each time it died in the Senate Agricultural Committee.

LAWS ARE WEAK

Except possibly for the Food and Drug Administration, federal agencies have been singularly unresponsive to the threat posed by pesticides. Laws are weak and implementation weaker.

The Agriculture Department's Agricultural Research Service is the agency chiefly responsible for policing the registration, distribution and use of pesticides. If the government's General Accounting Office can be believed, the agency's performance has been inexcusably lax.

The GAO says the department has seized only a fraction of the products found to be below government standards and has repeatedly failed to take legal action against shippers accused of violating the law. Furthermore, the GAO says it has permitted food-handling establishments to use the pesticide Lindane despite reservations voiced by health authorities.

Although pesticide control is plainly a federal problem, since dust from Iowa can harm plants and wildlife in Nebraska, Congress has been reluctant to act. Most of what action there is exists in the states.

BIOLOGICAL CONTROL

About a third of them have no laws at all governing the use of DDT. Others, including Maryland, have recently adopted mild restrictions. Still others have banned it outright.

After the coho salmon seizure, the Michigan Agricultural Commission banned the sale of DDT indefinitely. Senator Nelson's state, Wisconsin, has been holding hearings on the problem for almost six months and will probably decide this fall whether to follow suit. After the first of the year California will not allow its use except in non-dust form. Arizona has banned it for a year, and the New York Pesticide Control Board wants it banned permanently except for emergency use. Rhode Island plans to out-

ABM Foes Bar a Retreat On Eve of Senate Debate

White House Shows No Sign of Backing Down as Showdown Is Forecast— Panel's Report Gives 2 Views

By JOHN W. FINNEY
Special to The New York Times

WASHINGTON, July 7—On the eve of the Senate debate on the Administration's Safeguard Antiballistic missile defense system, the bipartisan opposition assumed today a no-compromise stance toward the White House.

With the Administration

Text of Committee's report will be found on Page 12.

showing no signs of beating a retreat, the result was to set the stage for a showdown fight between the White House forces and the Senate opposition, with the outcome far from certain.

The Senate Armed Services Committee provided a backdrop for the fight today when it issued a report containing the

arguments for and against Safeguard.

The stiffening attitude of the opposition to Safeguard was summed up by Senator Mike Mansfield, the Senate Democratic leader, who commented: "If they don't want an accommodation, we just will have to battle it out." Senator John Sherman Cooper of Kentucky, the Republican leader of the opposition, seconded the Mansfield view.

After weeks of dropping hints that it was willing to accept a compromise that would save the Administration's face, the opposition has concluded that there is no White House interest in reaching an accommodation that would avoid a

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knockdown fight in the Senate.

White House officials in recent days have been suggesting that the Administration has prepared to accept some modifications, but none that would go far enough to satisfy opposition demands for a decision against deployment at this time of the Safeguard system.

Meanwhile, however, the White House, according to Republican Senators, has been preventing representatives of the opposition from seeing President Nixon—a policy that has only contributed to the new adamant stand of the opposition.

The Senators who oppose Safeguard deployment suspect that the White House, in its no-compromise position, may be misjudging its strength in the Senate.

At this juncture the Senate

is so closely divided that the outcome, as Senator Mansfield put it, is a toss-up. The opposition, however, is reasonably confident that it can command a bare majority, an assessment that has contributed to its new view that the initiative for a compromise must now come from the White House.

Strategy Session

Opposition Senators met this afternoon for a final strategy session for the debate, which is expected to open tomorrow or Wednesday and probably continue through most of July.

Tentative agreement was reported to have been reached on an opposition amendment that would preclude the use of any funds for deployment but permit the Army to continue with research and development on an antiballistic system.

In the Administration bill before the Senate, the Army has

requested \$345.5-million for procurement of radars and computers for the first two planned Safeguard sites in North Dakota and Montana. In addition, \$400-million is being requested for research and development and \$12.7-million for construction of Safeguard missile test facilities on Kwajalein Island in the Pacific.

The opposing arguments that will be heard over and over in the forthcoming Senate debate were set forth today by a divided Senate Armed Services Committee in a report on a \$20-billion military procurement bill that contains authorization for initial deployment of the \$10.8-billion Safeguard system.

The committee majority argued that the system was necessary to strengthen the President's hands in strategic arms control talks with the

Soviet Union and to protect the nation's nuclear deterrent against a growing Soviet Missile force.

Citing Mr. Nixon's statement that the system was "essential for national security," the majority unilaterally abandon all deployment of our ABM's, what incentive do we give the Soviets to negotiate with us a limit on a reduction in their ABM deployment?"

The PRESIDING OFFICER. The bill is open to further amendment. If there be no further amendment to be proposed, the question is on the engrossment of the amendments and the third reading of the bill.

The amendments were ordered to be engrossed and the bill to be read a third time.

The bill (H.R. 11612) was read the third time.

THE MILITARY AUTHORIZATION BILL

Mr. STENNIS. Mr. President, I shall not delay the Senate. However, for the information of Senators present, the majority leader, the Senator from Montana, as I understand, if the pending bill is completed today, will be ready to make an announcement that the military authorization bill, with one slight exception, will be the next order of business. I would rather he make the announcement.

I shall have a few remarks to make about the debate on that bill. I hope that the Senators will stay after the rollcall.

MESSAGES FROM THE PRESIDENT—APPROVAL OF JOINT RESOLUTION

Messages in writing from the President of the United States were communicated to the Senate by Mr. Leonard, one of his secretaries, and he announced that on July 1, 1969, the President had approved and signed the joint resolution (S.J. Res. 123) to extend the time for the making of a final report by the Commission To Study Mortgage Interest Rates.

REPORT ON THE IMPLEMENTATION OF THE AUTOMOTIVE PRODUCTS TRADE ACT OF 1965—MESSAGE FROM THE PRESIDENT

The VICE PRESIDENT laid before the Senate the following message from the President of the United States, which, with the accompanying report, was referred to the Committee on Finance:

To the Congress of the United States: I hereby transmit the third annual report on the implementation of the Automotive Products Trade Act of 1965. The report contains information with respect to the United States-Canada Automotive Products Agreement, including automotive trade, production, prices and employment in 1968. Also included is other information relating to activities under the Act.

RICHARD NIXON.

THE WHITE HOUSE, July 7, 1969.

DEPARTMENT OF AGRICULTURE AND RELATED AGENCIES APPROPRIATIONS, 1970

The Senate resumed the consideration of the bill (H.R. 11612) making appropriations for the Department of Agriculture and related agencies for the fiscal year ending June 30, 1970, and for other purposes.

The PRESIDING OFFICER. The bill having been read the third time, the question is, Shall the bill pass? On this question the yeas and nays have been ordered, and the clerk will call the roll.

The assistant legislative clerk called the roll.

Mr. KENNEDY. I announce that the Senator from Washington (Mr. MAGNUSON), and the Senator from Wisconsin (Mr. NELSON) are absent on official business.

I also announce that the Senator from New Mexico (Mr. ANDERSON), the Senator from Nevada (Mr. CANNON), the Senator from Hawaii (Mr. INOUE), the Senator from Connecticut (Mr. RIBICOFF), and the Senator from Alaska (Mr. GRAVEL) are necessarily absent.

On this vote, the Senator from Alaska (Mr. GRAVEL) is paired with the Senator from Connecticut (Mr. RIBICOFF). If present and voting, the Senator from Alaska would vote "yea," and the Senator from Connecticut would vote "nay."

I further announce that, if present and voting, the Senator from Hawaii (Mr. INOUE), the Senator from Washington (Mr. MAGNUSON), the Senator from Wisconsin (Mr. NELSON), and the Senator from Nevada (Mr. CANNON) would each vote "yea."

