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25 August 1965

THE PRESENT AND FUTURE ROLE OF CIA

I. General

A. At the outset in long-range planning for the Central Intelligence Agency it is necessary to examine its present and future responsibilities, bearing in mind that while the National Security Act of 1947 which created the Agency describes certain functions for the organization, the evolution of the intelligence community, the changing roles and responsibilities of other departments and agencies and the creation of new agencies have all served to affect the activities of the CIA. It is equally important to CIA's planning that there be clear understanding within the U. S. Government of the Agency's responsibility and authority. It is therefore believed essential that the Agency continue and intensify efforts to brief selected Congressmen and Congressional staff members, taking into account their continuing and special interests and including discussions of CIA's functions and responsibilities in general. Such briefings should also be initiated for the Executive Branch

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of the Government, including particularly such policy groups as the President's Foreign Intelligence Advisory Board. While it is realized that the DCI must carry the principal burden in briefing U. S. Government officials, greater use of second echelon officers of CIA, as feasible, would increase the scope of the Agency's efforts in this area without increasing the Director's already heavy schedule.

II War Planning

A. The role of the CIA in wartime is not fully understood or accepted by the member agencies of the United States Intelligence Board (USIB). In 1957, the National Security Council instructed the Director of Central Intelligence to proceed with the development of war plans for the intelligence community. The Director took the position that it would be necessary first to develop directives governing peacetime arrangements. During the ensuing two years, various National Security Council Intelligence Directives defining foreign intelligence responsibilities of the USIB member agencies were published. In 1959 the Emergency Planning Steering Committee (never formally constituted or recognized by the USIB) initiated a study which was concerned largely with emergency relocation--only one facet of war planning. The Committee ceased to

function when the Board reached an impasse on the intelligence advisory role of the DCI to the President during wartime.

B The CIA Act of 1947 makes no distinction between the peacetime and the wartime roles of the DCI or the Agency. The Act provides all of the authority needed by the Agency for the pursuit of wartime activities. Positive assertion of existing statutory authority in the form of a CIA war plan is needed. Subsequent planning should integrate the wartime roles of the USIB member agencies.

C Paragraph 8 of National Security Council Intelligence Directive 5 and the Command Relationships Agreement (between the DCI and the Secretary of Defense) place the Agency's forces operating in or from an active theatre of war under the command of the Theatre Commander. The Theatre Commander would be under the operational control of the Joint Chiefs of Staff.

D. Relationships between CIA Headquarters and the military command structure in time of war have not been defined. As matters now stand, CIA would tend to lose its forces located in an active theatre of war and would be without any plan of action for the wartime operation of the remainder of the Agency. It is imperative that CIA clarify its mission in war and its relations with the Department of Defense.

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E. The Agency is small in size as compared to the military. Its real worth is based upon qualitative characteristics and a quick reaction capability. Being irregular and unorthodox by nature, its activities and capabilities are understood little by the military. Its field components cannot operate effectively without the resources and guidance of CIA Headquarters.

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III The DCI and Warning

A. As Chairman of USIB, the DCI is the senior intelligence officer concerned with warning. The USIB's formal intelligence warning

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mechanism--the Watch Committee and its staff, the National Indications Center--reports to USIB by the terms of DCID 1/5 and the Chairman of the Watch Committee is designated by the DCI after consultation with USIB We have dealt with early warning in a separate monograph elsewhere in this plan.

IV Intelligence Production

A The Agency's role in the production of intelligence has been quite well established in most areas, both by law and by directive, as being charged with the production of national intelligence. In some areas of intelligence production this is more specifically established than in others, and therefore in planning it is important that it be firmly established in all areas where the Agency must make major commitments. In this regard the National Security Act of 1947 states,

> "(b) for the purpose of coordinating the intelligence activities of the several Government departments and agencies in the interest of national security, it shall be the duty of the Agency, under the direction of the National Security Council--(3) to correlate and evaluate intelligence relating to the national security, and provide for the appropriate dissemination of such intelligence within the Government using where appropriate existing agencies and facilities."

What this says in simplest modern-day terms is that the Agency is charged with producing national intelligence.

B The responsibility for the production of National Intelligence Estimates has been clearly established by common practice over the years and is spelled out in DCID 1/1. This is one of the most important important responsibilities of the Agency and has created for the United States Government a document of incalculable value in which the greatest objectivity of the intelligence system provides the policymaker with the top intelligence viewpoint. Its integrity should be preserved at all costs in the interests of national security, most particularly the responsibility of an independent agency for its production.

C. The responsibility for national current intelligence is less clearly established by directive although it appears that there is a clear understanding with DIA as to the division of responsibilities. In the negotiations conducted in 1962 and 1963 between the Agency and DIA, specifically Messrs Kirkpatrick and Cline for the Agency and [redacted] 25X1 for DIA, a clear understanding was reached that DIA produced departmental current intelligence while CIA produced national current intelligence. However, this has not been inscribed in any directive and this should be done at an early date in order to insure logical

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organizational development both within the Agency and the Department of Defense that will implement the agreement.

D The Foreign Missiles and Space Analysis Center (FMSAC) was established by the DCI as a means of meeting his statutory responsibilities under the National Security Act of 1947 to correlate and intelligence relating to national security and to provide appropriate evaluate/dissemination of such intelligence within the Government. Mr McCone expressed the view that his authority to form such an organization was clear and he felt there was no need for supporting documents--i.e., NSCIDs and DCIDs No additional action is believed necessary at this time.

E The production of national economic intelligence on specified areas of the world was established as a CIA responsibility by letter from General Walter Bedell Smith to Secretary of State Dean Acheson. This was formally delineated in DCID 3/1 which assigns to CIA primary responsibility for the production of economic intelligence on the Communist countries. The DCI in March of this year advised the Secretary of State that he found it necessary to develop within CIA a limited capability for economic analysis on non-Communist countries as

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well. In the fields of military-economic intelligence CIA has also undertaken to supplement intelligence produced elsewhere in order to provide essential contributions to National Intelligence Estimates on military questions and to provide the support required by the Director of Central Intelligence in carrying out his responsibilities to the President. Research relating to the cost and resource impact of foreign military and space programs has been recognized by the Department of Defense as a primary responsibility of CIA. Finally, the coordination of economic intelligence is carried out through the Economic Intelligence Committee, chaired by a representative of the Central Intelligence Agency in accordance with DCID 3/1.

F The responsibility for the production of national basic intelligence as typified by the National Intelligence Surveys is clearly established and is specified in NSCID 3, paragraph 1a, b, c, d, and e. However, there is considerable duplication of effort in the broad area of basic intelligence, since each community organization produces intelligence for different purposes and can clearly establish that their product is not identical with the National Intelligence Surveys and within the

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military area basic intelligence is often produced under contract from non-intelligence components. Basic intelligence research and production is therefore an area in which there is considerable uncontrolled and uncoordinated effort. It is recommended that in planning for the future the entire area of basic intelligence, not just the production of National Intelligence Surveys, be subjected to intensive scrutiny and clearly delineated responsibilities be established in order to insure orderly progress. While this is being done--it may take a matter of years--the CIA should continue to carry the responsibility for the production of the National Intelligence Surveys.

G. Present and future demands on the Director emphasize the importance of completing the Agency's strategic base in research by extending it in political intelligence. This is an area as critical as it is difficult. It is a major challenge, but must be met if intelligence is to match its findings in hostile capabilities with correlative insight into intentions. In recent years the State Department has more and more withdrawn from this field and devoted its limited resources to quick support of policy. The Agency does not have a "charter" for

for political research and does not ask for one. There are gaps here which must be filled in the national interest and CIA means to fill them.

H. Responsibility for the Agency's production of finished intelligence on all foreign scientific and technical activities rests with the Office of Scientific Intelligence under the authority of National Security Council Intelligence Directive 3 and Director of Central Intelligence Directives 3/3 for atomic energy, 3/4 for guided missiles and astronautics, and 3/5 for other scientific and technical intelligence. The pertinent citations in NSCID 3 are contained in paragraph 7c ("the CIA shall produce. . . . scientific and technical intelligence as a service of common concern") and 7d on atomic energy intelligence. DCID 3/3 and 3/4 both state in paragraph 2 that the production of intelligence on the responsibility of all departments and agencies atomic energy and guided missiles and astronautics is/represented on the USIB. Paragraph 2a of DCID 3/5 reiterates paragraph 7c of NSCID 3 that the CIA shall product scientific and technical intelligence as a service of common concern "and as required to fulfill the statutory responsibilities of the DCI." Thus OSI produces intelligence in nearly every phase of foreign military research and development consistent with its manpower capabilities and external research facilities.

V. National Reference Services

A. Over the years CIA has developed certain national intelligence reference services required for independent intelligence production by the Agency in direct support of the DCI, to support assigned intelligence responsibilities and to provide services of common support to the community. Likewise, the simultaneous development of reference services by each of the USIB intelligence organizations would be costly, duplicative, and unnecessary. This is an area where the attention of the DCI is needed in order to reach agreement with the military agencies and the Department of State as to the responsibility for the development and maintenance of national intelligence reference services of common concern. It is also clear that this Agency's ability to cope with its own immediate needs for information handling, much less to move toward a more centralized community effort, will depend heavily, if not entirely, upon the use of automatic data processing techniques. The Agency's future need for automatic data processing is, therefore, given special emphasis later on in this plan.

B The Central Intelligence Agency now has firmly established its responsibility for the maintenance of a national reference service in

the field of biographic intelligence dealing with all foreign personalities outside of the military field. This is an important service and should be maintained. Its charter is DCID 1/9.

C. The CIA also has an established national intelligence reference service responsibility in the field of the acquisition and indexing of foreign documents. This is prescribed in DCID 2/4 and is one one of the better coordinated efforts in the Federal Government.

D While CIA's library and substantive intelligence files are at the present time used more extensively by other agencies than by CIA--and this is as it should be--this is nevertheless one area where centralization and coordination can achieve savings for the intelligence community. With substantive intelligence documents entering the system at a rate in excess of a million a month, it is obviously wasteful for each agency to plan to file the identical documents. On the other hand, each agency obviously has the right to be able to retrieve immediately documents on any subject which it may need. It is therefore important that the DCI insist on the clear delineation of responsibility in the intelligence system for the storage and retrieval of substantive documents.

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VI Intelligence Collection

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B. The Central Intelligence Agency by intent of Congress is responsible for the conduct of Federally directed espionage and counter-espionage on a world-wide basis. This has been directed in NSCID 5 which also provides that the armed services may participate in clandestine operations for departmental purposes provided that their efforts are coordinated with the designated representatives of the DCI. This requires especial attention to the necessity for the security implications of clandestinity.

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19 August 1965

The Present and Future Role of CIA

1. In preparing any long-range plan for the Central Intelligence Agency it is necessary to examine its present and future responsibilities, bearing in mind that the National Security Act of 1947 which created the Agency describes certain functions for the organization, the evolution of the intelligence community, the changing roles and responsibilities of other departments and agencies and the creation of new agencies have all served to affect the activities of the CIA. It is equally important to CIA's planning that there be clear understanding within the U.S. Government of the Agency's responsibility and authority. It is therefore believed essential that the Agency continue and intensify efforts to brief selected Congressmen and Congressional staff members, taking into account their continuing and special interests and including discussions of CIA's functions and responsibilities in general. Such briefings should also be initiated for the Executive Branch of the Government, including particularly such policy groups as the President's Foreign Intelligence Advisory Board. While it is realized that the DCI must carry the principal burden in briefing U.S. Government officials, greater use of second echelon officers of CIA, as feasible, would increase the scope of the Agency's efforts in this area without increasing the Director's already heavy schedule.

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War Planning

2. The role of the CIA in wartime is not fully understood or accepted by the member agencies of the United States Intelligence Board (USIB). In 1957, the National Security Council instructed the Director of Central Intelligence to proceed with the development of war plans for the Intelligence Community. The Director took the position that it would be necessary first to develop directives governing peacetime arrangements. During the ensuing two years, various National Security Council Intelligence Directives defining foreign intelligence responsibilities of the USIB member agencies were published. In 1959 the Emergency Planning Steering Committee (never formally constituted or recognized by the USIB) initiated a study which was concerned largely with emergency relocation -- only one facet of war planning. The Committee ceased to function when the Board reached an impasse on the intelligence advisory role of the DCI to the President during wartime. The CIA Act of 1947 makes no distinction between the peacetime and the wartime roles of the DCI or the Agency. The Act provides all of the authority needed by the Agency for the pursuit of wartime activities. Positive assertion of existing statutory authority in the form of a CIA war plan is needed. Subsequent planning should integrate the wartime roles of the USIB member agencies. Paragraph 8 of National Security Council Intelligence Directive 5 and the Command Relationships Agreement (between the DCI and the Secretary of Defense) place the Agency's forces operating in or from an active theatre of war under the command of the Theatre Commander. The Theatre Commander would be under the operational control of the Joint Chiefs of Staff. Relationships between CIA Headquarters

and the military command structure in time of war have not been defined. As matters now stand, CIA would lose its forces located in an active theatre of war, and would be without any plan of action for the wartime operation of the remainder of the Agency. The Agency is small in size as compared to the military. Its real worth is based upon qualitative characteristics and a quick reaction capability. Being irregular and unorthodox by nature, its activities and capabilities are understood little by the military. Its field components cannot operate effectively without the resources and guidance

25X1 of CIA Headquarters.

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The DCI and Warning

3. As Chairman of USIB, the DCI is the senior intelligence officer concerned with warning. The USIB's formal intelligence warning mechanism -- the Watch Committee and its staff, the National Indications Center -- reports to USIB by the terms of DCID 1/5 and the Chairman of the Watch Committee is designated by the DCI after consultation with USIB.

Intelligence Production

4. The Agency's role in the production of intelligence has been quite well established in most areas, both by law and by directive, as being charged

with the production of national intelligence. In some areas of intelligence production this is more specifically established than in others, and therefore in planning it is important that it be firmly established in all areas where the Agency must make major commitments. In this regard the National Security Act of 1947 states, "(b) for the purpose of coordinating the intelligence activities of the several Government departments and agencies in the interest of national security, it shall be the duty of the Agency, under the direction of the National Security Council -- (3) to correlate and evaluate intelligence relating to the national security, and provide for the appropriate dissemination of such intelligence within the Government using where appropriate existing agencies and facilities."

5. The responsibility for the production of National Intelligence Estimates has been clearly established by common practice over the years and is spelled out in DCID 1/1. This is one of the most important responsibilities of the Agency and has created for the United States Government a document of incalculable value in which the greatest objectivity of the intelligence system provides the policymaker with the top intelligence viewpoint. Its integrity should be preserved at all costs in the interests of national security, most particularly the responsibility of an independent agency for its production.

6. The responsibility for national current intelligence is less clearly established by directive, although it appears that there is a clear understanding with DIA as to the division of responsibilities. In the negotiations conducted in 1962 and 1963 between the Agency and DIA, specifically

Messrs. Kirkpatrick and Cline for the Agency and [redacted] for DIA, a clear understanding was reached that DIA produced departmental current intelligence while CIA produced national current intelligence. However, this has not been inscribed in any directive and this should be done at an early date in order to insure logical organizational development both within the Agency and the Department of Defense.

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7. The production of national economic intelligence on specified areas of the world was established as a CIA responsibility by letter from General Walter Bedell Smith to Secretary of State Dean Acheson. This was formally delineated in DCID 3/1 which assigns to CIA primary responsibility for the production of economic intelligence on the Communist countries. The DCI in March of this year advised the Secretary of State that he found it necessary to develop within CIA a limited capability for economic analysis on non-Communist countries as well. In the fields of military-economic intelligence CIA has also undertaken to supplement intelligence produced elsewhere in order to provide essential contributions to National Intelligence Estimates on military questions and to provide the support required by the Director of Central Intelligence in carrying out his responsibilities to the President. Research relating to the cost and resource impact of foreign military and space programs has been recognized by the Department of Defense as a primary responsibility of CIA. Finally, the coordination of economic intelligence is carried out through the Economic Intelligence Committee, chaired by a representative of the Central Intelligence Agency in accordance with DCID 3/1.

