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## IMPLICATIONS OF CERTAIN US EARTH SATELLITE PROGRAMS<sup>1</sup>

### THE PROBLEM

To estimate the political and psychological reactions to US launchings of earth satellites with reconnaissance capabilities, and to assess the reactions to alternative methods of handling the informational and foreign policy aspects of such launchings.

### ASSUMPTIONS

1. The US will be capable of launching small test vehicles for a reconnaissance satellite program about the end of 1958 and effective reconnaissance vehicles about the middle of 1960.
2. There has been no international agreement prohibiting the use of outer space for military purposes, or requiring that all outer space projects be under international operation or control.
3. There has been no Soviet announcement of a Soviet reconnaissance satellite operation and the US has no persuasive evidence of one.

### NOTE

The third assumption does not prejudge whether the USSR will launch reconnaissance satellites. It merely states the situation existing at this time. If the Soviets should put up a satellite and announce it, or if the US possessed persuasive evidence that one was in orbit, the situation might be greatly different, and the analysis contained in this estimate would probably no longer apply.

### CONCLUSIONS

1. Both the US and the USSR are on record as advocating that outer space should be used exclusively for peaceful purposes, and most people throughout the world hope that outer space will not be used for military purposes. Whatever

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country first becomes identified as using earth satellite vehicles for military purposes will therefore probably incur considerable blame for projecting into outer space the political-military contest between the great powers. However, an important segment of opinion in countries allied with the US would readily recognize the value of US reconnaissance satellites as strengthening the US deterrent and thus contributing to the maintenance of world peace. (Paras. 10-11)

2. The Soviet leaders would probably not regard a US reconnaissance satellite program as evidence of any basic shift in the balance of military power or as requiring them drastically to revise their estimate of US intentions. They would conclude, however, that US reconnaissance satellites would have some effect in reducing Soviet capabilities for surprise attack and for concealing military preparations. They would almost certainly feel compelled to react strongly to what they would regard as a violation of their security and a challenge to their prestige. (Paras. 12, 13, 15)

3. If the US launched reconnaissance satellites without publicly announcing that it had done so, the fact would probably become known anyway. We believe the USSR would attempt to neutralize or to destroy such satellites to the extent they were capable of doing so. Some Soviet capability to neutralize may exist now, but a capability to destroy probably could not be developed before 1960. The Soviet leaders would probably also open a propaganda campaign against the US. Soviet charges against the US would probably gain a sympathetic audience, particularly in the neutralist nations. While allied governments would probably sup-

port the US, particularly if consulted in advance, some of them would do so reluctantly and would encounter considerable public opposition. We doubt that anti-US sentiment and propaganda would be violent or prolonged, but there would be renewed anxiety and disappointment throughout the world because a scientific achievement had again led to an increase in international tension. (Paras. 16-25)

4. If the US announced its reconnaissance satellite program as a valuable addition to free world security, public reaction in allied countries would be more favorable because the stigma of covert action would be removed. Nevertheless, there would be people in allied as well as neutralist countries who would regard the US statement as provocative. The Soviet leaders would feel themselves confronted with a direct challenge, and would initiate intensive efforts to neutralize or destroy the US satellites. They would lodge a complaint in the UN and carry on an intensive propaganda campaign against the US program. They would probably win considerable support in the neutralist countries. (Paras. 27-29)

5. If the US, in connection with its reconnaissance satellite program, declared its intention to pass to the UN the information received, there would probably be a more favorable reaction, even in neutralist countries. Despite this more favorable world reaction, the USSR would probably denounce the US proposal and take whatever action it could to neutralize or destroy the US satellites. (Paras. 30-34)

6. If the US, before implementing its own program, offered to cooperate with the USSR and other countries in utilizing re-

connaissance satellites as part of a multi-lateral inspection system on behalf of the UN, world reaction would be generally favorable. The Soviet leaders would probably react cautiously, fearing that an open attack upon the US proposal would hurt them. They would probably not accept the proposal, but instead would delay and maneuver in an effort to depict the US proposal as dishonest and to retard the development of an independent US satellite program. (Paras. 36-39)

7. We do not believe that the Soviet position in international disarmament negotiations would be significantly affected by the US reconnaissance satellite pro-

gram at least until the USSR had tested its capabilities to frustrate this program by political or physical means. If they thought that a US program was unpreventable, they might seek a form of internationalization which would substantially reduce its value to the US. They might agree to cooperative use of satellites with limited reconnaissance capabilities, such as those proposed for monitoring a nuclear test ban, but they would be more likely to seek a complete prohibition of reconnaissance satellites capable of yielding significant information on Soviet military installations and preparations. (Para. 26)