Mr. SCOTT. I announce that the Senator from Michigan (Mr. GRIFFIN) is absent on official business.

The Senator from Vermont (Mr. PROUTY) is necessarily absent, and if present and voting, would vote "yea."

The Senator from Delaware (Mr. WILLIAMS) is detained on official business.

The result was announced—yeas 88, nays 2, as follows:

[No. 55 Leg.]

YEAS—88

Aiken	Fulbright	Moss
Allen	Goldwater	Mundt
Allott	Gore	Murphy
Baker	Gurney	Muskie
Bayh	Hansen	Packwood
Bellmon	Harris	Pastore
Bennett	Hart	Pearson
Bible	Hartke	Pell
Boggs	Hatfield	Percy
Brooke	Holland	Proxmire
Burdick	Hollings	Randolph
Byrd, Va.	Hruska	Russell
Byrd, W. Va.	Hughes	Schweiker
Case	Jackson	Scott
Church	Javits	Smith
Cook	Jordan, N.C.	Sparkman
Cooper	Jordan, Idaho	Spong
Cotton	Kennedy	Stennis
Cranston	Long	Stevens
Curtis	Mansfield	Symington
Dirksen	Mathias	Talmadge
Dodd	McCarthy	Thurmond
Dole	McClellan	Tower
Domnick	McGee	Tydings
Eagleton	McGovern	Williams, N.J.
Eastland	McIntyre	Yarborough
Ellender	Metcalf	Young, N. Dak.
Ervin	Miller	Young, Ohio
Fannin	Mondale	
Fong	Montoya	

NAYS—2

Goodell

Saxbe

NOT VOTING—10

Anderson	Inouye	Ribicoff
Cannon	Magnuson	Williams, Del.
Gravel	Nelson	
Griffin	Prouty	

So the bill (H.R. 11612) was passed.

Mr. HOLLAND. Mr. President, I move to reconsider the vote by which the bill was passed.

Mr. MANSFIELD. I move to lay that motion on the table.

The motion to lay on the table was agreed to.

Mr. HOLLAND. Mr. President, I move that the Senate insist upon its amendments and request a conference with the House of Representatives thereon, and that the Chair be authorized to appoint the conferees on the part of the Senate.

The motion was agreed to; and the Presiding Officer appointed Mr. HOLLAND, Mr. RUSSELL, Mr. STENNIS, Mr. ELLENDER, Mr. HRUSKA, Mr. YOUNG of North Dakota, and Mr. MUNDT conferees on the part of the Senate.

Mr. MANSFIELD. Mr. President, it has been a great pleasure to witness again the handling of a measure by the distinguished senior Senator from Florida (Mr. HOLLAND). As the chairman of the Agriculture Subcommittee of the Committee on Appropriations, he has exhibited once more his superior managerial skill and ability.

This funding measure is designed to maintain our present farm program. May I say that as extensive and broad as that program is, every one of its many facets and features are thoroughly known and well understood by Senator HOLLAND. His outstanding advocacy, his great legislative skill and ability, his strong persuasive capacities were exhibited on this measure as they have been on all proposals that gain his endorsement. The Senate is grateful once again to Senator HOLLAND. The Senate's overwhelming approval of this funding bill adds another outstanding achievement to his already abundant record of public service.

Of course the swift and efficient disposition of this measure was aided immensely by the senior Senator from Nebraska (Mr. HRUSKA). His strong advocacy and his splendid cooperation were essential to this great success.

Others, too, should be singled out for their participation. The Senator from Delaware (Mr. WILLIAMS) is to be commended especially for his contribution in offering and urging his amendment. That may also be said for the distinguished Senators from New York (Mr. GOODELL and Mr. JAVITS), the Senator from Iowa (Mr. MILLER), and the Senator from Michigan (Mr. HART). These and other Senators joined to assure expeditious and efficient action today on this measure. The Senate is deeply grateful.

AAS AUTHORIZATION OF APPROPRIATIONS FOR FISCAL YEAR 1970 FOR MILITARY PROCUREMENT, RESEARCH AND DEVELOPMENT, AND FOR THE CONSTRUCTION OF MISSILE TEST FACILITIES AT KWAJALEIN MISSILE RANGE, AND RESERVE COMPONENT STRENGTH

Mr. MANSFIELD. Mr. President, I move that the Senate turn to the consideration of Calendar No. 281, S. 2546, and that the bill be laid before the Senate and be made the pending business.

The PRESIDING OFFICER (Mr. ALLEN in the chair). The bill will be stated by title.

The ASSISTANT LEGISLATIVE CLERK. A bill (S. 2546) to authorize appropria-

Jackson, who said dieldrin is "five to fifty times as toxic as DDT," asserted that an earlier recommendation by a regional office of the Department of Agriculture called for dieldrin applications at Kelly Air Force Base, Texas, in highly dangerous amounts.

"Previous applications of this chemical in substantially the same dosages recommended for use at Kelly AFB have been shown to have devastating effects upon fish, wildlife, poultry and livestock," said Jackson.

In another suspension action, the Agriculture has cautioned that insect strips like Shell's No-Pest Strip Insecticide should not be hung where infants or ill or aged people are confined.

Shell has been notified to include on all future strips a cautionary statement to this effect, and to stop distributing any already-manufactured strips that do not carry such a statement.

Mr. HOLLAND. Mr. President, I have consulted with the Senator from Nebraska and we are willing to take the amendment to conference except that we want an understanding of the words in the fourth line of the Senator's amendment, "or substantially affected."

If we understand the Senator wants this to apply to the use of these prohibited pesticides within States, that is all right. However, what does he mean by the words, "or substantially affected?"

Mr. HART. Mr. President, that language is intended to respond to the problem—and let me localize it to Michigan—where if there were a national forest immediately adjoining the State of Michigan in Ohio, and there was no prohibition in Ohio against DDT, for example, and the application of DDT that close to our border would substantially affect the fish and wildlife in Michigan, then Michigan would be able to object to its use and persuade the Department to seek an alternative.

Mr. HOLLAND. Mr. President, I doubt if we could go that far in conference. However, I am willing to take the whole amendment to conference, having voiced my doubts about the words, "or substantially affected."

Mr. HART. Mr. President, I thank the Senator very much.

Mr. HRUSKA. Mr. President, I know the amendment comes at a late hour, but I do not object to its being accepted with the understanding that we might refine it further if necessary.

Mr. HART. I am very grateful.

The PRESIDING OFFICER. The question is on agreeing to the amendment. The amendment was agreed to.

Mr. MUNDT. Mr. President, I send to the desk an amendment and ask that it be stated.

The PRESIDING OFFICER. The amendment will be stated.

The LEGISLATIVE CLERK. On page 34, line 15, strike out "\$2,000,000" and insert "\$3,000,000."

Mr. MUNDT. Mr. President, I have discussed the amendment with the distinguished chairman of the subcommittee and the ranking Republican member, both of whom have agreed to its merit and I think they are willing to accept it.

In the 1970 budget the administration recommended an appropriation of \$3 million to enlarge the important new phase of the rural housing program, the so-called mutual self-help housing program for low income rural people.

The House reduced that amount to \$1,250,000. In our committee it was increased to \$2 million. My amendment brings the amount to the \$3 million recommended by the budget.

I point out that this is a new program and that about 3,000 additional low-income families can be helped if we provide the \$3 million.

In this housing, a lot of "sweat equity" is involved because farmers for low income land people not only take the assistance that is made available to them, but they also put into the housing a lot of their own effort, collectively and individually. I think that in terms of pride and dignity it is a very small investment in responsible citizenship. I heartily recommend that we increase the amount to the \$3 million recommended by the budget.

Mr. HOLLAND. Mr. President, the Senator from Nebraska and I are willing to accept the amendment and take it to conference.