8. The responsibility for the production of basic intelligence as typified by the National Intelligence Surveys is clearly established and is specified in NSCID 3, paragraph 1a, b, c, d, and e. However, there is considerable duplication of effort in the broad area of basic intelligence, since each Community organization produces intelligence for different purposes and can clearly establish that their product is not identical with the National Intelligence Surveys. Basic intelligence research and production is therefore an area in which there is considerable uncontrolled and uncoordinated effort. It is recommended that in planning for the future the entire area of basic intelligence, not just the production of National Intelligence Surveys, be subjected to intensive scrutiny and clearly delineated responsibilities be established in order to insure orderly progress. While this is being done -- it may take a matter of years -- the CIA should continue to carry the responsibility for the production of the National Intelligence Surveys.

National Reference Services

9. Over the years CIA has developed certain national intelligence reference services required for independent intelligence production by the Agency in direct support of the DCI, to support assigned intelligence responsibilities and to provide services of common support to the Community. This has been an expensive area as far as money and manpower is concerned and with the information explosion already upon us will, without proper attention in the near future, consume a very large portion of Agency resources. Likewise, the simultaneous development of reference services by each of the USIB intelligence organizations would be costly, duplicative and unnecessary.

This is an area where the attention of the DCI is needed in order to reach agreement with the military agencies and the Department of State as to the responsibility for the development and maintenance of national intelligence reference services of common concern. It is also clear that this Agency's ability to cope with its own immediate needs for information handling, much less to move toward a more centralized Community effort, will depend heavily, if not entirely, upon the use of automatic data processing techniques. The Agency's future need for automatic data processing is therefore given special emphasis later on in this plan.

10. The Central Intelligence Agency now has firmly established its responsibility for the maintenance of a national reference service in the field of biographic intelligence dealing with all foreign personalities outside of the military field. This is an important service and should be maintained. Its charter is DCID 1/9.

11. The CIA also has an established national intelligence reference service responsibility in the field of the acquisition and indexing of foreign documents. This is prescribed in DCID 2/4.and is one of the better coordinated efforts in the Federal Government.

12. While CIA's library and substantive intelligence files are at the present time used more extensively by other agencies than by CIA -- and this is as it should be -- this is nevertheless one area where centralization and coordination can achieve savings. With substantive intelligence documents entering the system at a rate in excess of a million a month, it is obviously wasteful for each agency to plan to file the identical documents. On the other hand, each agency obviously has the right to be able to retrieve

immediately documents on any subject which it may need. It is therefore important that the DCI insist on the clear delineation of responsibility in the intelligence system for the storage and retrieval of substantive documents.

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Intelligence Collection

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14. The Central Intelligence Agency by intent of Congress is responsible for the conduct of federally directed espionage and counterespionage on a world-wide basis. This has been directed in NSCID 5 which also provides that the services may participate in clandestine operations provided that their efforts are coordinated with the designated representatives of the DCI. This requires especial attention to the necessity for the security implications of clandestinity. It is one of the few Agency activities which has its wartime charter in existence through the command relationship agreement with the Joint Chiefs of Staff, which provides that in times of war or national emergency or when directed by the President, CIA assets in a theatre of war or zone of military operations will be under the direction of the theatre commander.

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A. M., Tuesday, 17 August 65

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ASSUMPTIONS--THE ROLE OF CIA

1. In preparing any long-range plan for the Central Intelligence Agency it is necessary to make certain assumptions as to its future responsibilities. While the National Security Act of 1947 which created the Agency describes certain functions for the organization, the evolution of the intelligence community, the changing roles and responsibilities of other departments and agencies and the creation of new agencies have all served to affect the activities of the CIA. We consider it important as a basis for sound planning that there be clear understanding both within the Agency and within the United States Government, including the Executive Branch and the Congress, to what responsibilities rest with the CIA.

2. In a later section we deal with the subject of emergency and war planning and note the necessity for action in these areas. However, we would stress at this point the necessity for simply establishing an understanding in the Government as to the role of the CIA in the time of national emergency or general war. It is essential that this be clarified before any national emergency or general war creates a situation where national assets can be lost through hasty action in time of stress. The Congress has made no distinction between CIA's role in wartime and that in peacetime. It is therefore assumed that, except where qualified by National Security Council Directives or Presidential orders, the CIA will continue to perform

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the same functions in wartime that it does at present. Except for the command relationship agreement with the Joint Chiefs of Staff, which establishes the role of the CIA clandestine services overseas in the military command structure, and for the few sentences in the National Military Command System paper on the role of CIA, there is no statement of understanding as to what the Agency will do in wartime. Views on this subject range all the way from it becoming a completely subordinate unit to the Pentagon or being phased completely out of existence--both of which are held in Pentagon circles--to the position that its functions and responsibilities would not be materially altered in wartime. These extremes are obviously both impractical and unwise, and therefore we recommend that at the earliest possible moment the Agency take the initiative in preparing and reaching an understanding with the Government on its war role.

Intelligence Production

3. The Agency's role in the production of intelligence has been quite well established in most areas, both by law and by directive, as being charged with the production of national intelligence. In some areas of intelligence production this is more specifically established than in others, and therefore in planning it is important that it be firmly established in all areas where the Agency is planning to make major commitments. In this regard the National Security Act of 1947 states, "(b) for the purpose of coordinating the intelligence activities of the several Government departments and agencies in the interest of national security, it shall be the duty of the Agency, under the direction of the National Security Council--(3) to corollate and evaluate intelligence

relating to the national security, and provide for the appropriate dissemination of such intelligence within the Government using where appropriate existing agencies and facilities:"

4. The responsibility for the production of National Intelligence Estimates has been clearly established by common practice over the years and is spelled out in DCID 1/1. This is one of the most important responsibilities of the Agency and has created for the United States Government a document of incalculable value in which the greatest objectivity of the intelligence system provides the policy maker with the top intelligence viewpoint. Its integrity should be preserved at all costs in the interests of national security, most particularly the responsibility of an independent agency for its production. There is at least some assurance of the prevention of another Pearl Harbor through this vehicle of a coordinated National Intelligence Estimate.

5. The responsibility for national current intelligence is less clearly established by directive, although it appears that there is a clear understanding with DIA as to the division of responsibilities. In the negotiations conducted in 1962 and 1963 between the Agency and DIA, specifically Messrs. Kirkpatrick and Cline for the Agency and [redacted] for DIA, a clear understanding was reached that DIA produced departmental current intelligence while CIA produced national current intelligence. However, this has not been inscribed in any directive and this should be done at an early

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date in order to insure logical organizational development both within the Agency and the Department of Defense.

6. The production of national economic intelligence on specified areas of the world was established as a CIA responsibility by letter from General Walter Bedell Smith to Secretary of State Dean Acheson. This is further delineated in DCID 3/1.

7. The responsibility for the production of basic intelligence as typified by the National Intelligence Surveys is clearly established and is specified in NSCID No. 3, paragraph 1a, b, c, d, and e. However, despite this clear understanding, one of the areas where there is considerable duplication of effort is in the broad area in the production of basic intelligence. This is a difficult region to legislate because each organization produces intelligence for different purposes and can clearly establish that their product is not identical with the National Intelligence Surveys. On the other hand, it is patently clear, and has been for years, that this area of basic intelligence research and production is one in which there is considerable uncontrolled and uncoordinated effort. It is recommended that in planning for the future the entire area of basic intelligence, not just the production of National Intelligence Surveys, be subjected to intensive scrutiny and clearly delineated responsibilities be established in order to insure orderly progress. While this is being done--it may take a matter of years--the CIA should continue to carry the responsibility for the production of the National Intelligence Surveys.

National Reference Services

8. While originally located in the Directorate for Intelligence, and closely related to intelligence production, over the years the Agency has been developing certain national intelligence reference services. This is an expensive area as far as money and manpower is concerned and is one in which there is considerable room for greater coordination and integration. With the information explosion already upon us, it is vital that the U.S. and National Intelligence System agree upon certain services of common concern which can be performed in the reference field. The simultaneous development of reference services by each of the intelligence organizations will be costly, duplicative and unnecessary. This is another area where the attention of the DCI is needed in order to reach agreement with the military intelligence agencies and the Department of State as to the responsibility for the development and maintenance of national intelligence reference services.

9. The Central Intelligence Agency now has firmly established its responsibility for the maintenance of a national reference service in the field of biographic intelligence dealing with all foreign personalities outside of the military field. This is an important service and should be maintained. Its charter is DCID 1/9.

10. The CIA also has an established national intelligence reference service responsibility in the field of the acquisition and indexing of foreign

documents. This is prescribed in DCID 2/4 and is one of the better coordinated efforts in the Federal Government.

11. While CIA's library and substantive intelligence files are at the present time used more extensively by other agencies than by CIA--and this is as it should be--this is nevertheless one area where centralization and coordination can achieve immense savings. With substantive intelligence documents entering the system at a rate in excess of a million a month, it is obviously absurd for each agency to plan to file the identical documents. On the other hand, each agency obviously has the right to be able to retrieve immediately documents on any subject which it may need. It is therefore important that the DCI insist on the clear delineation of responsibility in the intelligence system for the storage and retrieval of substantive documents.

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LONG RANGE PLAN
PRODUCTION OF INTELLIGENCE

SUMMARY

1. The major objectives in CIA's long range plan for the production of intelligence are:

a. To strengthen the capability for assuring 24-hour current and net tactical intelligence;

b. To strengthen the strategic base of research in support of estimates - economic, economic-military, and scientific-technical - and to complete the base by extending it in political research.

These objectives must be realized concurrently.

2. Research and analysis against Communist China must be more than doubled during the next five years, without relaxing effort against the USSR. By request of the Secretary of Defense the Agency's work in military costing must be expanded to include all Communist military establishments, especially the Chinese. It should be noted that the sharp increase against Communist China

25X1 [redacted] will mean a small, relative decrease against the USSR. The effort against

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the Communist power as a whole, however, may increase from 64 to 68% of the total production effort during this period.

3. At the same time, care is necessary to prevent a weakening of capability directed to the instability and disorder which threaten from the underdeveloped countries and regions of the world.

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5. The intelligence required during the period of this plan will be more and more national in character, whether it pertains to localized political turbulence in a less developed or newly emerging nation; to the conflicting interests of great powers in local nationalisms, racism, or populism in the inciting crossfires of revolutionary social and political movements; to the potential for confrontation with Communist China and the USSR; or to

Olympian competitions between the U.S., the USSR, and possibly others such as China.

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DISCUSSION

1. Twenty-four Hour Current Intelligence. From the time of the Korean War, when the Agency operated on a shoe string, sending one or two analysts to the Pentagon each morning to summarize the daily telecon for the President, to the present war in Vietnam, there have been many alarms and crises of widely differing kinds. The Agency knows from experience that it must stay ahead of the changing tempos in the development and progression of enduring crises, and that it must not let new crises and untoward events take our Government by surprise. In serving the President it serves the entire foreign operations of the Government. The degree of the President's involvement in the direction of foreign operations has varied with time, style, and situation. But over the years a rising premium has attached to fast and accurate current intelligence. The current intelligence front has increased in importance, with corresponding demands upon the CIA Watch system.

2. Operations Center and Current Intelligence Strength For the duration of this plan the goal is maximum preparedness for simultaneous crises of all kinds, from obscure and

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multifarious developments in the revolutionary world of the backward, to the actions and reactions of the Communist powers, both in their internal and external policies and their relations to new and old opportunities and contests. The perfecting of means for alert involves not only the ability to concentrate resources for quick response, but also advanced readiness with the strength and quality of analysis required.

a. The Operations Center.

It is an immediate objective to press on to a proper locus in which to concentrate analytical forces on critical situations, one equipped with the best in supporting services and communications, especially served by Clandestine Service reporting with proper protection by the DDP of its operations and sources. The Operations Center must be a nerve center in fact as well as in name.

b. Current Intelligence Strength

At the same time there is the objective of strengthening the analytical roster for current reporting by about 50% during the next five years,

i.e., from a strength of [redacted] This plan will 25X1
and should be subjected to continuous review and re-assessment. As now seen the increase should provide the measure needed to sustain task forces and analytical support of the Operations Center.

3. The planned increase, however, will not man a watch bill such as would be required in general war. To plan now for a full watch bill of analysts would multiply the projected increase by a factor of four. This would mean to plan now for a war-time scale of operations by 1970, without regard to the ambivalence of our position in external affairs. It does not seem advisable to take this full step in planning at this time, although with the possibility clearly in mind, the measurement of on-duty and planned strength against the degrees of war should be a continuing task of a permanent planning group.

4. The expansion of current intelligence should not take place at the expense of or as a surrogate for the completion and the manning of the Agency's strategic base in research.

5. Strategic Base in Research. The next major concern, then, is the strategic base in research. It is not second in time or priority. Research here means research in support of estimates. It seeks painstakingly for the most reliable answers which all of the information will yield to the critical questions of major import to our national security. While the emphasis falls on support of estimates of hostile capabilities and intentions, the research is directly pertinent to the evaluations needed in current intelligence. Without anchorage in the depth of conclusions from relevant research, current intelligence is always in danger of drifting with a tide, imperceptible from one day to the next in the preoccupation with the immediate and the immediately following. Furthermore, the kind of research which constitutes the strategic base must be done within the Government by specialists in their several fields who bring to the peculiarities and sensitivities of classified information a knowledge not only equal to that of their colleagues outside of Government but already shaped by experience to the practical

questions which confront the Administration in its decisions of foreign policy.

6. There is an old controversy in the intelligence community over CIA's role in research. It stemmed from the question of jurisdictional responsibility and authority for estimates. This in turn reflected the thesis that each department preempted the responsibility for research in the field of its own operational authority. In research lay the authority of superior knowledge. Departmental authority for estimates in the field of departmental operations and departmental jurisdiction in research combined against CIA's earliest efforts to do national intelligence.

7. Following the reorganization of 1950-51, CIA was chartered to do research in economic intelligence on the Bloc only, and the charter came as much by default of State as by CIA's insistence on research in an area which was then unknown territory. Research in the Soviet economy had to turn its back on requests for current intelligence in order first to establish base lines and norms. In time, the CIA became authoritative in the field of Soviet economic capabilities and performance.

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8. From this base, by force of circumstance - the Director's need in support of the Department of Defense and the President - the Agency moved into military economics, military costing of the Soviet military establishment, research and development, production of advanced weapons, and the allocation of resources.

9. It is planned to strengthen this base to meet the requirement of the Secretary of Defense for military costing of the Chinese and satellite military establishments. An increase is necessary in any case [redacted] 25X6

25X6 [redacted] - and the anticipated increase in volume of information on Chinese military capabilities, in research and development as well as in production and allocation.

10. In political research the problem is to strengthen the small existing base and build from it to the end of a diagnostic grasp and improved capability for prognosis in the many problems of Communist political capabilities and intentions as they relate to the practical dilemmas of their domestic and foreign policies. The Agency has secured a small base of research in special problems of

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political intelligence: Sino-Soviet relations, Communist doctrine and practice, Chinese policy and leadership. The international base of political research should extend beyond Sino-Soviet relations into the evolving relations of the powers, both Communist and non-Communist,

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11. In terms of dollars and positions relative to other efforts this expansion is not costly. But it will be well to make haste slowly and therefore surely. The analysts who can do the kind of work required must be masters, not journeymen apprentices, and they are hard to find - or hard to spare from other pressing duties.