## DISCUSSION

### 1. General Attitudes and Policies

8. Man's capacity to put satellites into orbit around the earth has stimulated more intense interest than any other scientific achievement since the explosion of the first atomic bomb. As the developments in the field of nuclear energy in 1945 created hopes that the world was at the threshold of a new era of cheap energy from which all mankind would benefit, so the achievements of recent months have created hopes that man could explore the mysteries of outer space and discover new truths concerning the origin of life and the nature of the universe. At the same time there is growing concern and apprehension lest these scientific advances lead only to the projection into outer space of the political-military contest between the great powers.

9. The USSR, by its initial efforts in the earth satellite field and by its continuing progress, has enhanced its prestige throughout the world. In many countries, particularly in the underdeveloped and backward areas, the Soviet achievements have been widely acclaimed as proof of the scientific and economic progress which the USSR — itself so recently an

underdeveloped country — has made. Although the Soviet scientists had placed earth satellites in orbit with rocket systems developed for military purposes, the Soviet leaders were able to dramatize their effort as a scientific achievement by launching their satellites first, under the program of the International Geophysical Year. At the same time, the military implications of the launchings have also made a deep impression on world opinion — an impression which the Soviets themselves have not refrained from encouraging.

10. The US earth satellite program, like that of the USSR, is generally regarded as an undertaking for both scientific and military purposes. Sophisticated people, particularly in allied countries, realize that both the US and the USSR are making great efforts to advance their missile capabilities, and this fact is probably more widely known than related scientific efforts. Most people throughout the world hope that the scientific rather than the military aspects of space programs will be emphasized and that the two great powers will cooperate with each other toward that

end. Whatever country is first identified as using earth satellite vehicles for military purposes will therefore probably incur considerable blame for frustrating these hopes. If, as we assume in this paper, the US were the first to be so identified, an important segment of opinion in countries allied with the US would readily recognize the value of US reconnaissance satellites as strengthening the US deterrent and thus contributing to the maintenance of world peace. On the other hand, there would also be many people — particularly in neutralist and underdeveloped countries — who would react negatively, since they already regard the US as too preoccupied with military security.

11. Both the US and the USSR are on record as advocating that outer space should be used exclusively for peaceful purposes. The US has made proposals to this end in the UN General Assembly, in the UN disarmament negotiations, and in direct communications to the Soviet government. Although the USSR has proposed a ban on the use of outer space for military purposes and international cooperation in the study of outer space, it has tied to these proposals the elimination of foreign bases from the territories of other countries. The Soviet leaders apparently believe that a ban on the use of outer space for military purposes — at least during the next several years — would benefit the US strategic position at the expense of that of the USSR, since it would outlaw ICBM's and IRBM's and give greater weight to the US deterrent, which is derived principally from superiority in manned aircraft and access to overseas bases.

12. The Soviet leaders probably anticipate that the US will acquire and exercise the capability to launch reconnaissance satellites. In assessing the strategic effects of this development they would have to consider the extent to which these satellites would add to US intelligence capabilities against the Bloc. This judgment may present some difficulty, particularly since it involves, in addition to a prior estimate of US intelligence abilities, assessment of the nature and effectiveness of the equipment in reconnaissance satellites. For

the purposes of this estimate, it is assumed that the Soviet leaders would estimate that the reconnaissance satellite program as a whole would substantially increase US knowledge in important fields.<sup>2</sup> Consequently they would probably conclude that a perfected US reconnaissance program would constitute a gain to the West's relative capabilities, especially by (a) reducing existing Soviet capabilities for surprise attack and for concealing military preparations, (b) increasing the USSR's own vulnerability to attack, as a result of better US target and other information, and (c) necessitating additional Soviet programs to compensate for losses in internal security.

13. The effect of these factors on the USSR's estimate of East-West relations and the balance of power would depend on its assessment of the effectiveness of its own intelligence program, as well as upon its own military and political intentions. Apart from its effect upon the Soviet capacity to launch a surprise attack, it seems unlikely that the USSR would regard a US reconnaissance satellite program as evidence of any basic shift in the balance of power. Nor is it likely that the reconnaissance program would by itself result in any drastic revision of the Soviet estimate of US intentions.