I recently had a communication from the county agent of Collier County, Fla., in which Immokalee is located. The county agent tells me that the principal help in the way of housing for the migrant workers there in the last year has been from this particular program. He gave me the number of new homes created through this self-help machinery. Perhaps it has real meaning in places that are not big enough to have housing authorities.

I am glad to take the amendment to conference. I understand that my distinguished friend, the Senator from Nebraska, joins me.

Mr. HRUSKA. Mr. President, I am glad to join the distinguished Senator from Florida in accepting the amendment. I believe the matter should be given further consideration.

Mr. MUNDT. I thank the Senators.

The PRESIDING OFFICER. The Chair advises the Senator that the amendment would not be in order at this time.

Mr. HOLLAND. Mr. President, I ask unanimous consent that the former action of the Senate in agreeing to the committee amendment be reconsidered so that the Mundt amendment may be considered at this time.

The PRESIDING OFFICER. Without objection, it is so ordered.

The question is now on agreeing to the amendment of the Senator from South Dakota to the committee amendment.

The amendment was agreed to.

The committee amendment, as amended, was agreed to.

TEXAS LEGISLATURE ASKS \$220 MILLION FOR AGRICULTURAL CONSERVATION PROGRAM

Mr. YARBOROUGH. Mr. President, the agricultural conservation program is one of the most worthwhile programs I know, and I have supported it fully from the time I first came to the Senate in 1957. It reaches over a million farms each year and results in the application of the greatest amount of conservation measures to the land at the lowest cost per acre of any similar program.

I pointed out on July 2 in my statement before the Senate on the agricultural appropriations bill for fiscal year 1970 that the \$185 million recommended by the Senate Committee on Appropria-

tions was too low and that at least \$220 million should have been recommended. However, I also pointed out that the committee's recommendation was \$185 million over the administration's request, but lower than the House allowance.

I have a duly authenticated copy of Senate Concurrent Resolution 116 from the State of Texas which was passed and properly certified by both the Senate and the House of the Texas Legislature. This resolution shows the value of this program to Texas and the Nation. It also questions the wisdom of the attempted elimination of this program by the present administration and asks that the agricultural conservation program be reinstated at its former allocation level of \$220 million for fiscal year 1970. I agree with this resolution from the Texas Legislature, and think the \$220 million should have been allowed for the agricultural conservation program.

Mr. President, I ask unanimous consent that Senate Concurrent Resolution 116 as passed and certified by the Texas Legislature be printed in its entirety along with the names of its signers at this point in the Record.

There being no objection, the resolution was ordered to be printed in the Record, as follows:

SENATE CONCURRENT RESOLUTION 116

Whereas, President Nixon's 1970 fiscal year Budget proposes complete elimination of funds for the National Agricultural Conservation Program; and

Whereas, The Texas Legislature, through their appropriation and law making processes have always recognized the absolute necessity for state and national conservation programs; and

Whereas, The National ACP is the only conservation program available to all farms and ranches of the nation with its cost-share provisions designed to get widespread conservation participation from a maximum number of farmers and ranchers; and

Whereas, Spiraling population growth emphasizes the urgency for our land uses to be in accordance with the very best conservation measures; and

Whereas, This program more specifically affects approximately 300,000 Texas Farms and Ranches, consisting of approximately 150,000,000 acres of land; now, therefore, be it

Resolved, By the Senate of the 61st Legislature, the House of Representatives concurring, that the Agricultural Conservation Program of the United States be reinstated at its former allocation level of \$220,000,000 for the year 1970, that funds for this program be updated annually to meet the increasing costs of carrying out conservation measures, and that emphasis be placed on the need for these funds to reach as many farmers as possible in order to assure that the conservation message is fully reflected to the entire nation; and be it further

Resolved, That copies of this Resolution be sent to the President of the United States, the Secretary of Agriculture, Members of the House and Senate Agricultural Committees and to the entire Texas Congressional Delegation.

BEN BARNES,
Lieutenant Governor.

Speaker of the House.

I hereby certify that S.C.R. No. 116 was adopted by the Senate on May 30, 1969.

CHARLES SCHNABEL,
Secretary of the Senate.

I hereby certify that S.C.R. No. 116 was adopted by the House on May 31, 1969.

DOROTHY HALLMAN,
Chief Clerk of the House.

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tions during the fiscal year 1970 for procurement of aircraft, missiles, naval vessels, and tracked combat vehicles, and research, development, test, and evaluation for the Armed Forces, and to authorize the construction of test facilities at Kwajalein Missile Range, and to prescribe the authorized personnel strength of the Selected Reserve of each Reserve component of the Armed Forces, and for other purposes.

The PRESIDING OFFICER. The question is on agreeing to the motion of the Senator from Montana.

The motion was agreed to; and the Senate proceeded to consider the bill.

Mr. STENNIS. Mr. President, will the Senator yield to me?

Mr. MANSFIELD. I yield to the Senator from Mississippi.

Mr. STENNIS. Mr. President, I wish to make a brief statement about what the committee has done in connection with this bill.

I think we are going to have a good solid debate about the bill on the floor, but I merely wish to point out now that it is a most important bill not only because it involves \$20 billion or more but also because it will necessarily greatly affect, perhaps to a large extent, the level of our national security in years to come.

During several months the Committee on Armed Services held hearings on the bill and then for several days, over a period of 2 weeks, the committee carefully considered the entire testimony, all of the items in the bill of any substance were passed on separately, and the committee has reported the bill to the Senate. The full text of the hearings, the index, together with the report and the bill in final form have been passed by the committee. This is a Senate bill which was delivered this morning at 10 o'clock or at 10:30 to the office of each Senator.

I shall present this matter tomorrow, and in a reasonable time, but going somewhat into detail as to the high points. I shall present the entire matter to the Senate.

We heard a great deal of testimony that was classified. That is true with respect to any bill that has important items in it such as this bill, which pertain to our security and conditions all over the world. There was a great deal of classified testimony of necessity about what may be the trend and success or failure of weapons developments by our potential adversaries or those that might be aggressors against us. The committee went into those matters more fully than usual. We received classified documents. Much of the testimony and debate had within the committee could be of the greatest benefit to any potential enemy.

It is apparent from press reports that there will be attacks on certain provisions of the bill. There are provisions in the bill which some Senators oppose, and there are provisions which some Senators favor. Other Senators oppose generally the military amounts, the general total amount; and they have expressed an intention to move to reduce that military authorization.

I wish to emphasize that I believe in the right of every Senator to oppose any bill in its entirety or any part of any bill.

There is nothing finer than to have a real and genuine debate. Each Senator is entitled to all relevant facts. Each Senator is not only entitled to know the relevant and pertinent facts to reach a decision on how to vote, but each Senator has a duty to become informed of the facts. Likewise, I have a duty as the so-called floor manager of the bill to inform Senators of anything I know to help them fully understand the reasons, circumstances, and justification of the authorization request.

What I am leading up to is this. Unfortunately, it is not possible to present all of those matters in open session. We cannot present fully the testimony we acted on in making these recommendations, and I say that for the same reason I have stated heretofore: This material would be of great benefit to our adversaries and compromise security to the extent that our military forces might now or in the future be placed in jeopardy.

It is for that reason that after I make my best efforts to bring out the whole issue and place it on the table, so to speak, I will make a motion under rule XXXV for a closed session. I have no doubt that a closed session will expedite the debate greatly, so that we may get all the facts before the Senate. As far as I am concerned, a closed session would not have to be extended, but the duration would be determined by Members of the Senate.

To refresh the recollection of Senators, rule XXXV merely provides:

On a motion made and seconded to close the doors of the Senate, on the discussion of any business which may, in the opinion of a Senator, require secrecy, the Presiding Officer shall direct the galleries to be cleared; and during the discussion of such motion the doors shall remain closed.