12. As a unique subcategory, research in support of clandestine operational needs requires emphasis and recognition. It is necessary to bring a variety of specialists together for this effort. Long experience and experimentation point to the conclusion that this kind of support to the clandestine service must be carried out in and by, or under the auspices of the Directorate of Plans because of the considerations of security and the requirement for detailed knowledge of operations.

This is treated especially in the clandestine services section.

13. Balance of Programs. The review of initial projections for the Agency's long-range plan raises a fundamental question about long-range trends in the distribution of positions and funds. In particular, the investment in the corps of analysts seems to diminish relative to that in technical research and development, collection, processing, and support. The identification and investigation of imbalances in our system should be an important part of the work of the permanent planning group.

14. Organization for Production. The present organization is not necessarily the best because it has grown the way it has. It is obviously essential to have functional as well as regional specialists and a strong group of generalists. But there is always the question of the most effective way in which to relate these groups in order to keep flexibility without loss of organization discipline. There is no unchanging answer to the practical question of the right organization, as between geographic and functional, for example. Response to need by task forces

will always be one of our organizational answers, because no rigid alignment will anticipate the overlapping complexities of substantive problems as they change in their particular formulations with events.

15. The question of organization is a vital Agency concern. It should be on the agenda of the permanent planning group. In preparation, it is recommended that the directorates review their organization in being or projected for production, and in collaboration with the permanent planning group submit their review and recommendations to the Director. The review should not be done in haste. It should presuppose the findings of study groups assigned by directorates to review our major substantive problems.

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PG-D-16/3

RECOMMENDATIONS

1. Approve the long range objectives for the production of intelligence:

a. To strengthen the Agency capability for 24-hour current intelligence and the development of the Operations Center in connection therewith;

b. To strengthen the CIA strategic base in research and to extend it in political intelligence; and

c. To increase CIA's analytical strength against Communist China during the next five years in the measure of [redacted] strength. 25X

2. Request the permanent planning group:

a. To assess periodically the on-duty and planned strength against the degree of war existing and estimated (with the assistance of the Board of National Estimates); and

b. To identify and investigate actual and potential imbalances in the distribution of positions and funds in the Agency.

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PG-D-16/2

2D August 1965

PRODUCTION OF INTELLIGENCE RECOMMENDATIONS

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a. To strengthen the Agency capability for 24-hour current intelligence and the development of the Operations Center in connection therewith;

b. To strength the CIA strategic base in research and to extend it in political intelligence; and

c. To increase CIA's analytical strength against Communist China during the next five years

25X1 in the measure of [redacted] strength.

2. Request the permanent planning group:

a. To assess periodically the on-duty and planned strength against the degree of war existing and estimated (with the assistance of the Board of National Estimates); and

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25X1 [redacted]

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[redacted]

PG-D-16/2

b. To identify and investigate actual and potential imbalances in the distribution of positions and funds in the Agency.

25X1 (Note: [redacted] was good enough to provide both recommendations which you have just read and the following two-page summary. It is suggested that the members in examining this paper consider whether both are necessary for discussion when we reach this paper.)

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PG-D-16/2

LONG RANGE PLAN
PRODUCTION OF INTELLIGENCE

SUMMARY

1. The major objectives in CIA's long range plan for the production of intelligence are:

a. To strengthen the capability for assuring 24-hour current and net tactical intelligence;

b. To strengthen the strategic base of research in support of estimates - economic, economic-military, and scientific-technical - and to complete the base by extending it in political research.

These objectives must be realized concurrently.

2. Research and analysis against Communist China must be more than doubled during the next five years, without relaxing effort against the USSR. It should be noted that the sharp increase against Communist China [redacted] will mean a small, relative decrease against the USSR, even though the effort against the Communist power as a whole may increase [redacted] during this period.

3. At the same time, care is necessary to prevent a weakening of capability directed to the instability and disorder which threaten from the underdeveloped countries and regions of the world.

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5. The intelligence required during the period of this plan will be more and more national in character, whether it pertains to localized political turbulence in a less developed or newly emerging nation; to the conflicting interests of great powers in local nationalisms, racism, or populism in the inciting crossfires of revolutionary social and political movements; to the potential for confrontation with Communist China and the USSR; or to Olympian competitions between the U.S., the USSR, and possibly others such as China.

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DISCUSSION

1. Twenty-four Hour Current Intelligence. From the time of the Korean War, when the Agency operated on a shoe string, sending one or two analysts to the Pentagon each morning to summarize the daily telecon for the President, to the present war in Vietnam, there have been many alarms and crises of widely differing kinds. The Agency knows from experience that it must stay ahead of the changing tempos in the development and progression of enduring crises, and that it must not let new crises and untoward events take our Government by surprise. In serving the President it serves the entire foreign operations of the Government, and in a way which makes the question of what is national and what is departmental of academic interest, for all practical purposes. The degree of the President's involvement in the direction of foreign operations has varied with time, style, and situation. But over the years a rising premium has attached to fast and accurate current intelligence. The current intelligence front has increased in importance, with corresponding demands upon the CIA Watch system.

2. Operations Center and Current Intelligence Strength. For the duration of this plan the goal is maximum preparedness for simultaneous crises of all kinds, from obscure and multifarious developments in the revolutionary world of the backward, to the actions and

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reactions of the Communist powers, both in their internal and external policies and their relations to new and old opportunities and contests. The perfecting of means for alert involves not only the ability to concentrate resources for quick response, but also advanced readiness with the strength and quality of analysis required.

a. The Operations Center.

It is an immediate objective to press on to a proper locus in which to concentrate analytical forces on critical situations, one equipped with the best in supporting services and communications. A nerve center in fact as well as in name.

b. Current Intelligence Strength.

At the same time there is the objective of strengthening the analytical roster for current reporting

X1 by [redacted] during the next five years, i.e., from a

25X1 strength of [redacted] This plan will and should be subjected to continuous review and reassessment. As now seen the increase should provide the measure needed to sustain task forces and analytical support of the Operations Center.

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3. The planned increase, however, will not man a watch bill such as would be required in general war. To plan now for a full watch bill of analysts would multiply the projected increase by a factor of four. This would mean to plan now for a war-time scale of operations by 1970, without regard to the ambivalence of our position in external affairs. It does not seem advisable to take this full step in planning at this time, although with the possibility clearly in mind, the measurement of on-duty and planned strength against the degrees of war should be a continuing task of a permanent planning group.

4. The expansion of current intelligence should not take place at the expense of or as a surrogate for the completion and the manning of the Agency's strategic base in research.

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7. Following the reorganization of 1950-51, CIA was chartered to do research in economic intelligence on the Bloc only, and the charter came as much by default of State as by CIA's insistence on research in an area which was then unknown territory. Research in the Soviet economy had to turn its back on requests for current intelligence in order first to establish base lines and norms. In time, the CIA became authoritative in the field of Soviet economic capabilities and performance.

8. From this base, by force of circumstance - the Director's need in support of the President - the Agency moved into military economics, military costing of the Soviet military establishment, research and development, production of advanced weapons, and the allocation of resources.

9. It is planned to strengthen this base to meet the requirement of the Secretary of Defense for military costing of the Chinese and satellite military establishments. An increase is necessary in any case 25X6 [redacted] - and the anticipated increase in volume of information on Chinese military capabilities, in research and development as well as in production and allocation.

10. Present and future demands on the Director emphasize the importance of completing the Agency's strategic base in research by

extending it in political intelligence. This is an area as critical as it is difficult. It is a major challenge, but must be met if intelligence is to match its findings in hostile capabilities with correlative insight into intentions. In recent years the State Department has more and more withdrawn from this field and devoted its limited resources to quick support of policy. The Agency does not have a "charter" for political research and does not ask for one. There are gaps here which must be filled in the national interest and CIA means to fill them.

11. In political research the problem is to strengthen the small existing base and build from it to the end of a diagnostic grasp and improved capability for prognosis in the many problems of Communist political capabilities and intentions as they relate to the practical dilemmas of their domestic and foreign policies. The Agency has secured a small base of research in special problems of political intelligence: Sino-Soviet relations, Communist doctrine and practice, Chinese policy and leadership. The international base of political research should extend beyond Sino-Soviet relations into the evolving relations of the powers, both Communist and non-Communist [redacted] 25X6

25X6 [redacted]

12. In terms of dollars and positions relative to other efforts this expansion is not costly. But it will be well to make haste slowly and

and therefore surely. The analysts who can do the kind of work required must be masters, not journeymen apprentices, and they are hard to find - or hard to spare from other pressing duties.

13. As a unique subcategory, research in support of clandestine operational needs requires emphasis and recognition. It is necessary to bring a variety of specialists together for this effort. Long experience and experimentation point to the conclusion that this kind of support to the clandestine service must be carried out in the Directorate of Plans because of the considerations of security and the requirement for detailed knowledge of operations. This is treated especially in the monograph on DDP.

14. Balance of Programs. The review of initial projections for the Agency's long-range plan raises a fundamental question about long-range trends in the distribution of positions and funds. In particular, the investment in the corps of analysts seems to diminish relative to that in technical research and development, collection, processing and support. The identification and investigation of imbalances in our system should be an important part of the work of the permanent planning group.

15. Organization for Production. The present organization is not necessarily the best because it has grown the way it has. It is obviously essential to have functional as well as regional specialists and a strong

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PG-D-16/1

Long Range Plan

Production of Intelligence

1. The major objectives in CIA's long range plan for the production of intelligence are:

a) to strengthen the capability for assuring 24-hour current and net tactical intelligence;

b) to strengthen the strategic base of research in support of estimates - economic, economic-military, and scientific-technical - and to complete the base by extending it in political research.

These objectives must be realized concurrently.

2. Research and analysis against Communist China must be more than doubled during the next five years, without relaxing effort against the USSR. It should be noted that the sharp increase against Communist China 25X1 [redacted] will mean a small, relative decrease against the USSR, even though the effort against the Communist power as a whole may increase [redacted] 25X1 during this period.

3. At the same time, care is necessary to prevent a weakening of capability directed to the instability and disorder which threaten from the underdeveloped

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countries and regions of the world.

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5. The intelligence required during the period of this plan will be more and more national in character, whether it pertains to localized political turbulence in a less developed or newly emerging nation; to the conflicting interests of great powers in local nationalisms, racism, or populism in the inciting crossfires of revolutionary social and political movements; to the potential for confrontation with Communist China and the USSR; or to Olympian competitions between the US, the USSR, and possibly others such as China.

[redacted] 25

7. Twenty-four Hour Current Intelligence

From the time of the Korean War, when the Agency operated on a shoe string, sending one or two analysts to the Pentagon each morning to summarize the daily telecon for the President, to the present war in Viet Nam, there have been many alarms and crises of widely differing kinds. The Agency knows from experience that it must stay ahead of the changing tempos in the development and progression of enduring crises, and that it must not let new crises and untoward events take our Government by surprise. In serving the President it serves the entire foreign operations of the Government, and in a way which makes the question of what is national and what is departmental of academic interest, for all practical purposes. The degree of the President's involvement in the direction of foreign operations has varied with time, style, and situation. But over the years a rising premium has attached to fast and accurate current intelligence. The current intelligence front has increased in importance, with corresponding demands upon the CIA Watch system.

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8. For the duration of this plan the goal is maximum preparedness for simultaneous crises of all kinds, from obscure and multifarious developments in the revolutionary world of the backward, to the actions and reactions of the Communist powers, both in their internal and external policies and their relations to new and old opportunities and contests. The perfecting of means for alert involves not only the ability to concentrate resources for quick response, but also advanced readiness with the strength and quality of analysis required.

9.

a) The Operations Center.

It is an immediate objective to press on to a proper locus in which to concentrate analytical forces on critical situations, one equipped with the best in supporting services and communications. A nerve center in fact as well as in name.

b) Current intelligence strength.

At the same time there is the objective of strengthening the analytical roster for current reporting by [redacted] during the next five years, i.e. from a strength of [redacted] This plan will

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and should be subjected to continuous review and reassessment. As now seen the increase should provide the measure needed to sustain task forces and analytical support of the Operations Center.

10. The planned increase, however, will not man a watch bill such as would be required in general war. To plan now for a full watch bill of analysts would multiply the projected increase by a factor of four. This would mean to plan now for a war-time scale of operations by 1970, without regard to the ambivalence of our position in external affairs. It does not seem advisable to take this full step in planning at this time, although with the possibility clearly in mind, the measurement of on-duty and planned strength against the degrees of war should be continuing task of a permanent planning group.

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12. The next major concern, then, is the strategic base in research. It is not second in time or priority. Research here means research in support of estimates.

It seeks painstakingly for the most reliable answers which all of the information will yield to the critical questions of major import to our national security. While the emphasis falls on support of estimates of hostile capabilities and intentions, the research is directly pertinent to the evaluations needed in current intelligence. Without anchorage in the depth of conclusions from relevant research, current intelligence is always in danger of drifting with a tide, imperceptible from one day to the next in the preoccupation with the immediate and the immediately following. Furthermore, the kind of research which constitutes the strategic base must be done within the Government by specialists in their several fields who bring to the peculiarities and sensitivities of classified information a knowledge not only equal to that of their colleagues outside of Government but already shaped by experience to the practical questions which confront the Administration in its decisions of foreign policy.

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15. From this base, by force of circumstance - the Director's need in support of the President - the Agency moved into military economics, military costing of the Soviet military establishment, research and development, production of advanced weapons, and the allocation of resources.

16. It is planned to strengthen this base to meet the Secretary of Defense's requirement for military costing of the Chinese and Satellite military establishments. An increase is necessary in any case [redacted] 25X6
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17. Present and future demands on the Director emphasize the importance of completing the Agency's strategic base in research by extending it in political intelligence. This is an area as critical as it is difficult. It is a major challenge, but must be met if intelligence is to match its findings in hostile capabilities with correlative insight into intentions. In recent years the State Department has more and more withdrawn from this field and devoted its limited resources to quick support of policy. The Agency does not have a "charter" for political research and does not ask for one. There are gaps here which must be filled in the national interest and CIA means to fill them.

18. Political research in support of estimates cannot count on increasing volumes of information to provide improved quality. And it cannot count on

breakthroughs into intentions, or on kind of assistance which computers can give to subjects which lend themselves to quantitative measurement and visual data.

19. The Agency has secured a small base in special problems of political intelligence: Sino-Soviet relations, Communist doctrine and practice, Chinese policy and leadership. The problem now is to strengthen this base and build from it to the end of a diagnostic grasp and improved capability for prognosis in the many problems of Communist political capabilities and intentions as they relate to the practical dilemmas of their domestic and foreign policies. The field of specialized research should extend beyond Sino-Soviet relations into the evolving relations of the powers, both Communist and non-Communist [redacted] 25X1

25X6 [redacted]

20. In terms of dollars and positions relative to other efforts this expansion is not costly. But it will be well to make haste slowly and therefore surely. The analysts who can do the kind of work required must be masters, not journeymen apprentices, and they are hard to find - or hard to spare from other pressing duties.

21. As a unique subcategory, research in support of clandestine operational needs requires emphasis and recognition. It is necessary to bring a variety of specialists together for this effort. Long experience and experimentation point to the conclusion that this kind of support to the clandestine service must be carried out in the Directorate of Plans because of the considerations of security and the requirement for detailed knowledge of operations.

22. The review of initial projections for the Agency's long range plan raises a fundamental question about long range trends in the distribution of positions and funds. In particular, the investment in the corps of analysts seems to diminish relative to that in technical research and development, collection, processing and support. The identification and investigation of imbalances in our system should be an important part of the work of the permanent planning group.