14. Nevertheless, the Soviet leaders would recognize that the launching of US reconnaissance satellites would introduce into the world situation a political factor of considerable significance. They would appreciate the opportunities presented for anti-US propaganda. They would probably also recognize that the manner in which the US handled the foreign policy and public relations aspects of its launching of reconnaissance satellites, and the manner in which the USSR itself reacted, would affect world opinion and establish a series of precedents affecting the ultimate uses and control of outer space itself.

<sup>2</sup> Assuming photographic, infra-red, and electronic capabilities, the USSR would consider that increased US knowledge will, for example, reduce the secrecy of Soviet missile launching sites, airbases, actual air and missile operations, and location of major secret industrial complexes.

15. The Soviet reaction to US reconnaissance satellites would not, however, be wholly in reasoned terms of assessing potential military and political gains and losses. The almost pathological Soviet preoccupation with secrecy would be greatly stimulated. The Soviet leaders would almost certainly feel compelled to react strongly to what they would regard as a violation of their security and a challenge to their prestige. Thus, in whatever manner the US handled the public relations and foreign policy aspects of a reconnaissance satellite program, there would probably be an increase in Soviet-US tensions.

## II. World Reactions if the US Launched Reconnaissance Satellites Without Making Any Public Disclosure

16. If the US chose to launch reconnaissance satellites without making any public disclosure that these satellites contained reconnaissance equipment, we believe it most unlikely that the USSR or even the rest of the world would long be ignorant of it. Information which has already been disclosed<sup>3</sup> or which will leak out or be obtained by espionage, and perhaps the characteristics of the satellites themselves, would lead to a strong presumption — if not to absolute proof — that certain US-launched satellites contained reconnaissance equipment.

17. The USSR's reaction would be affected in some measure by its estimate of its capabilities to prevent these satellites from achieving their objective. Passive defense would certainly be attempted. To destroy, damage, or neutralize an earth satellite would be difficult, though not technically impossible. It should be noted that a full-scale satellite reconnaissance system capable of supplying timely, reliable, and regular information useful in providing warning as well as target information is a complicated system involving a number of satellites, as well as extensive ground installations for receiving and interpreting data.

<sup>3</sup>The most definitive disclosure appears in the June 23, 1958 issue of *Aviation Week*. The substance of the article in this magazine has been widely disseminated by the press services.

18. We believe that, within the limits of its capabilities, the USSR will certainly seek to neutralize US reconnaissance satellites. Since some time will elapse between the first launching of a reconnaissance test vehicle and the orbiting of the first effective US reconnaissance satellite, the USSR would of course have an opportunity to experiment against the initially limited US capability, and to attempt to develop and improve various techniques for neutralizing satellites as the US program proceeds.

19. We believe that in the next two years the USSR will probably not be able to destroy or physically damage US reconnaissance test vehicles, even though it might have some capability to neutralize them. It is possible that a capability to destroy satellites by one method or another could be developed as early as 1960, when the first effective US reconnaissance satellites are assumed to be in orbit, although it is more likely that this Soviet capability would not exist until later in the 1960-64 period. Destruction is likely to be very costly.

20. Even assuming that by 1960 the USSR had developed an effective capability for the physical destruction or damage of US reconnaissance satellites, several considerations might deter the Soviets from using it. The Soviet leaders would weigh the extent to which neutralization methods were effective and the specific technical or military disadvantages of physically destroying US reconnaissance satellites. They would also consider the possibility of embarrassing failures and the further possibility that physical destruction of US reconnaissance satellites could lead to a "space war." Finally, the Soviet leaders might feel that such an act would have an undesirable effect upon their foreign policy tactics.

21. On the other hand, they would probably believe that physical destruction of the reconnaissance satellite might discourage the US from proceeding with a full-scale program. They might also believe, particularly if the US satellite reconnaissance effort became known, that for reasons of prestige, they

ought to make a prompt and effective physical demonstration in reply, if this were at all possible. While specific technical, military, and political considerations not now foreseen might affect Soviet decisions, we believe on balance that the USSR would make maximum efforts to neutralize US reconnaissance satellites. If it believed that its security and prestige had not been adequately safeguarded by neutralization, the USSR would make maximum efforts to destroy these satellites.

22. At the same time, however, the USSR would probably make strong public accusations against the US as soon as it had usable evidence that the US had launched reconnaissance satellites. We believe the Soviet leaders would not limit themselves to press and radio charges but would also bring the issue into the UN. They would readily see the political advantage to be gained by contrasting US public professions of interest in using outer space for peaceful purposes only, and the US secret use of outer space for military purposes.