Mr. President, it will be with some reluctance that I shall make that motion. I have never done so before, but the comprehensive facts that have been developed and the far-reaching questions that are involved, the development of far-reaching weapons, the air and sea missiles all involve extremely sensitive testimony. For that reason I will make that motion at the proper time. I thought I should bring that to the attention of Senators today.

I have one other point that will involve a matter of security. The general rule, as Senators will recall, is that only those persons can be present in the Chamber who meet security requirements and have approval. Of course, that includes all Senators. Some of this information will be of the highest classification. Therefore, I give that notice now.

I thank the Senator from Montana for his consideration in yielding.

Mr. SYMINGTON. Mr. President, will the Senator yield?

Mr. STENNIS. I shall yield to the Senator in a moment.

I thank the Senator from Montana for yielding so that this matter may be placed before the Senate. I am not going to try to rush it but I hope we can have attendance that is better than average. I hope we can have nearly full attendance. I believe if we really get the facts we can pass on them in view of the

enlightenment we have. I believe sound decisions will prevail. The committee membership is familiar with this matter and they will help present the bill. We have subcommittees that conducted hearings and they will be called on.

Mr. MANSFIELD. Mr. President, will the Senator yield?

Mr. STENNIS. I yield.

Mr. MANSFIELD. Mr. President, I am delighted that the chairman of the committee in charge of the bill which has just been laid before the Senate has indicated that he intends to move for an executive session. It will be my pleasure to second that motion because I think it is almost mandatory that there be a motion to that effect in view of developments which have occurred over the past several years, and not just this year.

I am pleased also to note that on this day 91 Senators are present. I would hope, health permitting, we would have attendance of nearly 100 Senators until the bill is disposed of one way or the other, because this will be the most important bill which will come before Congress this session. It therefore behooves all Senators, regardless of their feelings, to be here and if they feel like it to participate in the debate which will be undertaken.

The bill will not be disposed of this week. I doubt that it will be disposed of next week. I hope it will be disposed of before the end of the month.

Thus, I join the distinguished Senator from Mississippi in what he had to say in urging that all Senators be here, because this is a most important and worthwhile bill and certainly merits the attention of every Senator.

I thank the gracious Senator from Mississippi for making the announcement he did today so that the Senate is now on notice as to what to expect in the days and perhaps the weeks ahead.

Mr. STENNIS. I thank the distinguished Senator from Montana.

Mr. SYMINGTON. Mr. President, may I ask the distinguished Senator from Mississippi if he plans to give his position on the bill and, before there is further discussion, to ask for a closed session. I ask that because if there is to be a closed session, those of us who are apprehensive about certain aspects of the bill might like to present charts which could not be presented in an open session. Of course, it will take a little time to prepare those charts.

Mr. STENNIS. Yes. I was going to make a motion as the final part of my presentation of the bill on the major items in the bill that we would go on into a closed session.

Mr. SYMINGTON. Then would the able Senator yield for this further question: After he has presented the bill and had the closed session, would he have any objection if we had another closed session based on the testimony taken up to that time?

Mr. STENNIS. Well, does the Senator mean an additional closed session?

Mr. SYMINGTON. Yes.

Mr. STENNIS. I could not object to that. I would have no basis on which to object, even if I wanted to, but I would not object to that at all. I want a closed

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session for the reasons I have already given.

Mr. SYMINGTON. I appreciate the sentiments of the Senator from Mississippi.

Mr. STENNIS. I thank the Senator.

Mr. PERCY. Mr. President, I have one brief question. I also commend the distinguished Senator from Mississippi for the procedure he has adopted. It will be extremely helpful.

My question is: We have staff members with classified clearance who could be of great help to us. In previous executive sessions, the Chamber has been cleared of all staff members. Would it be the intention of the chairman of the Committee on Armed Services to have staff members present if they have been cleared for classified material, and if so, whether classified, secret, top secret, whatever it may be?

Mr. MANSFIELD. Mr. President, I would have to object, much as I would dislike doing so. If anyone aside from those under the rules of the Senate were to be in attendance, I would wish to put him on notice now that I will object to any such consideration. I hate to do that, but I think there is no choice.

Mr. HOLLAND. Mr. President, first I wish to express thanks to the distinguished Senator from Mississippi for clearing today so that we could dispose of the agriculture bill. My question is: How long a notice does the Senator think we will have about a closed session? I ask this question because a week from Wednesday of this week is the beginning of the Apollo 11 voyage to the moon. I happen to know that many Senators have already indicated—and this would include the Senator from Florida—that they want to be there. Hence, we would like to have a couple of days notice ahead of time, because it would aid us materially in making our plans.

The Senator from Mississippi knows that I am not one to be away from the Senate, but I would certainly want to be on hand for that particular occasion so that I could plan with reference to the time limit ahead of the actual closed session.

Mr. STENNIS. Mr. President, with all deference to the Apollo 11 mission's going to the moon, I do not wish to offer a way we can stop some time next week. That is a matter to be worked out by the Senate. I think, I do not contemplate any secret session that will last later on into next week. My time will be fairly limited; but as to the other 99 Senators, of course, that would have to be determined by the Senate.

Mr. HOLLAND. All I am suggesting is that a couple of days' leeway or notice would be very helpful to me and to other Senators. If I have to be here, I shall be here. The Senator knows that. But a couple of days' notice would enable us to make our plans. We have all been asked. We have all been requested. Each Senator has been allowed to bring one member of his family if he cares to do so. I wish to bring my oldest son, who happens to be a marine veteran, subject to possible clearances, of course. But I would want to know if I could have a couple of days' notice ahead of time, be-

cause it would be very helpful to me and I know to other Senators.

Mr. STENNIS. That does not come until the middle of next week, does it?

Mr. HOLLAND. A week from Wednesday.

Mr. STENNIS. I think that is a matter solely for the Senate to determine, as to whether we recess for that day or what the Senate will do. I know that the secret session to which I refer will not last that long. At least I think it will not. I do not think there is any likelihood of it.

Mr. HOLLAND. All I am suggesting is that we have a day or two notice. It would be very helpful to me. I hope that the Senator will make some advance notice available to us.

Mr. STENNIS. I thank the Senator.

Mr. President, I yield the floor.

Mr. SYMINGTON. If the Senator from Mississippi will yield for just one more question, I was impressed with the suggestion made by the distinguished Senator from Illinois (Mr. PERCY), because this is a complicated matter. The books which are roughly comparable to the books now on Senator's desks today on the subject of the agriculture bill present in considerable detail the pros and cons of all the weapons systems. Those Senators who have the good fortune—as do I—to have listened to the hearings, and to have had the opportunity to study these weapons systems, and the pros and cons incident thereto, are in a fortunate position. But those Senators and their staffs who may not have been interested in it are in a less fortunate position. Therefore, if there is a closed session prior to discussion of the bill, it would appear to me that some Senators would not have the same advantage as others do in considering this very important bill.

Therefore, although I am entirely willing to accede, of course, to the position taken by the majority leader, I am in full agreement with the logic of the suggestion made by the Senator from Illinois.

Mr. MANSFIELD. May I say to the distinguished Senator from Missouri that the matter which he raised will, of course, be given consideration. I am fearful, however, that if we break the rule for one, we must break the rule for all. Hence, I am sure the Senator will understand, because of the peculiar situation in which a Member of the Senate finds himself in a closed session.

Mr. SYMINGTON. My position is not one of disagreement, but one of distress, because as we move to consideration of the bill on the floor, many Members are not as cognizant of the bill as members of the committee are.

Mr. MANSFIELD. With Senators like the Senator from Missouri, our experts will be available.

Mr. SYMINGTON. I would hope that staff people could be considered. Nevertheless, I accept the position of the Senator from Montana. My position was one of sympathy for the Senator from Illinois.