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The present organization is not necessarily the best because it has grown the way it has. It is obviously essential to have functional as well as regional specialists

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PG-D-16

12 August 1965

MEMORANDUM FOR: Planning Group

SUBJECT: Twenty-four Hour Current Intelligence

1. The difference between a 24-hour watch and 24 hour current intelligence is one of degree. At one extreme you have a message center and an operator who has instructions to call people according to a list of requirements; at the other extreme, analysts on duty who evaluate information as it comes in, report their findings promptly on matters of critical import and maintain a continuous summary of critical situations. The degree of 24 hour current intelligence, in terms of depth and breadth of regional/functional coverage, depends on

a) the nature and condition of our affairs abroad;

b) the flow of information pertinent to them;

c) the kind of command structure served, (i.e. how directly the command involves itself in the tactical direction of operations); and

d) the number of analysts qualified and trained for quick evaluation.

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2. An illustration of the two extremes may be useful. It is taken from experience during the last great war, when one became an intelligence officer before he could dissociate the term intelligence from academic usage. An intelligence unit at headquarters worked frantically, coming in early and leaving late, but its night watch consisted of one man. Every member of the unit took his turn as watch officer. His function was to keep the office open - for telephone calls, the possible receipt of information, etc. The condition of our affairs abroad was very grim indeed, but the unit had no current information bearing on the particular form and front of warfare to which it was assigned and therefore could not assist the combat intelligence command to which it was subordinated. As soon however as the unit began to receive current information - fortunately it was soon - it converted at once into a 24 hour intelligence "production" watch with the necessary number of officers assigned to it to make up a full complement for each watch. As a point of interest, the command combat intelligence unit (very few officers) did not itself go to a watch bill. These officers rested on the assurance that they would be wakened at any hour of the night when there

was intelligence which could not await the opening of business. And the intelligence officers on watch, in return for agonies of judgment, had the assurance that they would get their own share of sleep - unlike the situation which existed when they were working to obtain current information.

3. One could elaborate at great length on conditions a), b) and c) above as they apply to our present and to the future we anticipate, but it would be unnecessary, at least as far as our Director is concerned. For purposes of contrast, however, one might recall our situation in the Agency during the Korean War. We had no current intelligence watch. But then the President was not in tactical command, and it never occurred to anyone that he should be. As for CIA, at least some were confused about what CIA's role was - until the White House informed the Director that the President wished to have summaries of the situation from CIA. We sent one or two officers to the Pentagon early each morning to read the daily telecon report, which we then summarized and sent to the President.

4. Since the mid-50's our current intelligence has developed toward a 24 hour operation, subject to

the changes in conditions a), b), and c) above and limited by d), the number of analysts. When a), b), and c) came together in a certain combination the limitation of d) had to be overcome, by extending the analysts.

5. If the tempo of events has not accelerated, our Government's reactions have. By now the Agency has probably tried every expedient which could provide 24 hour current intelligence without going to a regular watch bill - SIDO's, every current analyst at one time or another on prolonged duty (overtime), staggered duty hours, task forces to divide the hours, stay behinds, and special forces for early morning duty. And now, to the information about the rising events themselves, has been added information about U.S. tactical operations. We have an Operations Center.

6. As the strategic seriousness of our situations and engagements abroad deepens and as no diminution can be foreseen of extraordinary calls for faster, more continuous and better current and tactical intelligence, there is no sensible way to face the future except to plan now for a regular, instead of an irregular, 24-hour current intelligence service.

7. It is true that what we have experienced and what we foresee are several crises at the same time - of unequal degrees and kinds of seriousness. One can argue that our irregular system is regular enough, and flexible enough, to continue giving us adequate coverage of the things that need to be covered at any hour of need. To begin planning now for a complete 24-hour current intelligence service, net, tactical and all, may seem to accept a premise that we prepare for war. We are at war in Viet Nam, but it is a limited war and it is our policy to keep it limited. To declare a state of national emergency would in itself tend to raise the limit and contribute to a process of escalation. The same might be said in relation to an escalation of current intelligence.

8. The Operations Center plans a capability to handle from 2 to 3 crises simultaneously. But why 2 to 3? Two is Viet Nam plus the Dominican Republic. Three allows for one more. More than that would saturate the system and relegate the surplus to lower orders of priority - if one can always make so clear a distinction between one crisis and another. A crisis may be one

large and long affair evoking, provoking others which it then absorbs and subordinates. Inherent in our present situation in Viet Nam are the continuing preoccupations with reactions and actions in Communist China and the Soviet Union, and with repercussions throughout South East Asia and the rest of the Far East. From an epicenter waves go out, extending far beyond, disturbing areas which previously appeared calm, and agitating others already disturbed. This is not to estimate the progression and outcome of the war in Viet Nam, but it is to say that when tensions rise and concern increases, we must be prepared to keep an accurate and quick account of change - and must not let untoward events take us by surprise, whether they are directly related to the locus of power engagement or not.

9. The degree of 24 hour current intelligence at any given time will be determined by the conditions stated in para. one. The degree may continue to rise, may fall, or may have its ups and downs in between. But the degree should not be determined after the event or events. The purpose of planning is to lead the events. It is a matter for judgment when to shift to a stronger watch - to prevent a crisis from heading

up, if that be possible by action, or, if not, to be geared and ready when it comes.

10. We cannot foresee how many crises, of what kinds and interrelations, we shall face in any coming year. We can say however that a long range plan, as of August 1965, should provide for a current intelligence strength that can cover the world with order and dispatch at all hours - and do so without weakening our strategic base in research.

11. It remains to be said that 24 hour collection and transmission of information, as foretold by research and development, will generate its own pressure toward 24 hour analysis, if the future is at all so tense and turbulent as to warrant the increase in collection. And if warranted, the same improvement in communications will have its own effect on the command center in Washington, which must and will be served.

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PG-D-15/3

PERSONNEL AND TRAINING

I Introduction

A. In the years ahead the Agency must undertake new, diverse, and distinctly more demanding responsibilities if it is to serve adequately the increasingly critical security interests of the U.S. How well it will be able to respond to these challenges depends in large part on how well we manage our human resources. In planning for the future, therefore, the CIA should recognize that its most valuable asset is its trained professional cadre of career personnel. These people provide the cutting edge for everything we do. Evolved over time, and conditioned by exposure to the disciplines and pressures of a demanding environment, they represent a unique body of talent. It behooves us to make certain that we sustain it and conserve it.

II Discussion

A. We can be proud of the cadre of career personnel that conducts the business of this Agency today. As one senior Bureau of the Budget officer recently put it, "the CIA has the largest reservoir of highly trained and competent personnel in the Government." Key elements of this cadre began their professional careers during and after World War II and constitute the "first generation" of CIA personnel. Others of this

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cadre were developed over later years with considerable efforts by top management, the career service boards, and the Office of Personnel and Training. We have been particularly successful in the recruitment of young people for CIA. The establishment in 1951 of a Junior Officer Trainee (JOT) program has assured a regular input of highly qualified junior officers. Many of these young officers have fulfilled their high promise and form an increasingly large percentage of those officers selected for the mid-career training program. This program has been recognized as one of the finest of its type in the U.S. Government. It

25X1 currently produces [redacted] graduates each year as of September 1965. This output should be expanded if we are to meet our needs in the years just ahead. Its program content likewise must be continually reviewed to assess possible changes for improvement.

B. The mid-career program has been used as a vehicle for identifying those with a potential to become senior executives and for providing further training for them. This program has worked well but now needs increased emphasis and closer attention.

C. While at the senior levels the Agency has made creditable attempts to improve its managerial capacities, including executive training programs, this will not suffice for the future. The Agency should therefore plan also for the early creation of an executive career service and a senior training program to sustain it.

D. In order to preserve the top-flight quality of its personnel cadre well into the "second generation" and to assure a vital continuity of leadership, we must, in addition to sustaining a regular input of young officers through the Career Trainee Program (formerly JOT), on which we have largely depended for officer recruitment since 1957, also encourage lateral entry at various levels of specialists and generalists. This practice would provide the new ideas and new blood that the Agency needs. A program of lateral entry cannot be haphazard but must be scheduled on a regular basis with stated goals and objectives. We must also recognize that certain needed disciplines and skills will remain in short supply. We should, for example, train our own photo interpreters if none can be recruited from the market.

E. It must also be recognized that the acquisition of many of the skills that the Agency requires need not involve long-term career employment. This is particularly true of the technical and scientific field where the "state-of-the-art" is moving so quickly and where, after several years, the scientist or technician hired on short-term arrangements by the Agency does well to return to his particular discipline in order to maintain his professional credentials and standing in it. Rather than resist the efforts of persons with rare skills to return to academic or scientific discipline, the Agency should, where appropriate, accommodate it. In those circumstances where the Agency feels its interests are

best served by retaining people with special skills on a long-term career basis who are desirous of remaining loyal to and retaining status in their particular disciplines, then it must take steps in the future to help them to do so. Specifically, the Agency must adopt a more flexible policy than it now has, in which academic sabbaticals, external training, acceptance of grants, and publication of works is not just allowed, but actually encouraged.

F. The Agency, in order to sustain the continued input of high caliber personnel, must plan for a more aggressive recruitment program and make use of the considerable latitude of its authorities to insure that CIA remains competitive in the increasingly tight professional labor market. The Agency should more clearly enunciate the fact that it is its policy to encourage the use of qualified senior personnel from the various directorates to assist directly and on a continuous basis in identifying and recruiting individuals of the same skills and disciplines. Managers of operating components should therefore take greater initiative to provide opportunities for them to do so, underwriting necessary travel and arranging work schedules to accommodate it. We should note most particularly in planning for the future that the Agency's image and reputation will continue to have a very direct effect on the ability to recruit people.

G. We must point out that training in the Agency has not been restricted to formalized courses of instruction. A significant amount of training consists of the in-house on-the-job variety throughout the directorates. This is so because many of the skills required by the Agency are either unique to it or must be developed to respond quickly to new requirements. Much that we have done in this field has been distinctly innovative, has reflected the "can do" philosophy of the Agency, and has spelled the difference between success or failure in many critical areas of our operations.

H. While the Agency has achieved commendable progress in the development of professional personnel, it must plan for an increased emphasis and a broader recognition of the need for it as well as a more systematic approach to professional training, particularly at the mid-career and senior levels. To be successful in this endeavor the Agency must more sharply define its needs. In any event, there should certainly be brought into being some form of rotation in executive positions within directorates and where appropriate between directorates in order to develop professionals with broader bases of experience. Such rotations would open up new perspectives and provide new insights essential to an executive development concept. Extension of rotation to include other departments of the Government, particularly the Departments of Defense, and State, pose significant collateral benefits for CIA.

I. Any executive development concept should include the creation of an executive career service under the immediate aegis of the DCI. This service should be created as soon as possible and should include senior echelons of the Agency, except specialists so uniquely qualified that they can and should be excluded from a general executive program. This executive cadre should have a regular inflow of officers identified as having executive potential. The latter, by assignment to the executive career service, automatically would be assured of opportunities for rotational assignments, executive training, and appropriate consideration for senior executive jobs within their own and other directorates. A senior training program should also include, as it has to a limited degree in the past, exposure to certain of the disciplines found in the Senior Seminar in Foreign Policy of the Foreign Service Institute and in the National War College.

J. We recognize that there are organizational difficulties that would hamper the development of an executive career service particularly as it applies to the concept of rotation but recommend, nonetheless, that immediate attention be given to it. Inherent in any executive career service would be the understanding that training would be more mandatory than permissive and that promotion to certain levels would depend on successful completion of prescribed training.

K. In light of the retirement exodus from the ranks of the present executive group of CIA which will start in just a few years, the Agency must address itself to the challenges of professional-cadre development with a certain sense of urgency. This task lies primarily in the years immediately ahead. It cannot be postponed, or attacked, in a leisurely sequence without risk of serious adverse impact in the decade beyond.

L. Hand-in-hand with the recruitment of qualified personnel and the institution of realistic and well ordered training mechanisms goes the equally important task of selection-out and retirement. The Agency must, beginning immediately, recognize that it cannot maintain a regular input of professionals into the Agency and expect to keep them unless it takes steps to assure the orderly and timely promotions that are inhibited by stagnation at higher levels. There should therefore be a much greater emphasis at all levels of selection-out of individuals who fail to meet standards or who are otherwise inadequate. There should be an efficient and thereby attractive out-placement system for those eligible for retirement or for those who must change their careers. Serious consideration should be given to CIA-sponsored external training to encourage such persons to leave the Agency in a manner beneficial to them and to the Agency.

M. The Agency should, finally, seek authority for the establishment of a training complement. In doing so, it would be following a practice routinely found in the military establishments. Any such complement that CIA possessed at one time has long since been dissipated because of the need to respond to mounting responsibilities and mounting demands on its human resources. The reinstitution of a training complement would assure a slender but vitally important reserve that we do not now enjoy. It would not only assure more orderly and planned training but would also, in effect, create a strength in depth to sustain us as we meet crises that will further strain our resources. These crises and their drain on manpower have inhibited the training and rotation that good management requires.

N. Over the next five years, approximately _____ people over and above current authorized strength, will have to be recruited, trained, and disposed throughout the Agency. Prudence dictates that a large proportion should be acquired early in the period. The training establishment in being must be readied to expend; at the same time, early critical attention must be given to the creation of professional career development mechanisms of the type recommended above if the Agency is to get and keep the skilled careerists that it must have.

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III Recommendations. It is recommended that:

A. The Career Trainee Program be expanded from its

25X1 current annual output of [redacted] to approximately double this figure, beginning immediately.

B. The Director authorize (1) the creation of an Executive Career Service under the aegis of the DCI, which would include a system of rotation, and (2) the inauguration of a senior officer training program geared to the requirements of this service.

C. Lateral entry of persons with wanted skills and disciplines in short supply into the Agency be programmed and given much greater emphasis to provide new blood the Agency needs.

D. The Agency make greater use of its authorities and conduct a more aggressive recruitment program..

E. Selection-out and retirement be given much greater emphasis in the near future and that strong efforts be made to create attractive and efficient out-placement mechanisms to include Agency-sponsored external training.

F. The Agency participate in the development of new methods of instruction (program learning) which give promise of great efficiency and economy in the future, particularly in languate training.

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G. The Agency clarify its language training needs and reorder its training facility to accommodate the increased requirements for training reflected in the Long Range Plan.

H. The Agency seek authority to establish a training complement to assure a slender but vital reserve of manpower without which the career development mission of the Agency cannot be adequately accomplished.

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PG-D-15/2

23 Aug 65

Personnel and Training

1. It is evident that in the years ahead, the Agency must undertake new, diverse, and distinctly more demanding responsibilities if it is to serve adequately the increasingly critical security interests of the U.S. How well it will be able to respond to the challenges of the next five years and the decade beyond depends in large part on how well we manage our human resources. In planning for the future therefore, the CIA should recognize that its most valuable asset is its trained professional cadre of career personnel. These people provide the cutting edge of everything we do. Evolved over time, and conditioned by exposure to the disciplines and pressures of a demanding environment, they represent a unique body of talent. It behooves us to make certain that every effort is made to sustain it and to conserve it.