23. We do not believe that the Soviet leaders would be inhibited from taking such a line because the USSR itself had reconnaissance satellites under development or because they were taking physical measures against the US satellites. They would cite the US program as justification for Soviet counteraction, including neutralization or destruction of US satellites and the launching of reconnaissance satellites of their own.

24. We believe that the USSR would gain a sympathetic hearing of its case. The neutralist nations in particular would be reinforced in their suspicions that the US was more concerned to increase its military strength than to advance the cause of peace and progress. Although governments allied with the US would probably support the US, some of them would do so reluctantly and would encounter considerable public opposition. If the US had consulted with its major allies in advance of launching reconnaissance satellites, allied governments would be less likely to be critical of the US, but they would still have to contend with those who favored

a more conciliatory policy toward the USSR and who would regard the US program as provocative and as tending to increase international tensions.

25. The US action would make it more difficult for allied governments to defend their relations with the US, and it would strengthen the hand of pro-Communists and neutralists everywhere. In general, we doubt that anti-US sentiment and propaganda would be either violent or prolonged. In some quarters there would probably be considerable satisfaction that the US had achieved a technological advance which strengthened the free world position. Nevertheless, there would also be renewed anxiety and disappointment throughout the world because a scientific achievement had again been the occasion for an increase in international tension. This reaction would be more acute if there were Soviet efforts to destroy US satellites and if these efforts became publicly known.

26. We do not believe that the Soviet position in international disarmament negotiations would be significantly affected by the Soviet discovery that the US had acquired a satellite reconnaissance capability, at least until the USSR had tested its own capabilities to frustrate US programs by physical and political means. Even in the event that the Soviet leaders found it impossible to frustrate the program they would probably be reluctant to accept satellite reconnaissance as a form of international inspection. They might agree to cooperative use of satellites with limited reconnaissance capabilities, such as those proposed for monitoring a nuclear test ban, but they would be more likely to seek a complete prohibition of reconnaissance satellites capable of yielding significant information on Soviet military installations and preparations. Failing in this effort to single out such satellites for prohibition, and faced with the existence of a continuing US program, they would seek further ways of inhibiting and retarding it, possibly by pressing for a form of internationalization which because of Soviet participation would substantially reduce its value to the US.



### III. World Reactions if the US Announced Its Satellite Program as a Valuable Addition to Free World Security

27. If, in announcing the launching of its first reconnaissance test vehicles, the US emphasized the potential for developing better warning against surprise attack and noted in particular that after further development the US would be better able to defend itself and its allies, public reaction in the allied countries would probably be more favorable. Probably the most significant difference from the preceding case would be that the stigma of covert action would be removed. There would, of course, be those within allied as well as neutral countries who would regard the US statement as provocative. If the US had consulted with its allies in advance and obtained their agreement, allied governments could with more authority and conviction defend US action against this type of criticism.

28. A formal US announcement would confront the USSR with a direct and immediate problem. The Soviet leaders could not remain silent in the face of what they would regard as a direct challenge. If they had a capability to neutralize or destroy US satellites they would do so; if they did not have such a capability, they would speed up their efforts to acquire one. They would probably estimate that they could not profitably make open threats to destroy US satellites unless they were capable of carrying out such threats promptly.

29. In any case, the USSR would lodge a complaint in the UN and carry on an intensive propaganda campaign against the US reconnaissance satellite program. The USSR would, as in the case of undisclosed US launchings, probably gain considerable support in neutralist countries. Those with strong nationalist feelings would be receptive to Soviet arguments about the violation of national sovereignty by "cosmic spying." Even if the US claimed its satellites were reconnoitering the USSR only, many would doubt that this was true or technically possible.

### IV. World Reaction if the US, in Initiating Its Reconnaissance Satellite Program, Declared Its Intention to Pass to the UN the Information Obtained

30. We assume that, in adopting this course of action, the US would declare its continued support of the principle of utilizing outer space for peaceful purposes only, and its intention to intensify its efforts to reach agreements for restricting the use of outer space to peaceful purposes. In this context, the declared intention to place in UN hands the information obtained by reconnaissance satellites would be intended to demonstrate US desire for agreement. Moreover, in order to emphasize the impartiality of the offer, some satellites actually launched would have to reconnoiter large parts of the world — including the territories of the US and its allies. The US announcement might be made at the time of the first launchings, or it might be announced as a general program well in advance, with the statement that the US would forego its unilateral program if international agreements were reached. We assume that the US would also set a date beyond which, in the first case, it would no longer forward information to the UN, or in the second case no longer forego the unilateral launchings, if no agreements had been reached.