Mr. MANSFIELD. I understand.

ORDER FOR ADJOURNMENT

Mr. MANSFIELD. Mr. President, with the permission of the distinguished mi-

nority leader, concerning the request that the Senate come in tomorrow at 11:30 a.m., because both parties will have policy luncheons, I think it is better to ask unanimous consent that when the Senate completes its business today, it adjourn until 12 o'clock noon tomorrow.

The PRESIDING OFFICER. Without objection, it is so ordered.

S. 1647—AUTHORIZATION FOR RELEASE OF 100,000 SHORT TONS OF LEAD FROM THE NATIONAL STOCKPILE AND THE SUPPLEMENTARY STOCKPILE

Mr. MANSFIELD. Mr. President, I ask unanimous consent that after the prayer and the reading of the Journal tomorrow, the Senate proceed to the consideration of House amendment to S. 1647, a bill having to do with the release of 100,000 tons of lead from the national stockpile and the supplementary stockpile. The bill passed this body but was amended in the House.

UNANIMOUS-CONSENT AGREEMENT

I ask unanimous consent that consideration of this amendment take place for not to exceed one-half hour, the time to be equally divided between the distinguished Senator from Missouri (Mr. SYMINGTON) and the distinguished Senator from Delaware (Mr. WILLIAMS).

The PRESIDING OFFICER. The Chair would ask the Senator from Montana, does that include any amendments thereto?

Mr. MANSFIELD. For the information of the Senate, there is a possibility that there may be a rollcall vote on the House amendment.

The PRESIDING OFFICER. The Chair would inquire of the Senator from Montana if it is a 1-hour limitation.

Mr. MANSFIELD. It is a one-half hour limitation, with 15 minutes to a side. There is only one amendment. That will be it.

The PRESIDING OFFICER. Is there objection to the unanimous-consent request of the Senator from Montana? The Chair hears none, and it is so ordered.

The unanimous-consent agreement reduced to writing is as follows:

Ordered, That during the consideration of the House amendment to S. 1647, an Act to authorize the release of 100,000 short tons of lead from the national stockpile and the supplementary stockpile, on Tuesday, July 8, 1969, after the prayer and approval of the Journal, debate on that amendment and all amendments thereto shall be limited to one-half hour to be equally divided and controlled by the Senator from Missouri (Mr. SYMINGTON) and the Senator from Delaware (Mr. WILLIAMS).

"WHY ABM?"—A FORTHCOMING BOOK BY HUDSON INSTITUTE

Mr. KENNEDY. Mr. President, later this month, on July 17, Pergamon Press plans to publish a book entitled "Why ABM?" The book is authored largely by members of the Hudson Institute of Croton-on-Hudson, New York.

All of us involved in the debate on the Safeguard ABM welcome additions to the already extensive literature on ABM. This literature includes numerous statements by the Department of Defense be-

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fore the appropriate congressional committees; a detailed series of questions-and-answers releases by the White House office; an extensive nongovernment analysis organized by Dr. Jerome Wiesner and Prof. Abram Chayes; continued reports by the Council for a Livable World; a pamphlet by the American Security Council; and numerous others.

We are best served at this point in the debate over ABM, I think, by credible, independent analyses seeking to answer the troublesome questions raised over the past 5 months. These include the ABM's workability; its arms race implications; its necessity; and other matters. Unfortunately, however, the Hudson Institute book does not appear to be an independent analysis. Rather, it appears to be one financed in part by the Department of Defense.

On March 27, 1969, the Hudson Institute signed a contract with the Pentagon's Safeguard Systems Command for a study effort entitled "Strategic Implications of BMD Response." The letters "BMD" stand for ballistic missile defense; the ABM, of course, is the principal measure proposed as a defense against ballistic missiles. The price of this study was set at \$34,973. Three months later, on June 20, 1969, this same contract was extended for an additional 4 months period, at a further cost of \$35,280. Thus, the Pentagon has contracted with the Hudson Institute for some \$70,253 for a short-range study of the strategic implications of responses to ballistic missile defenses. In other words, the Hudson Institute is examining, in part, what steps our adversaries might take in response to our ABM, and then what steps we would be forced to take in response to their steps, et cetera. Actually, the scope of work under this contract is classified secret—and thus not subject to public discussion.

This raises a number of serious questions.

Mr. Donald Brennan of the Hudson Institute testified in favor of the ABM before the Senate Foreign Relations Committee on March 28, 1969, ostensibly as an independent expert. Yet at that time the institute was under contract to the Pentagon for studies relating to the ABM.

The Hudson Institute, while under a Pentagon contract for this study, has apparently sponsored a book in favor of ABM deployment. Yet nowhere in the press reports is there an indication that Hudson Institute prepared this book while under Pentagon contract.

Only a few years ago there were revelations that the Government had, through contracts of this sort, arranged for the publication of books favorable to its positions without indicating the fact of Government support. The Congress acted at that time with an intent to forestall similar abuses in the future.

I do not think that the efficacy of the ABM debate is raised by this activity. We do not need more information from vested interests; rather, we need independent, objective, and skilled judgments. The Hudson ABM book does not appear to reflect this need.

Mr. MANSFIELD. Mr. President, will the Senator yield?

Mr. KENNEDY. I yield.

Mr. MANSFIELD. When I read in this morning's paper that a book on behalf of the ABM was being published by the Hudson Institute, I recalled that, for at least a decade, and very likely more, this institute has been under contract for research projects with the Pentagon. I have asked for some figures as to just how much the Hudson Institute has received as remuneration. Let me make it clear that I have no fault to find with the institute's publishing this book. But, at the same time, I think the special connection involved ought to be made very clear also. In going back only 3 years, including this year, the figures show that in 1967, this organization received from the Department of Defense \$713,000. In 1968 it received \$444,000, under a Democratic administration, I might say. So far in 1969, under both a Democratic and Republican administration, I would assume, it received \$873,000. That comes to about \$2 million covering 3 years, and the third year has not been completed.

I am wondering how much the Hudson Institute has received over the past decade or more, and I wonder how much it has produced in return. Aside from books and monographs such as this, I wonder what it has given to the Government for the money expended. I wonder how much of the research money, which comes to \$8 billion last year for the Department of Defense alone, has been siphoned to the Hudson Institute, the Rand Corp., colleges and universities, and other institutes in this country. I think that would make a most interesting study. And I would like to know the results, not to mention the subjects covered.

Mr. KENNEDY. Mr. President, in brief response, I think the figures that were placed in the Record by the majority leader are extremely important and significant. What troubled me in this regard, and what led me to comment on this matter, was the fact that Mr. Donald Brennan, of the Hudson Institute, testified on the question of the ABM before the Senate Foreign Relations Committee, ostensibly as an independent expert. I am sure some very serious questions are raised in the minds of all of us with respect to the relationship between the studies of the institute on the strategic implications of the ABM response for the Pentagon, which services were contracted for, and then the States given the later testimony of Mr. Brennan as an independent expert when he testified in support of the ABM. Now we have the announcement that the institute is going to publish this book.

As we begin what the majority leader has described as perhaps the most significant and important matter that will come before the Senate this year, we must come to grips with the problem of evaluation of evidence. It is timely that those questions be raised in order to evaluate the weight we ought to give various documents, statistics, and data as they are presented to us.

Mr. GOLDWATER. Mr. President, will the Senator yield?

Mr. KENNEDY. I yield.

Mr. GOLDWATER. In regard to the comments of both the Senator from Mas-

sachusetts and the Senator from Montana, I am sure they do not imply that we cannot trust the Hudson Institute. If we take that approach during the course of the debate, the Senate is going to be rather shocked at the tremendous amount of money that, under the guise of research and development, has been pumped into institutions in this country. From what I know about it, we might even talk about a 30-percent cut across the board without being hurt at all.