2. We can be justifiably proud of the cadre of career personnel that conducts the business of this Agency today. As one senior Bureau of the Budget officer recently put it, "the CIA has the largest reservoir of highly-trained and competent personnel in the Government." Key elements of this cadre began their professional careers during and after World War II and constitute the "first generation" of CIA personnel. Others of this cadre were developed over the years with considerable efforts by top management, the career service boards, and the Office of Personnel and Training. We have been particularly successful in the

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recruitment of young people for CIA. The establishment in 1951 of a Junior Officer Trainee (JOT) program has assured a regular input of highly qualified junior officers. Many of these young officers have fulfilled their high promise and form an increasingly large percentage of those officers selected for the mid-career training program. This program has been recognized as one of the finest of its type in the U.S. Government. It currently produces [redacted] graduates each year. 25X1 This output should be expanded if we are to meet our needs in the years just ahead. It's program content likewise must be critically reviewed to assess possible changes for improvement.

3. The mid-career program has been used as a vehicle for identifying those with a potential to become senior executives and for providing further training for them. This program now needs increased emphasis and closer attention. While the Agency has made creditable attempts to improve its managerial capacities, including executive training programs, this will not suffice for the future. The Agency should, therefore, plan also for the early creation of a senior training program.

4. In order to preserve the top-flight quality of its personnel cadre well into the "second generation" and to assure a vital continuity of leadership, we must, in addition to sustaining a regular input of young

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officers through the Career Trainee Program (formerly JOT), on which we have largely depended for officer recruitment since 1957, also encourage lateral entry at various levels of specialists and generalists. This practice would provide the new ideas and new blood that the Agency needs. A program of lateral entry cannot be haphazard but must be scheduled on a regular basis with stated goals and objectives. In this regard, the Agency should create a holding mechanism for professionals in order to avoid the loss of those possessing rare skills while they wait for security clearance. We must also recognize that certain needed disciplines and skills will remain in short supply. We should, for example, train our own photo interpretors, if none can be recruited from the market.

5. The Agency, in order to sustain the continued input of high calibre personnel, must plan for a more aggressive recruitment program and make use of the considerable latitude of its authorities to insure that CIA remains competitive in the increasingly tight professional labor market. Greater use should be made of qualified senior personnel from the various directorates to recruit individuals of the same skills and disciplines. We should note most particularly in planning for the future that the Agency's image and reputation will continue to have a very direct effect on the ability to recruit people.

6. While the Agency has achieved commendable progress in the development of professional personnel, it must plan for an increased

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emphasis and a broader recognition of the need for it as well as a more systematic approach to professional training, particularly at the mid-career and senior levels. To be successful in this endeavor the Agency must more sharply define its needs. In any event, there should certainly be brought into being some form of rotation in executive positions within directorates and where appropriate between directorates in order to develop professionals with broader bases of experience. Such rotations would open up new perspectives and provide new insights essential to an executive development concept. Extension of rotation to include other departments of the Government, particularly the Departments of Defense, and State, pose significant collateral benefits for CIA.

7. Any executive development concept should include the creation of an executive career service under the immediate aegis of the DCI. This service should be created as soon as possible and should include senior echelons of the Agency, except specialists so uniquely qualified that they can and should be excluded from a general executive program. This executive cadre should have a regular inflow of officers identified as having executive potential. The latter, by assignment to the executive career service, automatically would be assured of opportunities for rotational assignments, executive training, and appropriate consideration for senior executive jobs within their own and other directorates.

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A senior training program should also include, as it has to a limited degree in the past, exposure to certain of the disciplines found in the Senior Seminar in Foreign Policy of the Foreign Service Institute and in the National War College.

8. We recognize that there are organizational difficulties that would hamper the development of an executive career service particularly as it applies to the concept of rotation but recommend, nonetheless, that immediate attention be given to it. Inherent in any executive career service would be the understanding that training would be more mandatory than permissive and that promotion to certain levels would depend on successful completion of prescribed training.

9. In light of the retirement exodus from the ranks of the present executive group of CIA which will start in just a few years, the Agency must address itself to the challenges of professional-cadre development with a certain sense of urgency. This task lies primarily in the years immediately ahead. It cannot be postponed, or attacked in a leisurely sequence without risk of serious adverse impact in the decade beyond.

10. Hand-in-hand with the recruitment of qualified personnel and the institution of realistic and well ordered training mechanisms goes the equally important task of selection-out and retirement. The Agency must, beginning immediately, recognize that it cannot maintain a regular

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input of professionals into the Agency and expect to keep them unless it takes steps to assure the orderly and timely promotions that are inhibited by stagnation at higher levels. There should, therefore, be a much greater emphasis at all levels of selection-out of individuals who fail to meet standards or who are otherwise inadequate. There should be an efficient and thereby attractive out-placement system for those eligible for retirement or for those who must change their careers. Serious consideration should be given to CIA-sponsored external training to encourage such persons to leave the Agency in a manner beneficial to them and to the Agency.

11. The Agency should, finally, seek authority for the establishment of a training complement of at least 10-15%. In doing so, it would be following a practice routinely found in the military establishments. Any such complement that CIA possessed at one time has long since been dissipated because of the need to respond to mounting responsibilities and mounting demands on its human resources. The reinstitution of a training complement would assure a slender but vitally important reserve that we do not now enjoy. It would not only assure more orderly and planned training but would also, in effect, create a strength in depth to sustain us as we meet crises that will further strain our resources. These crises and their drain on manpower have inhibited the training and rotation that good management requires.

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12. Over the next five years, approximately _____ people over and above current authorized strength, will have to be recruited, trained, and disposed throughout the Agency. Prudence dictates that a large proportion should be acquired early in the period. The training establishment in being must be readied to expand; early critical attention must be given to the creation of professional career development mechanisms of the type recommended above if the Agency is to get and keep the skilled careerists that it must have.

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17 August 1965

PG-D-15/1

MEMORANDUM FOR: Planning Group

SUBJECT: Personnel and Training

25X1 The attached re-write of the monograph on Personnel and Training was prepared by Mr. Kirkpatrick with the assistance of [redacted]. This paper should be kept with your package of documents for the semi-finals.

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Executive Secretary

Attachment
Subject monograph re-write

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Personnel and Training

1. In planning for the future the Central Intelligence Agency should recognize that its most valuable asset is the trained professional cadre of career personnel. This has been developed over the years with considerable effort on behalf of top management, the career service boards, and the Offices of Personnel and Training. The creation of the Junior Officer Training Program in 1951 resulted in the development by the Agency of a regular input of highly qualified junior officers in a program which has been recognized as the finest of its kind in the U. S. Government, if not in the country but which should be enlarged and made even more responsive to meet the need of the late 60's. As one senior Bureau of the Budget officer recently put it, "The CIA has the largest reservoir of highly trained and competent personnel in the Government." It behooves us to maintain it.

2. In order to maintain this important reputation and to preserve the top-flight quality of its personnel cadre well into the second generation of CIA professionals and to assure a vital continuity of leadership, the CIA must plan for and sustain a regular input of officer personnel, both through the Career Training Program (formerly JOT) and through lateral entry of specialists and generalists at various levels. This cannot be a haphazard program, but must be one which is scheduled on a regular basis and for which there must be stated goals and objectives. To be successful in this endeavor the Agency must define more sharply what it needs for career planning. The latter should certainly include some form of rotation within the Agency in order to develop professionals with broader bases of experience. It should include rotation to other departments--particularly the Departments of State and Defense in which there are significant collateral benefits to CIA--and it should include the creation of an executive career service under the immediate direction of the Director.

3. While the Agency has made creditable attempts to improve its managerial capacities, including executive training programs, it is clear that this will not be enough for the future. An executive career service should be created immediately which would include all of the senior echelons of the Agency except those specialists who are so uniquely qualified in a particular area that they can and should be eliminated from consideration for a general executive program. This executive cadre should include

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all those at office chief level or equivalent and above, and, further, it should have a regular inflow of those individuals who are identified as having executive qualities and who, by assignment to the executive career service, will be assured of rotational assignments, executive training and consideration for senior executive jobs throughout the entire Agency rather than within one Directorate as now is largely the case. We recognize that there will be initial resistance to this concept within the Directorates, but strongly recommend that it be implemented by a command decision at an early date after the Offices of Personnel and Training have developed a plan for its implementation.

4. In order to insure the continued input of high caliber personnel, the Agency should plan for a more aggressive recruitment program, and make use of the considerable latitude of its authorities to insure that CIA remains competitive in the increasingly vigorous professional labor market. Greater use should be made of qualified senior personnel from the various components to recruit individuals of the same skills and disciplines. The Agency should plan to create a holding mechanism for professionals similar to the one already in existence for clericals in order to avoid losing those possessing rare skills while their security clearance is in process. The Agency should recognize that there will be some disciplines and skills which will continue in short supply and therefore it should, for example, plan to develop its own photo interpreters, through internal training programs or develop more economists by extending its use of University resources. The Agency should also plan to increase the rather limited lateral entry at various grades, particularly in the DD/P, which faces a whole spectrum of demands on its personnel resources in order to insure periodic injection of new ideas, new expertise and new blood for the good of the Agency. We would note most particularly in planning for the future that the Agency's image and reputation will continue to have a very direct effect on its ability to recruit people.

5. CIA must plan for increased emphasis on the development of its professional personnel. While it is noted in the opening paragraph of this section that the Agency has achieved an enviable reputation in this field, we believe that in planning for the future there must be a broader recognition of the need and a more systematic approach to professional training, and that it should be more mandatory than permissive. The Career Training Program should be expanded well beyond its present objective of [redacted] new CTs a year. In this connection the Agency should

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seek approval from the appropriate authorities for a training complement of at least 10-15%. In doing so it would be following a practice routinely found in the military establishment. This would not only assure more orderly and planned training, but would also in effect create a strength in depth to sustain us as we meet further crisis situations of the type that have strained our resources and have inhibited the training and the rotation that good management requires but which we have found cannot be accomplished in the absence of an adequate training complement. The Agency should place increased emphasis on the midcareer program as a vehicle for identifying those with the potential to become senior executives and as a basis for initial admission to the executive development program. The Agency should plan also for an early creation of a senior training program which would include exposure to certain of the disciplines found in the Senior Seminar in Foreign Policy of the Foreign Service Institute and in the National War College. There should, in short, be increased and more planned training for executives. Under this concept, it should be understood throughout the Agency that promotion to certain levels will not be forthcoming until certain training programs have been successfully completed by the individual.

6. Finally, in planning its personnel program, the Agency must recognize that it cannot maintain a regular input of qualified individuals and expect to keep them in the Agency unless it also has a planned program for selection out and for retirement in order to prevent stagnation at senior levels which severely limits promotion from within. There should therefore be a much greater emphasis at all levels of selection out of those individuals who fail to meet standards or who are otherwise inadequate. There should be an efficient and thereby attractive out placement for individuals who are qualified for retirement and there should be CIA sponsored training for out placement for them and for other individuals who need to change careers.

7. The Agency must address itself to the challenges of professional cadre development with a certain sense of urgency, particularly in light of the retirement exodus from the ranks of the present executive group which will start in 1972. Not only the dictates of good management require it but the clear need to maintain the vital continuity of our executive leadership require that a concerted, and well ordered emphasis be given to professional career development immediately.

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PERSONNEL/TRAINING MONOGRAPH

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This is a one man paper. Though not all of the ideas are mine, this particular synthesis is - hence there is only one responsible for the ideas expressed.

In the interest of brevity and provocation this is bare-bones, articulated enough to give form to the skeleton, but unfleshed.

I

The Agency cannot expect to remain immune to nor avoid the professional manpower shortage in the country.

The next generation of executives and managers in the Agency will be unprepared for their responsibilities.

The career service system is an excellent management tool but nothing more.

Personnel management policy and personnel training policy are not separable, though organizational separation has been permitted for various historical reasons.

II

The current exercise is the first attempt at Agency-wide long-range planning in the personnel and training area. Out of it must come a system for planning personnel input. We are now planning for the cycle which begins this fall and there are no hard plans for FY '67 to say nothing of the years beyond '67. We must also establish a system - not just a policy - for employee development, with primary emphasis on executive development, but including skills, particularly language. Finally, we need to provide for the casualities of change - those who are technologically or organizationally displaced.

PG-D-15.

III

Even a casual reading of the back of Sunday edition of a metropolitan newspaper is convincing that there is now, today, a professional manpower shortage. The professional help wanted ads can be measured in pounds rather than column inches. Our experience in recruiting - whether it be economists for ORR, photogrammetists for NPIC or astrophysicists for DDS&T - attests to the same fact. (We think we may be running into the same thing even with stenographers!) In the past we did well. We got

pretty well the pick of the pack and in the numbers we needed. This is no longer the case - and not because our image is dulled or because we are not working as hard at it. There aren't enough to go around, and the competition is smarter as well as greater, and; the very developments which sharpen our requirements are sharpening those outside.

I shan't assume a program adjustment for I don't believe we need to cut the pattern to fit the cloth. But we may well have to do with different cloth.

Let me start by positing a training/hiring policy. We should expect a professional whose particular discipline is not unique to CIA to come to us fully prepared professionally, needing only perhaps four to six weeks orientation and indoctrination (miserable words but they do have currency). We should, on the other hand, expect to provide the training - call it vocational if you will - for those areas in which the disciplines are, if not unique to CIA, at least uncommon elsewhere and not taught by the schools of the country. I avoid "colleges and universities" for we are concerned with technical disciplines, too. Lest this lead to too narrow a view, note that the Clandestine Services are not alone in needing skills peculiar only to the Agency. More and more, Communications is finding that the Armed Forces are not training and discharging Communicators with the breadth of skills needed by the Agency. (How convenient that was!) In-house training, wider and longer, must be the answer. I would suggest that the NPIC problem is not merely that the cream has been skimmed from the available sources, but perhaps more likely, that the technological explosion is taking place inside their own shop and that nowhere outside can a man get the training or have the experience to meet fully NPIC's qualifications.

With the distinction between professional and vocational training, the Agency training policy should be to provide, with our own facilities, only that which is peculiar to us and to buy the rest. It would undoubtedly be cheaper, and would not require facilities and staff which are relatively inflexible - incapable of ebbing and flowing with demand. Note from the earlier argument that the need for in-house training may be one of degree - as well as kind.

While we hold to the principle that professionals should come prepared, we must for the near term, accept those with good basic qualifications and foot the bill for the necessary additional academic work, just as we must provide the training in the arcane arts.

This leads me to the Career Training Program which I believe is out of step with the times. With the exception of lateral entries of middle and senior grade professionals, the CTP has become, by agreement, the primary source of professionals. Yet the selection standards are those to be expected were we looking only for potential GS-15's and higher. If this

were to continue we would become a tribe of chiefs and frustrated would-be chiefs. I believe we should be hiring potential 12's, 13's, and 14's as well. The program should be raised in increments to [redacted] a year, emphasis should be on interest, drive and motivation with a minimum requirement of an AB degree. I would not insist that the academic record be unblemished but that there be evidence the applicant had found himself. I would maintain a minimum on ordinary intelligence, though perhaps not as high as at present. We should expect to lose, by their action or ours, a fourth to a third during training or the first couple years. Further, the CTP course for the DDI or DDS&T professional should be the minimum necessary to generate identification with the Agency and make him aware of his role in it -- the four to six weeks mentioned earlier. Those who were to receive operations or support training would be held for the necessarily longer time. 25X1

IV

Most of the present executive group (GS-15/18) were born within the second decade of this century. The average age of all GS-13's is only six years less than the average of all GS-17's. If age is the sole determinant - and it is the primary one - most of the present 15's, 16's and 17's will retire within a single two year period. Granted that averages hide the spread of ages for any grade, but the essential fact is that the next generation of executives will not have had a chance as a group to prepare themselves for their new responsibilities, unless we do something about it, now. The retirement exodus for the present 15's and higher will start in 1972 and be over by 1977. The natural process of evolution and self-selection produced the present executive group, most of whom have held senior positions for ten years and will for another five or ten. But where is the present 44 year old GS-13 (that's the average) going to get his experience? Or will he be the next executive?