31. A US offer of the type described, particularly if made some time before actual launchings occurred, would produce a more favorable reaction, even in neutral countries, than the previous two cases. The US action would probably be regarded as less provocative and as containing elements of forbearance and good will.

32. Despite a more favorable world reaction, the USSR would probably not accept the US proposal. It would probably make a wide variety of allegations about the US proposal, for example, that the US was trying to bring about an agreement favorable to the US through threats, that the US would not in fact turn over all the information it received, and that the US was "spying" on everybody. Nevertheless, if the US announcement were made well in advance of actual implementation, the

Soviet leaders would probably seize upon this as an opportunity, through prolonging the negotiations, to delay unilateral US launchings. When the US satellites were finally launched, the Soviets would almost certainly denounce the launchings and would probably exercise what capabilities they possessed to neutralize or destroy the satellites.

33. Despite a generally favorable worldwide response, the US might still encounter certain difficulties with some allies and neutrals. For example, the proposal to place the information obtained in the hands of the UN would probably be regarded in some quarters as little more than a subterfuge because of the unilateral control by the US of the release of the material. Some countries which would be pleased to have US satellites reconnoiter the Soviet Bloc would be less pleased to have US satellites reconnoiter their own territories and to have the US then place the information thus obtained in UN hands, where presumably it would be open to all.

34. In sum, although there would be considerable worldwide skepticism, opportunities for Soviet political maneuvering, and some problems with the US allies, the US would fare better in world opinion by making an offer of the type here assumed.

#### V. World Reactions if the US Offered to Cooperate with the USSR and Other Countries in Utilizing Reconnaissance Satellites as Part of a Multilateral Inspection System

35. In this case, the US would offer to cooperate with the USSR and other countries in utilizing reconnaissance satellites as part of a multilateral inspection system on behalf of the UN, for the enforcement of arms limitation agreements. Such a program would probably be more restricted than one which the US could carry out unilaterally. In connection with making such a proposal the US might indicate that it would be unable to postpone indefinitely the unilateral exploitation of its reconnaissance satellite capabilities if no agreement were reached, but that it

would not necessarily set an early deadline for completion of a satisfactory agreement.

36. We believe—and we think the Soviet leaders would similarly estimate—that the world reaction to such a proposal would be generally favorable. In allied and neutralist countries alike, the emphasis upon disarmament and international control would generate a favorable popular and official response. The Soviet leaders would probably realize that the opportunities were greatly reduced for profitably charging the US with “snooping” diplomacy, war-mongering, and militarism. They might conclude that openly to attack the US proposal would hurt them. Their reaction, therefore, would probably be cautious and reserved while they tested the US proposals and measured world-wide reaction to them.

37. It is possible that the Soviet leaders might weigh the consideration that a reconnaissance satellite program by the US was unpreventable and that it would be wiser to go along with it than to fight it. For example, they might feel that it would offer them the opportunity to argue in disarmament talks that a reconnaissance satellite program, as here assumed, was justification for dispensing with the large-scale air and ground inspection systems which the US has heretofore considered essential.

38. However, we believe that a US proposal along the lines assumed here would probably not be accepted by the USSR, even though the rest of the world would react favorably. A prior agreement on the cooperative use of earth satellites for limited purposes, such as monitoring a nuclear test ban, might make it more difficult for the USSR to reject the US proposal completely, but we believe that the Soviets probably would not agree to any comprehensive satellite reconnaissance system which infringed upon the secrecy of their military activities. The Soviet negotiators would probably delay and maneuver in an effort to depict the US proposal as dishonest. They would probably try to attach conditions—such as elimination of foreign bases—which they thought the US would not accept, in order to place upon the US the onus for any

breakdown in negotiations. In any event, they would — as in the preceding case — see vitally important advantages to be derived from retarding the development of an independent US satellite program, and they probably would for that reason seek to prolong any negotiations which took place.

39. Should the negotiations break down and the US then proceed with a unilateral pro-

gram, Free World opinion would probably continue to be favorable to the US for having made a sincere effort to internationalize the reconnaissance satellite program. Despite favorable Free World opinion toward the US efforts to achieve an international program, the Soviet reaction would probably not be essentially different from that under the preceding cases.

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