For example, Dr. Wiesner, of the Massachusetts Institute of Technology, is one of the receivers of Government money, but I do not for one moment regard Dr. Wiesner as having his judgment affected by the fact that he is one of the biggest contractors under the research and development funds.

I would feel very remiss in my concern about this whole question if I allowed the influence to stand that the Hudson Institute had done something under the table or something bad. Dr. Wiesner has testified in opposition to the ABM, I know Herman Kahn is for it and has testified in that manner.

It would be very difficult, in fact, at this stage of the game, to find some academic type who has not been on record publicly either for or against the ABM.

I am glad that the majority leader mentioned this matter. I hope I shall be able to present a complete inventory of these funds. I doubt that I shall be able to, because I can assure the Senator it is a tremendous outlay. But I think it is subject to some of the biggest cuts we can make in the military outlay.

Mr. MANSFIELD. Mr. President, will the Senator yield?

Mr. GOLDWATER. I am happy to yield.

Mr. MANSFIELD. I agree with the distinguished Senator from Arizona. I hope that he will not gather the impression that what was said by the distinguished assistant majority leader and the Senator from Montana carried any imputation or implication along the lines which the Senator thought he detected.

I was one of those who tried last year, and tried mightily, to bring about a 25-percent reduction in overhead cost for all of such research activity carried on by corporations and by universities and colleges. I had sweeping success in the Appropriations Committee, and resounding success on the Senate floor; but when the bill came back from conference, it was just another amendment which had lost its way.

The Massachusetts Institute of Technology is, I think, the recipient of the largest overall grant total for research from the Department of Defense; but I daresay that it is a rare university in this country which has not participated to some extent, which may or may not be a good thing. I should be happy to join the Senator this year in an effort to bring about a sizable reduction in cost of the research and development aspect of the Defense Department's activities, aside from missile projects and the like, and I would be hopeful that what the Committee on Armed Services has already accomplished—that is, to cut research by approximately \$1 billion—could be doubled on the floor this week or next.

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I think the Senator understands the situation clearly. It is not a matter of imputation or implication; it is a matter of interest in how these funds are being spent, and what is achieved as a result of the spending.

Mr. GOLDWATER. I might say for the information of the Senate, and this will be brought out if it has not already been, that the full Senate Committee on Armed Services is divided into a number of subcommittees this year for the first time; and the Subcommittee on Research and Development, under the able leadership of the Senator from New Hampshire (Mr. McINTYRE), has turned in what in my opinion has been an outstanding job; but there is so much to uncover and to cover that it could not be done, in my opinion, in the time we have spent on it, which is about 5 months.

Mr. MANSFIELD. Will the Senator yield further at that point?

Mr. GOLDWATER. I yield.

Mr. MANSFIELD. I have boxes of documents this high, this long, and this wide [indicating]. I think it costs the Pentagon something on the order of \$100,000 to collect this information. May I say that when the Appropriations Committee became interested last year in the subject it did not know at the time what was being done in the middle and lower echelons as far as research was concerned. That was how widespread the problem was. It is very difficult to look into, because we can only make a start. There are as the Senator has pointed out, a terrific number of research projects which, in years gone by, the Pentagon has undertaken.

I do not blame the Pentagon. The blame must rest with us, here in the Congress, because all that had to be done, up until this year, was to ask, and the Pentagon received.

I am delighted that the subcommittee of which the distinguished Senator from Arizona is a member, and the full Armed Services Committee, were able to cut approximately \$1 billion from the research funds this year.

Mr. GOLDWATER. Mr. President, I should like to make a slight correction. I am not a member of that subcommittee.

Mr. MANSFIELD. The Senator should be.

Mr. GOLDWATER. But I am very much intrigued by it, because I had no idea of the extent of it. During my self-imposed sabbatical for 4 years, my former colleagues seemingly went rather wild on this subject of academic research and development. I do not mean research and development on such matters as bending iron or aluminum, or building things, but the kind of research and development for which I can find no relationship to the needs of the Defense Department. I hope—and this suggestion has been made to the chairman of the committee, who has shown great willingness to cooperate—that this subcommittee will be made permanent, with an adequate staff to go into these things, not just every year, but on a day-by-day basis.

I do not want the Senator from Massachusetts or the Senator from Montana to think I was reading into their comments anything that might imply dis-

honesty on the part of the Hudson Institute, but this can become a very emotional issue. I hope and pray it will not.

I think this is probably the most important issue this body will vote upon in many years. I believe the whole future of our country, nationally and internationally, rests upon what we can wisely do here, without permitting emotion to get into it.

I recall just the other day a citizen of our country, at his own expense, ran a full page advertisement in the newspapers, and was bitterly attacked on the floor of the Senate, even being called a liar. I hope we can discuss this matter in a gently and scholarly way. It will have to be discussed, and I know it will be.

Mr. KENNEDY. Mr. President, will the Senator yield?

Mr. GOLDWATER. I yield.

Mr. KENNEDY. In regard to the earlier reference to Mr. Weisner and MIT, the Record should reflect, that if there is a conflict of interest, Mr. Weisner's position on this subject would be likely to be against his own professional interests and those of MIT. In regard to Mr. Brennan and Mr. Kahn on the other hand, the record indicates that they decided matters consistent with the position and interests of the institution they represent.

I should also like to make just a further brief comment about MIT. Just last week, as a matter of fact, President Johnson and Dr. Killian came down to see me about the results of a rather extensive report that had been prepared by members of the student body, the faculty and certain select members of the alumni relative to the institute's position to the Lincoln Laboratories. The Lincoln Laboratories, as a matter of record, receives extensive funding from the Defense Department. The study indicates great interest in trying to find new directions to move in, away from the heavy dependence upon the Defense Department for funding of its activities. Many other great universities have similar connections with institutions which depend in significant measure upon Defense Department Research and Development funds and it is a source of concern to students, faculty and alumni.

Another example of this conflict is Stanford University and the Stanford Research Institute, with the latter receiving approximately half its operating budget of \$64 million from the Department of Defense.

I think it was to the credit of MIT, the faculty, and student body as well as the alumni, that they have really taken the bit in their teeth in seeking to determine what can be done to solve this dilemma. I think the position they have taken is a wise one, and the universities should be assured that we who are in Congress are going to have to try to find ways that we can help assist those institutions which have developed this dependency, to move out into other fields.

Mr. GOLDWATER. Mr. President, I am glad that the Senator has that attitude. I know that MIT has it; and I know that Stanford and many of our top universities engaged in nuclear re-

search, physical research, and so forth, will want to take another look at the problem.

But I think we also have to keep in mind that a lot of weapons are being dreamed up in the laboratories of these institutions. Though rarely do weapons systems come flowering full blown off the drawing boards of astronomical or aeronautical researchers, I think the future of our country will depend more and more upon the academic sector. I think our job is to help them determine what their guidelines should be as to their participation and what they should do, and get along further with handling the buck which, to paraphrase an old friend, stops here.

Mr. DOMINICK. Mr. President, will the Senator yield?

Mr. GOLDWATER. I yield to the Senator from Colorado.

Mr. DOMINICK. I wish to add one thing to what the Senator from Arizona has said, and that is that, while I can understand why we should oversee carefully the work carried on by the academic community under Defense Department auspices, I think it well to remember that until we can achieve a world in which everyone lays down his arms, we will have to continue doing research and development work.

If we do not have the academic community for assistance, it means we will have to do it in haste which, once again, means that the cost and the imagination and the ability to get this done as economically and feasibly as possible would be lost.

I would hate to see us do that. I have heard it said on the floor that we ought to get the ROTC out of the colleges. Yet young people whom I have talked to say they do not want the military, because they do not think the people are educated enough. I say, "If you want that, why do you not let the ROTC go through the colleges and get them into the military?"