When the military services prepare their officer ceiling figures, they allow for training losses. In other words, the total exceeds operating requirements by the number planned for training. The Agency has a device on the books which would permit such an allowance - the Development Complement. For a short time we used it, at least in some components, for that purpose. Soon, though, the allowance was frittered away, and now with working positions matching ceiling, there is no slack and training assignments come out of our hide. I offer no solutions here but believe that more courage than imagination is needed.

V

I have recently become concerned with what I think is a semantic trap we have laid for ourselves. Unhappily, [redacted] was silent when I sought 25X

support for my thought that profession and professional, though of common root, are indeed of quite different meaning. By 'profession', I would mean that particular discipline in which one was formally trained and which he might apply to any of several purposes, while by 'professional' I would mean a high level of skill on a job. Thus a graduate of a law school is by profession a lawyer whether he be an attorney, counselor, solicitor or advocate and whether he has hung out a shingle or works for the Department of Labor. Whether he would be accorded the adjective 'professional' is another matter. My concern is that this confusion has led to confusion of thinking about "Career Service."

The attempt to put economists, computer programmers, astrophysicists, field case officers and nurses under a single tent flying the flag "career service" and thereby, in some miraculous fashion, give them a common identity is to deny the substance of their chosen disciplines. This is not to deny that they all take pride in applying their various skills to the Agency's task and intend to make a career of their CIA employment. Grouping people by like functions (Career Services) for the purpose of management makes good sense. In fact, other Agencies think so well of the idea that they have come to us for help in setting up similar systems. The principle is particularly effective in the Support services where so many serve in other components. But I suggest that the lengths to which we have attempted to push the idea of Career Service - that is, to the point of a single all-encompassing, all-purpose profession - has created management problems and that the sooner we back-off, the better. We are in fact but a collection of many professions all trying to be 'pros' in the practice of intelligence.

VI

My last point - that of the inseparability of the management of personnel and the training of personnel - has by now been established if you accept my earlier arguments. Whether a marriage of the two organizations is necessary, possible or wise may be moot but there can be no question that a singleness of policy and execution is essential. The policy must be Agency policy, derived from informed planning, understood, accepted and defended by the total command structure.

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PG-D-13/3
26 August 1965

CENTRAL INTELLIGENCE AGENCY SCIENTIFIC RESEARCH

I. Mission-Oriented Research. "Mission-oriented" means to carry out research efforts along functional lines rather than by organization or discipline. Research on the process of human perception [redacted] though basic in nature, provides the building blocks for development of systems to support the National Photographic Interpretation Center, DD/P, and other groups and in this sense is mission oriented. [redacted] 25X1

II. In-House Research. The most difficult part of research is proper identification of the problem. Government, industry, and university research groups cannot provide us with the kind of assistance we need until we are prepared to study in depth the nature of our problems and assist in the translation of these problems into technically feasible solutions. This will undoubtedly require some in-house research but should not imply the establishment of a number of laboratories or indeed any laboratories until it is abundantly clear that it is necessary and that it will be necessary for many years (see ADP and

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Analysis monograph).

III. External Research. The keystone of our research philosophy should be that we use the resources of other federal agencies, industries, and universities and that we "piggyback" on their research to the greatest extent possible. To this end we have devoted a major part of our time for the purpose of establishing a network which connects us with national research and development. This includes access to Department of Defense, Defense Documentation Center, Scientific Information Exchange, National Institutes of Health, National Science Foundation, Atomic Energy Commission, and other government research programs. The products of this network include research, reports, and periodic meetings with key research and development personnel. The university research community [redacted] and the various scientific advisory committees throughout the government. There are hundreds of leading scientists in the university environment who are in direct and often frequent contact with us. Expanded contacts with industrial research groups are at an early stage but are accelerating rapidly as industry becomes increasingly aware of the Agency's research and development mission. Security restrictions in some cases prevent us from disseminating requests for proposals in the usual sense, but we have asked industrial organizations to submit informal ideas to us for con-

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sideration and discussion before the submission of formal proposals. This has led to many fruitful discussions with industrial research groups without the necessity of their spending large sums of money for proposals which might not be of interest to this Agency. This is not to say that our contacts should not be broader nor is it to suggest that we have our fingers on all research under way in the United States. It should be pointed out, however, that a certain degree of discrimination is necessary as in other fields and that it is possible to select and maintain contact with key individuals in a given field who, in turn, can guide and direct us to the appropriate research activities in their general area of knowledge.

IV. Research Versus Development. This Agency, like Department of Defense, National Aeronautics and Space Administration, and others, tends to lump research and development together. In most cases the funds for development far outweigh those for research. There is a distinct danger that the pressures to produce quick solutions to complex problems lead to the impoverishment of research. It is often accompanied by a reluctance to terminate a development program (Russian proverb: "The better is the enemy of the good."). This Agency must establish and protect a small percentage of its budget for research which is not to be diverted to the day-to-day

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technical requirements.

At this time very little research is being supported by this Agency, probably well under 1 per cent of the total operating budget of the Agency. Indeed the present budget breakdown by programs and projects does not distinguish between research and development currently under way in such organizations as the Office of Communications, Office of ELINT, Office of Research and Development, National Photographic Interpretation Center, and Technical Services Division of DD/P. The time has come when the Agency must focus attention in a more organized way on those key research problems necessary for the achievement of the Agency's objectives.

Recommendation. Budget submissions and records must identify funds allocated to research as distinct from development.

V. Key Areas for Research. A few of the critical areas for research in behalf of the Agency's objectives have been identified.

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VI. Control of Research. Research by its nature requires

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long term support and continuity and should be undertaken only in high priority areas where results are applicable to several components of the Agency. Research funds should be budgeted for and allocated centrally within the Agency to ensure that research programs are viable, coordinated, not competitive, and are responsive. Research funds may be allocated to those components best able to carry out the programs.

Recommendation. Research funds should be budgeted and allocated centrally.

VII. Level of Research. Experience in private industry and government indicates that 3 to 5 per cent of the operating budget is a reasonable investment for research. The Agency's lack of experience or criteria necessary to determine the level of research dictates that our research program be re-examined frequently in the light of future needs as well as results of research undertaken by other government and private organizations.

Recommendation. The Agency should [redacted] per cent of its operating budget for scientific research in areas critical to the accomplishment of Agency objectives. The level of research effort should be re-examined at frequent intervals.

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AGENCY RESEARCH

Summary

Agency research must be mission oriented. Both in funding, organization, and definition it must be insulated from development even though the separation will not in all cases be clean and exceptions may be necessary as in the instance of sensors for overhead reconnaissance (see monograph on overhead reconnaissance). ORD should be responsible for the control of research funds to insure that the programs are viable, coordinated, not competitive, and yet are responsive to the highest priority problems in support of the DCI. This does not mean that all research will be carried out by ORD since case by case it may be necessary to allocate funds to other offices. The funds now assigned

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Discussion

Mission Oriented Research. Research on the process of human perception of a visual image or auditory signal, although basic in nature, provides the building blocks for development of systems to support NPIC, DD/P, and other groups. In this sense, it is mission oriented. [redacted] 25X

[redacted] 25X

Research Versus Development. This Agency, like DOD, NASA, and others, tends to lump research and development together. In most cases the funds for development far outweigh those for research. There is a distinct danger that the pressures to produce quick solutions to complex problems lead to the impoverishment of research. It is often accompanied by a reluctance to terminate a development program (Russian proverb: "The better is the enemy of the good."). This Agency must establish and protect a small percentage of its budget for research which is not to be diverted to the day-to-day technical requirements.

At this time, there is very little research undertaken by the Agency, perhaps as little as .7 per cent of the total

operating budget for the Agency. That which is being done is scattered through ORD, OEL, NPIC, Commo, and TSD. To identify projects which are research would be difficult indeed since the exigencies of budget presentation often dictate that we provide a "cover story" for research in order to make it appear as development with a high priority. The time has come when the Agency must focus on a few key research problems as, for example, those indicated in the following paragraph.

Key Areas for Research. There are a number of critical areas for research which can be identified. [redacted] 25X

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Control of Research. Research by its nature requires long term support and continuity. Research should be undertaken only in high priority areas where results are applicable to many parts of the Agency. For these reasons, research funds should be centralized in one organization within the Agency to be allocated for the solution of problems of common interest

by those best able to carry it out.

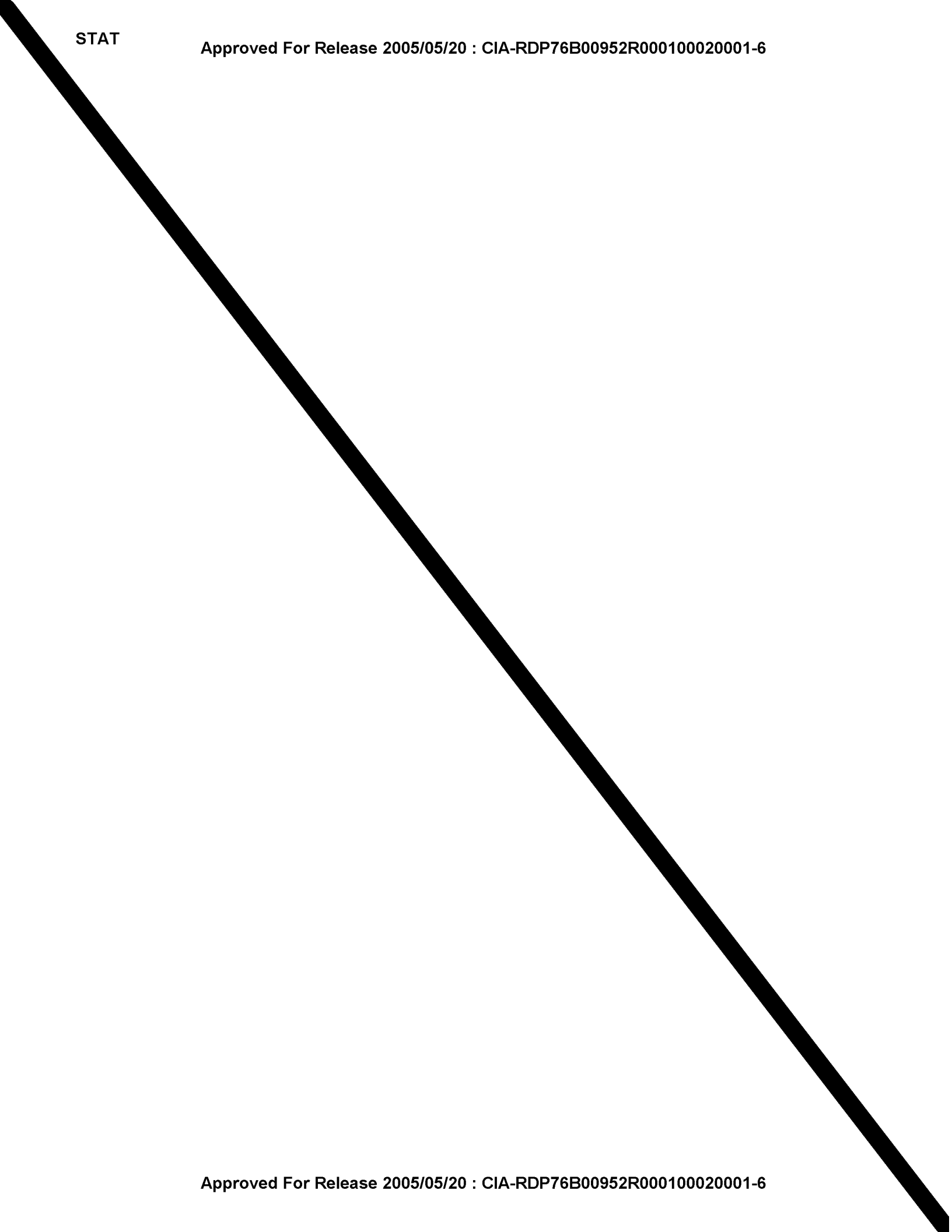
Level of Research. A proposal that three to five per cent of the operating budget be set aside for research seems to be a reasonable one but should be re-examined frequently in the light of future needs within the Agency and results of research undertaken by other government and private organizations.

In-House Research. The most difficult part of research is proper identification of the problem. Government, industry, and university research groups cannot provide us with the kind of assistance we need until we are prepared to study in depth the nature of our problems and assist in the translation of these problems into technically feasible solutions. This will undoubtedly require some in-house research but should not imply the establishment of a number of laboratories or indeed any laboratories until it is abundantly clear that it is necessary and that it will be necessary for many years. (See ADP and Analysis monograph).

External Contracts. The cornerstone of our research philosophy should be that we use the resources of other federal agencies, industries, and universities and that we "piggyback" on their research to the greatest extent possible. To this end we have devoted perhaps 50 per cent of our time for the

purpose of establishing a network which connects us with national research and development. This includes complete access to DOD, DDC, SIE, NIH, NSF, AEC, and other government research programs. The product of the network includes not only research reports but periodic meetings with key research and development personnel. The university community [redacted] 25X1 [redacted] and the 25X various scientific advisory committees throughout the government. There are hundreds of leading scientists in the university environment who are in direct and often frequent contact with us. Expanded contacts with industrial research groups is at an early stage but is accelerating rapidly as industry becomes increasingly aware of the Agency's research and development mission. Security restrictions prevent us from disseminating requests for proposals in the usual sense, but we have asked industrial organizations to submit informal ideas to us for consideration and discussion before the submission of formal proposals. This has led to many fruitful discussions with industrial research groups without the necessity of their spending large sums of money for proposals which might not be of interest to this Agency. This is not to say that our contacts should not be even broader nor is it to suggest that we have our fingers on every piece of research

under way in the United States. It should be pointed out, however, that a certain degree of discrimination is necessary as in other fields and that it is possible to select and maintain contact with relatively few individuals in a given field who, in turn, can guide and direct us to the appropriate research activities in their general area of knowledge.



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17. L. B. Thomas and E. B... *Phys.* 23, 868 (1955); also a recent private communication.
18. E. W. Müller, S. Nakamura, S. B. McLane, *J. Appl. Phys.*, in press.
19. B. J. Waclawski and E. W. Müller, *ibid.* **32**, 1472 (1961).
20. D. G. Brandon, S. Ranganathan, D. S. Whitmell, *Brit. J. Appl. Phys.* **15**, 55 (1964).
21. M. von Ardenne, *Tabellen der Elektronenphysik I* (Deutscher Verlag, Berlin, 1956), p. 581.
22. D. G. Brandon, private communication.
23. S. B. McLane, E. W. Müller, O. Nishikawa, *Rev. Sci. Instr.* **35**, 1297 (1964).
24. S. Nakamura and E. W. Müller, *J. Appl. Phys.*, in press.
25. E. W. Müller, in *Structure and Properties of Thin Films*, C. A. Neugebauer, J. D. Newkirk, ... 1959), p. 476.
26. J. F. Mulson and E. W. Müller, *J. Chem. Phys.* **38**, 2615 (1963).
27. G. Ehrlich and F. G. Hudda, *ibid.* **36**, 3233 (1962).
28. G. Ehrlich, *Advan. Catalysis* **14**, 255 (1963).
29. ——— and F. G. Hudda, *Phil. Mag.* **8**, 1587 (1963).
30. E. W. Müller, *Z. Physik* **156**, 399 (1959).
31. ———, *Proc. Intern. Symp. Reactivity Solids, 4th, Amsterdam, 1960* (1961), p. 682.
32. ———, "Proc. Intern. Conf. Crystal Lattice Defects, Kyoto 1962," *J. Phys. Soc. Japan* **18**, suppl. II, 1 (1963).
33. D. G. Brandon, M. Wald, M. J. Southon, B. Ralph, *ibid.*, p. 324.
34. M. K. Sinha and E. W. Müller, *J. Appl. Phys.* **35**, 1256 (1964).
35. ... *N.Y. Acad. Sci.* **101**, [redacted] (1963); D. G. Brandon, B. Ralph, S. Ranganathan, M. S. Wald, *Acta Met.* **12**, 813 (1964).
36. E. W. Müller, *Acta Met.* **6**, 620 (1958).
37. ———, W. T. Pimbley, J. F. Mulson, in *Internal Stresses and Fatigue in Metals*, Rassweiler and Grube, Eds. (Elsevier, Amsterdam, 1959), p. 189.
38. S. S. Brenner, *Surface Sci.* **2**, 496 (1964).
39. E. W. Müller, *Bull. Am. Phys. Soc.* **7**, 27 (1962).
40. B. Ralph and D. G. Brandon, *Phil. Mag.* **8**, 919 (1963).
41. ———, *Proc. European Regional Conf. Electron Microscopy, 3rd, Prague, 1964* (1964), vol. 1.
42. The instrument is handled by the Central Scientific Company, Chicago 13, Ill.

But Is the Teacher Also a Citizen?

Alvin M. Weinberg

My subject is the connection between the university, particularly the scientific university, and society. Insofar as this connection affects the university's interests and its manner and style of teaching, I am concerned with the question, "But is the teacher also a citizen?" The tensions and contradictions I see in the relation between the modern scientific university and society are much the same as those described by others, but I describe them in a slightly different language, a language that comes from my own nonuniversity world.

Perhaps I should explain what this language is. I come from a large government laboratory. The laboratory is organized into 16 scientific divisions, each of which is concerned with a particular scientific discipline—that is, each is "discipline-oriented." But the primary purpose of the laboratory is to accomplish applied missions—desalting the sea economically, or providing an inexhaustible, cheap, energy source, or alleviating radiation disease. The laboratory as a whole is "mission-oriented." Thus our laboratory, like so many other institutions, has a dual structure—organizationally it is "discipline-oriented"; functionally it is "mission-oriented." To accomplish each mission we establish projects which cross divisional, disciplinary lines. A large project can involve a dozen divisions. This "mission-discipline duality" is evident in many social structures, not only in large laboratories. I see the relations between the university and society in terms of this duality.

The author is director of Oak Ridge National Laboratory, Oak Ridge, Tennessee. This article is based on a paper presented at the session "Whither the university?" of the Purdue University Symposium on Science and Public Policy, 14 April 1965, and as one of a series of lectures on College Teaching as a Career, [...], 15 April 1965.

The Mission-Discipline Duality

Our society is "mission-oriented." Its mission is resolution of problems arising from social, technical, and psychological conflicts and pressures. Since these problems are not generated within any single intellectual discipline, their resolution is not to be found within a single discipline. Society's standards of achievement are set pragmatically: what works is excellent, whether or not it falls into a neatly classified discipline. In society the nonspecialist and synthesizer is king.

The university, by contrast, is "discipline-oriented." Its viewpoint is the sum of the viewpoints of the separate, traditional disciplines that constitute it. The problems it deals with are, by and large, problems generated and solved within the disciplines themselves. Its standards of excellence are set by and within the disciplines. What deepens our understanding of a discipline is excellent. In the university the specialist and analyst is king.

The structure of the discipline-oriented university and the structure of the mission-oriented society tend to be incongruent. Moreover, as the disciplines making up the university become more complex and elaborate in response to their own internal logic, the discrepancy between the university and society grows. The university becomes more remote; its connection with society weakens; ultimately it could become irrelevant. The growth of this discrepancy appears to me to be a central problem in the relation between the university and society. It poses major difficulties for the university professor, especially in the natural sciences, who views his responsibility as a citizen broadly.

Harvey Brooks, dean of engineering and applied physics at Harvard University, put the matter with his usual incisiveness (*1*):

> The . . . issue is the relationship between science and technology in education. The original concept of an engineering school, as of a medical school, was an association of practitioners who used the benefit of their varied experience to teach young people. This tradition is somewhat maintained to this day in the field of architecture, but in both medicine and engineering the importance of the underlying sciences has become so great that medical and engineering faculties are increasingly populated with basic scientists who do research or teaching in sciences which are relevant to but by no means identical with the practice of medicine or engineering. The old form of teaching primarily [...] engineers was found wanting because practical knowl-

edge was too rapidly being made obsolete by new scientific developments which could not be fully absorbed or appreciated by the mature practitioner. Yet in the process something of the spirit and attitude of the skilled practitioner was lost, particularly *his willingness to deal with problems whole rather than in terms of the individual contributing disciplines.* . . . In medicine this problem has been partially met by the teaching hospital, but in engineering the analog of the teaching hospital is the big engineering development laboratory in industry. How, then, is the spirit of applied science and engineering to be retained in engineering education? The intellectual foundations of engineering lie increasingly in the basic sciences; inevitably engineering faculties will contain large numbers of people whose way of thinking is more akin to that of the scientist than the engineer. It is these people who will develop many of the techniques which will be used by the engineer of the future. And it is their knowledge, not that of the current engineer, which the student will be using ten years from now. The reconciliation of these two necessary attitudes of mind in the process of engineering education is the central dilemma of the field today.

The Trend toward Purity

Though Brooks's critique is directed mainly at the engineering school, what he says has wider relevance. The university's disciplinary viewpoint and even organization create many points of tension between the university and the society in which it is embedded.

One is the tendency toward increasing purity, especially in the sciences and most notably in mathematics. I would measure "purity" of a branch of science by the degree to which the phenomena studied are of intrinsic interest to that science or are of extrinsic interest. In the first instance the science is more pure; in the second, where the motivation is to understand phenomena which lie outside the branch, the science is less pure. Thus I would divide science into "pure" or intrinsically motivated, and "applied" or, more broadly, extrinsically motivated. For example, applied science (in the usual sense of the term) seeks to clarify some aspect of, say, engineering or medicine: we study the chemistry of molten fluorides at Oak Ridge because we wish to build a reactor that uses molten fluorides; or we study certain viruses because these viruses are implicated in certain kinds of leukemia.

Extrinsically motivated science also includes those sciences that are pursued in order to deepen our understanding of some other branch of even pure science. For example, those parts of nuclear physics that are studied primarily to elucidate the origin of the elements rather than the structure of the nucleus would, in my usage, be termed "extrinsically motivated." On the other hand, the study of elementary particles, originally motivated by our desire to understand the nuclear force, now develops with a logic and urgency of its own dictated by the intrinsic interest and beauty of the phenomena occurring at very high energy. I would therefore call elementary particle physics "pure." Of course it is in the nature of "pure" science that the light it eventually will shed on other branches of science or technology is to some degree unpredictable; yet at any given time I believe one can often make a judgment of relevance on the basis of the motivation of those practicing the science. Thus, many nuclear physicists who measure capture cross sections make no bones about their primary motivation—it is to help the astrophysicist understand stellar nucleosynthesis better, rather than to help themselves understand the nucleus better.

At its inception nearly every science is extrinsically motivated—that is, it seeks to explain questions that were originally part of some other branch of human interest, usually, though by no means always, some practical matter. Mathematics originated because men had to measure, weigh, and count to maintain an organized economic system. The study of thermodynamics started from Carnot's interest in steam engines. Pasteur's science of bacteriology began when he tried to prevent French beer and wine manufacturers' products from turning sour. Group theory was invented by Galois as a means of studying the properties of algebraic equations. So to speak, nearly every "pure" science starts as an "applied," or at least as an extrinsically motivated, science.

And, indeed, in previous generations the distinction between pure and applied science was less pronounced than it is today. The three greatest pure mathematicians—Archimedes, Newton, and Gauss—were also great applied mathematicians; to these one can add the three greatest pure mathematicians of the 20th century—Poincaré, Hilbert, and von Neumann—each of whom was also a great applied mathematician. Pasteur, the founder of bacteriology, was an applied scientist. Lord Kelvin was equally at home in applied and basic physics. Similarly, the distinction between theoretical and experimental science was much less sharp two generations ago than it is now. Maxwell did experiments as well as construct theories.

But daughter sciences, once they bud off the stalk of the parent science, acquire a separate existence, grow, and luxuriate. In the process these offspring generally become purer and narrower. The parent stalk had closer roots in the original questions posed by some urgent need: in chemistry, the need to extract metals, or to find the elixir of life; in mechanics, to build more accurate missiles; in astronomy, to predict the seasons. But, today, many pressures compel the daughter science to become purer, especially when the science is pursued within the university.

To understand how this comes about, I remind you that every scientist or, for that matter, any intellectual creator, in plying his trade, tries to choose for himself problems that are both soluble and important. The importance of a problem is judged, by the scientist, by the breadth of added understanding its solution affords. The discovery of the second law of thermodynamics was important because it organized so many otherwise disjointed elements of physics and chemistry. Its discovery was much more important than, say, the discovery that light reflected at the Brewster angle is completely polarized, since the latter discovery affects a much narrower segment of related science or technology. The "important" questions often tend to be posed as much from without as from within a given narrow field of inquiry. The solution of an "important" problem tends to reinforce the relation between a scientific discipline and the disciplines to which it is related. In this sense, the "important" questions are broad—they tend to be extrinsically motivated.

Unfortunately, the "important" questions are often the most intractable ones, and therefore most of science is concerned with "soluble" problems, not "important" problems. We do not know how to create a controlled thermonuclear plasma; we therefore study aspects of plasmas that are tractable rather than necessarily relevant in the hope that our added general knowledge will eventually help us make progress toward the goal of controlled

fusion. But in the process the science of plasma physics becomes "purer." So, in general, the strategy of pure science is always to deal with soluble problems which, by their nature, tend to be narrow in impact. The "important" problems are skirted until enough soluble problems have been solved to permit a successful attack on the important problems.

The social structure and purpose of the university accentuate the pressure toward purity. For the university's purpose is not to solve problems that are set from outside a discipline. The university is not mission-oriented. Its purpose is to create and encourage the intellectual life per se. If a scientific discipline sets off on an independent course, separate from its original applied parent, it tends, in the university, toward greater purity and remoteness simply because there are few countervailing pressures there. In the university it is improper to ask of the scientist, "What is the relevance of what you are doing to the rest of the world or even to the rest of science?" The acceptable question is "What do your scientific peers, who view your work with the same intellectual prejudices as you, think of your work?"

The process leading toward greater purity and remoteness was described with exquisite perception by John von Neumann, though it had been discussed previously by David Hilbert (*2*). Speaking of the development of mathematics, von Neumann put it (*3*):

> As a mathematical discipline travels from its empirical source, or still more, if it is a second and third generation only indirectly inspired from 'reality' it is beset with very grave dangers. It becomes more and more pure aestheticizing, more and more purely *l'art pour l'art*. This need not be bad if the field is surrounded by correlated subjects, which still have closer empirical connections, or if the discipline is under the influence of men with exceptionally well-developed taste. But there is a grave danger that the subject will develop along the line of least resistance, that the stream so far from its source will separate into a multitude of insignificant branches, and that the discipline will become a disorganized mass of details and complexities. In other words, at a great distance from its empirical source, or after much abstract inbreeding, a mathematical subject is in danger of degeneration. At the inception the style is usually classical; when it shows signs of becoming baroque, then the danger signal is up. . . . whenever this stage is reached, the only remedy seems to me to be the rejuvenating return to the source: the reinjection of more or less directly empirical ideas. I am convinced that this was a necessary condition to conserve the freshness and vitality of the subject and that this will remain equally true in the future.

Von Neumann's plea for greater unity in the mathematical sciences has been taken up by others, notably Mark Kac and Richard Courant, who see grave danger in the trend toward superpurity, abstractness, and remoteness. Kac speaks of the professional purist in mathematics; Courant speaks of the "isolation that threatens every pursuit of science—certainly very much the pursuit of mathematics—this isolation can be very stifling." The trend toward isolation that has marked modern mathematics seems to me to have invaded the empirical sciences, and possibly even the social sciences, and for the same reasons. For example, the nuclear structure physicist today concerns himself with subtler, more delicate questions about nuclear structure than he did 20 years ago. And just because the questions are subtler, and more detailed, they tend to have less relevance to the fields of science and technology that surround nuclear structure physics. The language of the nuclear structure physicist becomes more sophisticated, his techniques more specialized. His ability to communicate with his colleagues in surrounding fields becomes impaired; and, insofar as what he studies becomes of less relevance to the fields in which his own field is embedded, his own field becomes purer.

The Denial of Science as Codifier

The other major danger I see in the development of science in the university is the tendency to downgrade science's role as codifier of human knowledge. Science traditionally has two aspects: it is on the one hand a technique for acquiring new knowledge; it is on the other hand a means for organizing and codifying existing knowledge, and therefore a tool for application. Both aspects of science are valid. The discovery of SU_3 symmetry does not in the slightest detract from the importance of the second law of thermodynamics. This law, with its enormous power as an organizing principle for much of existing chemistry, though discovered more than a century ago, is as much "science" as the *search* for new unitary symmetries.

The modern university tends to emphasize science as search at the expense of science as codification, and for many of the same reasons it drives science toward fragmentation and purity. The codified parts of science are often most useful in the neighboring sciences, not in the science in which the codification originally took place. X-ray crystal analysis sprang up in physics; most x-ray crystallographers nowadays work as chemists, metallurgists, or even biologists. Thus the university's disciplinarity, its tendency to deal with pure problems that are intrinsically motivated, reduces its concern for science as codification; such science has already been by-passed by the researcher in the field.

The pressure to do research rather than teach accentuates the denial of science as codification. Much has been said about the conflict between research and teaching in the university. As I see it, at least part of the conflict amounts to a philosophic judgment as to whether science is the search for new knowledge or the organizer of existing knowledge. In emphasizing research at the expense of teaching one is implicitly valuing the one above the other.

One by-product of this trend is the waning of the tradition of scientific scholarship. As our sciences become more and more fragmented and narrowly specialized, and as their connection with earlier, more general phases of science weakens, the relevance of what came before for the pursuit of current research decreases. For example, it is possible to carry out research on elementary particles without knowing much about nuclear structure. The taste for knowing the historical origin and development of a science wanes, partly because such knowledge is unnecessary for prosecuting current research, partly because there is too little time and energy left over after learning what is needed to do the research at hand.

Implications: For Education

These two tendencies—toward purity and fragmentation as opposed to application and interdisciplinarity, and toward research and away from scholarship—seem to me to portend trouble in the relation between the university and society.

First, I speak about the great curriculum reforms, especially in the sci-

ences. These reforms started in the high schools but have now been extended, particularly in mathematics, downward to the grade schools, and in many instances upward to the colleges. They are relevant to my discussion, because the reforms have been instigated by the university, and they certainly reflect the intellectual spirit of the university. With certain of the aims of the curriculum reform, one can have no quarrel. The new curricula try hard to be interesting, and in this I think they succeed; also, they demand more effort and present more challenge than the old. But, insofar as the new curricula have been captured by university scientists and mathematicians of narrowly puristic outlook, insofar as the curricula reflect deplorable fragmentation and abstraction, especially of mathematics, insofar as the curricula deny science as codification in favor of science as search, I consider them to be dangerous.