It makes no sense to me to throw them out when we need educated officers.

We have to be careful in our analysis and not let emotion run away with us and say that we do not want a war and so we are going to get out of the whole situation.

Mr. PELL. Mr. President, in connection with what portion of the Hudson Institute funds comes from the Department of Defense, I happened to ask Dr. Donald Brennan of the Hudson Institute that very question when he appeared before us in open session.

Dr. Brennan's reply quoted on page 383 of the hearings before the Subcommittee on International Organizational Disarmament Affairs for March 28, 1969, was:

The proportion would be perhaps three-fourths.

That would mean that only one-fourth of the funds of the Hudson Institute come from any sources anywhere, private or governmental, in the United States other than from the Defense Department.

Mr. GORE. Mr. President, the more Senators know about the ABM question, the more Senators in my opinion will

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oppose the deployment of an ABM weapon system.

When the question was before Congress heretofore, my subcommittee held extensive secret hearings. So far as I know, no secrets were withheld from the committee. But much information essential for a public judgment upon the issue was withheld from the public and from the Senate generally, except that any Senator, of course, could go to the committee rooms and obtain from the vaults the secret testimony and there read it.

This year, upon my recommendation, the subcommittee concluded to have public hearings. We felt that it was essential to involve the American people in this very important, very basic decision.

The hearings, as Senators know, have been extended. Members of the intelligence community and the universities, scientists, engineers, and authorities made themselves available by the hundreds to testify.

It has been, I believe, truly an educational experience. At the beginning of that hearing the opposition to the deployment of ABM was very much in the minority. As information accumulated, so did opposition.

So far as I know, no secret information has now been withheld from my committee. Therefore, we are fully prepared to debate it in secret session. I shall bring to the floor of the Senate numerous secret documents, including the testimony of the CIA. Nothing will be withheld from the Chamber. The more Senators know about the ABM, the more Senators will be opposed to it. I intend to afford them the opportunity to know the full story.

I know what the secrets are. What are they? They involve intelligence, intelligence estimates, sources of intelligence. They involve the yield of weapons, the geometry of weapons, trajectory, time elements, details of computers, radar, and so forth.

The secret information is largely technical.

Mr. President, there is ample information available not only to the Senate but also to the American people with which to reach a decision upon the central issue involved.

What is the central issue? It is whether or not it is necessary to deploy an antiballistic defensive weapon system, the ABM, in order to preserve the integrity of the U.S. deterrence against a nuclear war.

This is the principal basis upon which this deployment is advanced. In the words of both the President and the Secretary of Defense, ABM deployment is necessary, "to preserve the integrity of our deterrence."

Is it? Is it? That is the central issue, and on that we have joined issue. It is neither necessary nor advisable.

Why is it not necessary? It is not necessary because our country has massive power of retaliation in a variety of categories—Minutemen, the ICBM's in our Minute silos, intercontinental airplane bombers, our nuclear submarine fleet, missiles on foreign bases, planes on foreign bases, tactical weapons under our command in the NATO forces, nuclear missile launches aboard surface vessels.

There are so many and so much that our country has the power to lay 48 weapons—each one 50 times as powerful as the one that destroyed Hiroshima—on each of Russia's 50 largest cities. But Mr. Laird in public testimony on television before the American people, with millions of people listening and watching, said the Soviets are going for a first strike capability. Then he added, "There is no question about that."

Mr. President, there has been no intelligence estimate of the National Board of Intelligence to support that conclusion. And that information will be brought here in detail before the Senate.

Throughout this fight, there has been an attempt to spread an aura around the ABM, an aura of secrecy and thus win by secrecy what cannot be won in public debate in the light for all to see.

The Pentagon and the Pentagon projects thrive on secrecy. But Senators shall know.

I say the essential facts necessary to reach a judgment upon the central issue are publicly known, and I am proud to have had a part in making them publicly known.

Oh, yes. Mr. Laird says that deployment of ABM is necessary to preserve the integrity of our deterrence; therefore, he says, we must deploy ABM.

Is it necessary? The answer is "No," because of the magnitude of this country's retaliatory capacity. Deterrence has two parts: First, the power to retaliate with devastation upon an enemy who should attack the United States; second, the will to use that power. There is no question that the United States has the power; and if this country should be attacked with nuclear weapons, I have no doubt that it has the will to use that power. The important question is, What is the estimate of the Soviets of these two elements? What is their estimate of our power to retaliate if they should launch a nuclear war against us? I think they know what our power is.

What is their estimate of our will? This I do not know. But I surely do not wish to plant any questions in their mind. They are not frightened with ABM's. ABM's are not a deterrent.

Right in the beginning of this debate, let it be known that the senior Senator from Tennessee believes that we need to preserve the integrity of our deterrents. There will be no victory in a nuclear war. We would lose; they would lose; civilization would lose; everything would be lost in a nuclear exchange between Russia and the United States.

The way to win this battle is to prevent nuclear war; and to prevent it we need to have a deterrent—an unquestioned deterrent—not only the power to retaliate, but the will to retaliate. The important place for that to be rested is in the mind of anyone thinking to attack the United States with nuclear weapons. This is the central question.

Secretary Laird, in more recent testimony, has not again repeated his view that the Soviets were going for a first-strike capability. A first-strike capability, as the senior Senator from Missouri knows, is a word or term of art to the military. I placed in the Record an official interpretation of the term. It means,

in laymen's language, the capability of striking a country a first blow with such devastation that that country will not have the power to retaliate with unacceptable risk.

I ask the Senator from Missouri if that is a correct statement.

Mr. SYMINGTON. I would say that it is a correct interpretation.

If the Senator from Tennessee will yield to me for a brief remark, I would hope that every Member of the Senate would realize that for many years the distinguished senior Senator from Tennessee has been a member of the Joint Committee on Atomic Energy.

Mr. GORE. I thank the Senator from Missouri. I was a member of a small subcommittee that handled the appropriation for the Manhattan District when Oak Ridge, Tenn., was still a wilderness. I have been involved in nuclear energy since its very beginning. So far as I know, no secrets have ever been withheld from me. No secrets will be withheld from the Senate in this debate.

Mr. SYMINGTON. Mr. President, will the Senator further yield?

Mr. GORE. I yield.

Mr. SYMINGTON. I am glad that the able Senator brought up that fact, because he was deeply interested in the atomic picture when he was a Member of the House of Representatives for many years prior to his coming to the Senate. Therefore, I say without fear of contradiction that his position in this matter is at least as experienced as that of any other Member of the Senate.

Mr. GORE. I thank the Senator.

I wanted to say at this time, right in the very beginning, that we need to keep our minds on the central question: Is the deployment of ABM necessary to preserve the integrity of our deterrence? I think the answer, unquestionably, is No. Then the question is, If unnecessary, or though unnecessary, is it advisable? This leads to the involvement of our will and the estimate of our will. But more important, perhaps, it leads to the third point, which is that our deployment of ABM will stimulate and accelerate another round in the nuclear armaments race, out of which will come not more but less security for our country; less opportunity, not more, to avoid a nuclear war. So let us start the debate on this level.

I know there are questions as to whether it will work; questions about the computers; questions about the radar; questions about accidental detonations; many questions and doubts. These are mostly tangential and secondary issues.

The fundamental issue, let me repeat, is this: Is the deployment of ABM necessary for the Soviets to know that we have the power to retaliate with devastation if they should level an atomic attack against us? And is it necessary or advisable to deploy ABM to convince them of our will to do so if they start a war? Or would ABM deployment affect their estimate of our will to retaliate?

We have no intention of starting nuclear war. Our strategy has been postulated on the thesis that the way to prevent a nuclear war is to have the power to retaliate. This is the deterrence. This is what Winston Churchill called the balance of terror.

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So, Mr. President, let the Senate examine these basic questions. We can argue all day and all week about the technicalities, about the computers, about the programming of computers, about the geometry of the weapons, the yield of weapons, projectile timing, and so forth. These things will have a bearing upon the issue. But the essential facts are already available, not only to the Senate, but, fortunately, to the American people, to reach a decision on the basic question.

Mr. HART. Mr. President, will the Senator yield?

Mr. GORE. I yield.

Mr. HART. I merely wish to thank the Senator for opening the debate in the fashion he has—effective, restrained, thoughtful, and, I think, magnificent. I wish all Senators could have heard it.

Mr. GORE. I thank the Senator from Michigan.

Mr. PELL. Mr. President, will the Senator yield?

Mr. GORE. I yield.

Mr. PELL. I wish to add my own word of accord and to add that I wish all Senators could read the thrust of the argument of the Senator from Tennessee which, I think, is well digested from many hours of testimony.

Mr. GORE. I thank the Senator.

Mr. President, I call attention to the fact that the secret hearing with Secretary Laird on the question of intelligence estimates, after the making of certain deletions, is going to the printer tonight.

It will be available to the public on Wednesday or Thursday and then the Senate and, fortunately, the American people can determine for themselves whether the Secretary now maintains that the "Soviets are going for a first-strike capability."

Mr. KENNEDY. Mr. President, will the Senator yield?

Mr. GORE. I yield.

Mr. KENNEDY. Mr. President, I wish to join with Senators in commending the distinguished Senator from Tennessee on his most eloquent and well-reasoned presentation this evening. I think this Senator not only this evening but also during the conduct of the hearings he held, with the quality of the witnesses and the thrust of his questions, performed an extremely important service to this body and to the people.

I wish to join him and commend him this evening. I wish to say that I am certainly hopeful that his voice will be heard often during the course of discussion and debate because there are few Members of the Senate who have his understanding, background, and experience in this subject.

I thank the Senator for his comments and my only regret is that more Senators did not hear him.

GREECE

Mr. PELL. Mr. President, Rowland Evans and Robert Novak have written three excellent columns that appeared in the Washington Post on the present situation in Greece. The first of these articles, entitled "Greece Facing Grim Alternatives: Salazar-Type Rule or Bloody Revolt," appeared in the Post on June 19. The second, entitled "U.S. Ac-

tion Against Greek Junta Is Prevented by Military Needs," appeared on June 23. The third, entitled "Nature of Greek Junta Underscored by Arrest of Distinguished General," appeared on June 26.

I ask unanimous consent that these three articles be printed in the Record at the conclusion of my remarks.

The PRESIDING OFFICER. Without objection, it is so ordered.

(See exhibit 1.)

Mr. PELL. Mr. President, Mr. Evans and Mr. Novak make statements that deserve close attention. They note that if the colonels who seized power in 1967 ever intended any partial return to representative government, that intention is dead. They quote the Deputy Premier as saying, when asked about popular elections, "Nobody wants elections" and theorize that this attitude may be due to the fact that the military regime's popular base is so low that calling elections "would be equivalent to surrendering power." They characterize Greece as a "huge political pressure cooker" which they say may explode into insurrection with Communists in leading roles. Messrs. Evans and Novak argue that the need for a tough U.S. stand against the military dictatorship "is being undermined by the Pentagon's military requirements in the eastern Mediterranean." They report that the commander of the U.S. Military Advisory Group and his subordinate officers "have exercised little discretion in telling their Greek counterparts how they oppose the Embassy's fastidiousness about democracy." In their last column, they point to the case of the imprisoned General Koumanakos against whom no formal charge is pending, no trial is scheduled, and no limit of imprisonment has been placed. The implications of the sentiments aroused by the Koumanakos case, according to Messrs. Evans and Novak, include the possibility that many Greeks who have viewed Communists as their blood enemies now see the colonels ruling Greece as their real foes.

The three columns by Messrs. Evans and Novak do not paint a pretty picture but they do portray the political situation in Greece today with its very real dangers for Greece tomorrow.

This also brings to our minds the need that there be appointed to Athens a tough-minded, strong-willed, civilian-oriented ambassador who will express the wishes of the United States the best he can and will nudge Greece a little further along toward democracy.

EXHIBIT 1

GREECE FACING GRIM ALTERNATIVES: SALAZAR-TYPE RULE OR BLOODY REVOLT

ATHENS.—The Greek military dictatorship, after two years of bland assurances to Washington about restoring democracy, intends to retain power indefinitely without free elections—posing immense danger to long-range stability in the strategic eastern Mediterranean.

If the colonels who seized power April 21, 1967, on the pretext of preventing communism here ever intended any partial return to representative government, that intention is dead. Even the few politicians who have tried to cooperate with the colonels now concede that Col. George Pappadopoulos, the Premier, envisions an institutionalized tyranny modeled after Salazar's 37-year dictatorship in Portugal.

Unlike our last visit there two years ago when the freshly installed junta pledged an early return to constitutional forms, the regime now regards itself as permanent. Brig. Gen. Stylianos Pattakos, Deputy Premier and the junta's No. 2 man, bristled when we asked about popular elections. "That is an internal matter that you cannot inquire about," he said. "Go ask the people on the street. Nobody wants elections."

Indeed, all objective sources here agree that the military regime would lose badly in free elections. The colonels' "revolution," attempting by edict to transform the Greeks into work-oriented puritans, has depleted what popularity the regime enjoyed in 1967. Although past Greek governments have had excellent success in rigging elections, the military regime's popular base is so low—perhaps 10 per cent—that calling elections would be equivalent to surrendering power.

Unwilling to surrender power, the colonels have turned Greece into a huge political pressure-cooker with the true feeling of the Greeks suppressed by the local gendarmerie's watchful eye. An election today probably would show a sharp leftward swing. More ominously, after two or three additional years, the pressure-cooker may explode into insurrection with Communists in leading roles.

These ominous prospects have their source in perhaps the tightest police state this side of Moscow. Violating the colonels' own new constitution, non-Communist potential foes of the regime—mainly army officers and intellectuals—are imprisoned without indictment or trials. Reports of torture are impossible to verify in detail, but maltreatment and brutalization of low-level political prisoners continue.

Former political leaders are watched constantly. They cannot speak their view, are denied passports to travel abroad, and have their mail and telephone calls monitored. One former Premier cannot move without a car full of police agents following him. All former cabinet members are tailed when they visit their old constituencies.

The regime's iron vise is even tighter on the academic world. So many teachers have been purged that the educational system is crippled. Distinguished professors are subject to humiliating interrogation by Col. John Ladas, hard-line secretary general of the Interior Ministry. University students, solidly against the regime, are intimidated by police agents attending their very classes. A further deterrent is formed by severe prison sentences given six young teaching assistants (two of whom later were tortured) for distributing anti-junta propaganda.

The first armed resistance against this tyranny has come from the right: clandestine supporters of exiled King Constantine. Infrequently reported in the controlled Greek press are daily bombing incidents in the heart of Athens (forcing the government court martial to change buildings): There have been unconfirmed reports that the royalist resistance was responsible for the recent deaths of three pro-junta officers.

Thus, 16 retired officers arrested recently are all royalists with anti-Communist records (two of them with service in the Korean war). The regime's contention that the arrested officers participated in a left-wing army plot is only a propaganda smokescreen.

Harassing though it may be, however, the royalist resistance is incapable of overthrowing a regime so vigilant against potential opposition. Remembering the existence of the anti-Nazi resistance in World War II, Greeks fear that the Communists—better organized than ever—will dominate if and when the resistance assumes major proportions.

That day remains relatively distant. Greek Communists, badly fragmented into rival segments, are passive. The Soviet Ambassador here is circumspect, declining to discuss