The danger I worry about was brought home to me by a distinguished physics professor. According to him, the mathematics department at his university no longer teaches the kind of calculus course which develops power and skill in handling simple integration. Such skills are apparently too lowbrow, and in any event are no longer needed by one who wishes to pursue a career as a research mathematician. As a result, many physics students are unable to do the mathematics which still is important for physics, even if not for mathematics. This physics professor has therefore written a book on calculus which presents the traditional parts of the subject that have been by-passed by the professionals. I think this anecdote illustrates both what is wrong with, and what might be done to remedy, the situation. The professional purists, representing the spirit of the fragmented, research-oriented university, got hold of the curriculum reform and, by their diligence and aggressiveness, created puristic monsters. But education at the elementary level of a field is too important to be left entirely to the professionals in that field, especially if the professionals are themselves too narrowly specialized in outlook. Instead, curriculum reform should be strongly influenced by disciplines bordering the discipline being reformed. The mathematics curriculum should receive strong cues from the empirical sciences and from engineering; the physics curriculum, from engineering as well as from the neighboring sciences; and so on. There is nothing wrong with physics professors writing calculus books, or engineering professors writing physics texts, as long as the physics professor knows calculus or the engineering professor knows physics. And, indeed, seeds of the counterrevolution in curriculum reform seem to be sprouting. In physics a group at Harvard under Gerald Holton is trying to devise a curriculum which views physics as a more broadly cultural activity than some of the other curricula do. In mathematics a counterrevolution also seems to be taking place; for example, a group of 75 leading American mathematicians stated: " . . . to offer such subjects to all students as could interest only the small minority of prospective mathematicians is wasteful and amounts to ignoring the needs of the scientific community and of society as a whole" (*4*). And the American Council for Curricular Evaluation has been organized to maintain "the intellectual integrity of our schools"—that is, to scrutinize some of our newer curriculum reforms.

Related to the trend toward purity in curriculum reform is the relatively poor place of applied science in the universities. This matter has been emphasized by Edward Teller (*5*, pp. 257–266). He points out that most of the money our government spends for research and development goes for applied research; yet most of the prestige and emphasis in the university goes to basic science. The best scientific minds go into basic, not applied, science; and the social hierarchy of science, reflecting the discipline-orientation of the university as much as it does the intrinsic logic of the situation, places pure science above the interdisciplinary applied science. Hans Bethe, in speaking of the social responsibility of the scientist, has also noted this denigration of the applied sciences in the university. He exhorts the university scientist to overcome his prejudice against application and especially urges him, as part of his social responsibility, to reaffirm the dignity of applied science (*6*).

Implications: For Government

What are the implications of these trends for government and society? Our society increasingly is a product of the university. As the university degree becomes more and more common—it may be nearly as common, eventually, as a high school diploma is now—the outlook and point of view of our society and of our government becomes the outlook and point of view of the university.

I want to make perfectly clear that on balance I believe this to be enormously good. The university is rational, and its outlook is basically tolerant and knowledgeable. For example, I believe our whole enlightenment in race relations would be unthinkable if anthropological and psychological doctrines, developed largely in the university, had not penetrated society as a whole. One must never forget that the Supreme Court, in justifying its 1954 decision on school desegregation, invoked a psychological doctrine (psychic damage to the segregated child) that catches the spirit of and was certainly nurtured by the university.

But my purpose is to point out the dangers to government, to society, and to the university that lie in the latter's narrow disciplinarity. Thus university's picture of science as research and denial of science as codification or as a tool deadens its taste for action. Let me illustrate with the views of *Growth of World Population*, released by the National Academy of Sciences in 1963, to which I subscribed at the time (*7*). The report concluded that the overall task was to achieve "universal acceptance of the desirability of planning and controlling family size." The report then made four major recommendations, which I paraphrase:

1) Support graduate and postdoctoral training in demography.

2) Expand research laboratories for scientific investigation of human reproduction.

3) Cooperate in international studies of voluntary fertility regulation.

4) Train more administrators of family planning.

With none of these recommendations can anyone concerned with the population problem take issue. Of course we need more research and more studies, as well as more administrators. But such recommendations are, it now seems to me, tangential to the main issue. They substitute research about the problem of family planning for action on the problem. Complicated social problems such as control of family planning must be attacked with the information at hand even as we learn more about them. And, indeed, the distinguished biochemist, William D.

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McElroy, who chaired [illegible] issued the report, said recently: "Although I am still in full agreement with these recommendations, I think the time has come when we must move ahead even without the additional biological knowledge" (*8*).

Nor is this instance an isolated one. Panels that advise government, especially on matters having scientific implications (and what affair of government these days does not?), are usually dominated by university people, especially those active in research. What is more natural than to recommend more research as a kind of magical talisman that will solve profound and complex social problems? I was therefore much impressed with the contrast between the recent study on heart, cancer, and stroke, which proposed specific concrete action on the basis of the knowledge at hand, and the many other studies, such as the NAS study on population, which display an inclination to study rather than to do.

Even the choice of what things our government decides to spend its research funds on is now deeply influenced by the puristic university. In earlier, and simpler, times the government's attitude toward science was unsophisticated and inexpensive. First, the nonscientific goals of the society were ascertained by the political process; these goals by and large transcended the goals of the university. Thus, we had long since decided that national defense was a necessary goal; or good public health; or better navigation; or adequate physical and chemical standards. We then decided to support the science that scientists believed would help achieve these goals. How much we spent on the relevant science was determined by how important we regarded the goals themselves to be, and this was a political decision. It is true that in recent years we have become very relaxed over how relevant a science need be to warrant support; nevertheless, the mission-oriented agencies support basic science per se largely as a justified overhead expense charged against achievement of the overall mission. Just as a good applied laboratory does a fair amount of related basic science, so an enlightened government agency supports a large amount of related basic research. But the ultimate justification of this basic research, as far as society at large is concerned, is the achievement of some nonscientific goal. One examines the original basis for establish-

[illegible] finds that an eventual tangible and palpable pay-off of science was strongly in the minds of those who conceived the NSF.

The current active debate on scientific priorities bespeaks a change in our viewpoint. Whereas in previous times government support of science was justified by its contribution to the achievement of some nonscientific end, we seem now to have accepted the view that science deserves large support solely for its own sake; with this development no scientist can quarrel. However, to my mind, the same professionally puristic viewpoint that has captured the elementary mathematics curriculum seems to be prevailing in the present debate on scientific priority. The debate at the moment centers on the support given high-energy physics relative to that given other fields of science. Now, high-energy physics is at once the most elegant and, in a sense, the most fascinating branch of physics. The new unitary symmetries are beautiful to behold and astonishingly unexpected. The high-energy physicists themselves are brilliant and dedicated. Because the field is rich and exciting in itself it certainly deserves support. I cannot, however, understand the argument that high-energy physics commands an *urgency* of support simply because, as Robert Oppenheimer puts it, it is "the conviction of those who are in it that, without further penetration into the realm of the very small, the agony may this time not end in a triumph of human reason" (*9*). The agony Oppenheimer refers to is surely not shared by all of society, nor even by all scientists. The question is why the intellectual agony of this generation of physicists needs to be relieved as quickly as possible rather than being resolved, at a slower place, by succeeding generations.

To me urgent support of a field is justified only if that field is likely in some way to solve a pressing human need. The biomedical sciences merit urgent support because out of them come means of alleviating some of man's most primitive suffering—illness and premature death. The social sciences would merit urgent support insofar as they are aimed at helping solve man's social problems; unfortunately, in my opinion, they do not at this time seem ripe for great expansion. By contrast, high-energy physics offers [illegible] of satisfying any *urgent* human need.

[illegible] emergence of high-energy physics among our country's highest-priority basic scientific enterprises is a manifestation both of the university's deification of purity in science and of its influence on what our society does. High-energy physics is the purest branch of physics. In the university community it towers above most sciences in prestige and in the caliber of the students it attracts. That it should be placed so high on our society's list of things to be done attests at once to the pervasiveness of the university's influence on the society and to the way in which fragmentation and concern for disciplinary purity of the university, when imposed on the "mission-oriented" society, diverts the society from its real goals. Our society is not a university; the goals of our society are not the same as the goals of the fragmented and discipline-oriented university. For the university to persuade the society that at this stage in history the university's own intellectual goals and aspirations—remote, pure, and fragmented—deserve the highest place among the goals of the society is hardly tenable.

Recapitulation:

The Imbeddedness of Values

My remarks have been a fugue on a single theme. I began by pointing out that the university and society are incongruent in that the university is discipline-oriented and fragmented, the society, mission-oriented and whole. I tried to show how the ecology of the discipline-oriented university encourages the rise of purism and specialization and the denial of scholarship and application in science. I then argued that these trends in the universities are affecting our elementary curricula; are giving us poorer people to get on with the applied work of the day; are substituting research for action; and are tending to impose the scientific values of the fragmented university upon society.

In every one of these trends I discern the same underlying issue: a failure to realize that no judgment of the relative value of a universe can be made from the narrow base of that universe. Values are established from without a universe of discourse; means are established from within. Thus, our science tends to become more fragmented and more narrowly puristic because its practitioners, harried as they

are by the social pressures of the university community, have little [illegible] inclination to view what they do from a universe other than their own. They impose upon the elementary curricula their narrowly disciplinary point of view, which places greater value on the frontiers of a field than on its tradition, and they try to put across what seems important to them, not what is important when viewed in a larger perspective. The practitioners have no taste for application or even for interdisciplinarity since this takes them away from their own universe; and they naturally and honestly try to impose their style and their standards of value upon society, as when they insist on research instead of action, or when they claim urgency for matters whose urgency—that is, importance—is largely self-generated.

For the universities, and for the members of the universities, I have some recommendations though I put them forward diffidently. The university must accord the specialist of broad outlook the status and prestige it now confers solely upon the specialist of narrow outlook. Granted that specialization is "blessed" in the sense that only the specialist knows what he is talking about; yet, if only the specialist knows what he is talking about, only the generalist knows why he should talk at all.

Can the university combine the point of view of the specialist with that of the generalist? Can it acquire some of the mission-orientation of the large laboratory, yet retain its discipline-orientation intact? Can it truly become interdisciplinary and whole, and thus become congruent with society?

Several possibilities suggest themselves, though I do not pretend that these possibilities are panaceas. The university could convert itself into the National Laboratory. This is surely going too far, even though mission-oriented institutes are springing up on university campuses, largely I believe in response to the contradictions that I have outlined. The university certainly should not give up the freedom and the individual autonomy of the professor—the freedom and autonomy he cannot enjoy when he enters the mission-oriented institute. Thus, much as I approve of the mission-oriented institute, I value the professor's stubborn freedom even more, and so I would hate to see the university become the National Laboratory.

I would go farther [illegible] shortcomings I find in the university are intrinsic characteristics of the university and are hardly susceptible to change. The university loses something unique and precious when it submerges the professor's independence to achieve a common scientific mission conceived by administrators. But this means, simply, that some things are not properly done at the university. For example, the "important" problems even in pure science that transcend in difficulty the capacity and style of the university, like studies of genetics involving 200,000 mice, or modern plasma physics, must be done outside the university. Moreover, the basic research that goes to support such activities is properly the business of institutions having such responsibilities. Thus my plea amounts to reasserting the validity of the National Laboratory, with its shortcomings that I know so well, as a home for certain kinds of basic and applied research, even as I emphasize the place of the university, with its shortcomings, in the scientific society. The view that federal support of basic research is the university's inalienable right and that if competition with the mission-oriented institutions arises then the university's is the prior claim (as implied in the recent Wooldridge report on NIH, *10*) to my mind ignores the shortcomings of the university in basic research. There is an appropriate analogy here between the two kinds of institutions: the university and the mission-oriented laboratory. Basic research is supported in the mission-oriented laboratory to help the laboratory accomplish its mission. As Harvey Brooks suggested (*5*, pp. 77–110), it ought to be looked upon as a reward for achievement of the laboratory's mission, especially since the basic researcher is thereby given a stake in achievement of the laboratory's mission. Similarly, a case can be made for giving the university, as an institution, support for basic research as a reward for excellence in teaching, since one thereby gives the research professor a stake in the university's mission.

For in a sense the university, no less than the laboratory, is already mission-oriented if only it will accept and recognize its traditional mission—education of the young. And just as the mission orientation of the National Laboratory adds point and wholeness to its scientific activity, so undergraduate education ought to give wholeness to [illegible] Education at the undergraduate level should properly be less professionalized and puristic than it is at the highest levels. Just as ontogeny recapitulates phylogeny, so elementary education properly should recapitulate the historic path of a discipline: its connections with other disciplines and with practical purposes, its origin, its scholarship—in short, its place in the scheme of things. If the university takes undergraduate education seriously, and does not look upon it simply as attenuated professional education, the university community will be forced to broaden its outlook. The university professor would, by enforced contacts with young people whose backgrounds are diverse, surely be obliged to relate his narrow professional interest to the rest of the world. And in the process, as he becomes part of the interdisciplinary real world, the teacher ought once more to become a citizen.

References and Notes

1. "The dean's report, 1963–1964," *Harvard Engineers and Scientists Bull. No. 45*, (1964), p. 6. The italics are mine.
2. Von D. Hilbert, "Mathematische probleme," in *A Collection of Modern Mathematical Classics: Analysis*, Richard Bellman, Ed. (Dover, New York, 1961), p. 248. Translated from the German by E. Guth, Oak Ridge National Laboratory. See Hilbert's lecture before the Mathematical Congress, Paris, 1900: "In the meantime, while the generating force of the pure thought acts, the external world enters again and again; it forces upon us new questions through the actual phenomena; it opens new topics of mathematics, and while we try to incorporate these new topics into the realm of pure thought, we find often the answers to old unsolved problems, and advance this way best the old theories. Upon this repeating and changing interplay between thought and experience are based, as it seems to me, the many and surprising analogies and that apparently 'prestabilized harmony' which the mathematicians so often notice in the questions, methods, and concepts of different fields of science."
3. J. von Neumann, "The mathematician," in *The Works of the Mind*, R. B. Heywood, Ed. (Univ. of Chicago Press, Chicago, 1947), p. 196.
4. L. V. Ahlfors *et al.*, "Mathematics curriculum of the high school," *Amer. Math. Monthly* 69, 189 (1962).
5. *Basic Research and National Goals*, a report to the House Committee on Science and Astronautics, submitted by the National Academy of Sciences (March 1965).
6. H. Bethe, "The social responsibilities of scientists and engineers," a lecture at Cornell University, 6 Nov. 1963, published subsequently in *The Cornell Engineer* and excerpted in *SSRS Newsletter* (Gambier, Ohio, Feb. 1964), p. 1.
7. Committee on Science and Public Policy, "Growth of world population," *Nat. Acad. Sci. U.S. Publ. 1091* (Apr. 1963).
8. "The need for action," in *Population*, panel discussion held at the Pan American Union (Planned Parenthood/World Population, New York, 1964), p. 43.
9. J. R. Oppenheimer, in *Nature of Matter*, L. C. L. Yuan, Ed. (Brookhaven National Laboratory, Upton, N.Y., 1965), p. 5.
10. *Biomedical Science and Its Administration, A Study of The National Institutes of Health*, Report to the President, D. E. Wooldridge, Chairman (Government Printing Office, Washington, D.C., 1965).

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ROUTING AND RECORD SHEET

SUBJECT: (Optional)

FROM: DD/ORD 1D0410 Hq.	EXTENSION	NO. / DATE

TO: (Officer designation, room number, and building)	DATE RECEIVED	DATE FORWARDED	OFFICER'S INITIALS	COMMENTS (Number each comment to show from whom to whom. Draw a line across column after each comment.)
1. Planning Group				I would recommend this recent article from Science to all members of the Planning Group even though it is rather lengthy. Dr. Weinberg has expressed the concept of mission oriented research and the role of R&D in support of social needs better than anyone I know. I also believe his remarks on basic research and the trend toward purity without codification should be a warning to intelligence as well as science. I would particularly like to call your attention to the second paragraph on p. 606. For those who are interested, Weinberg also wrote an equally stimulating article on Big Science in an earlier journal.
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PG-D-13/1

14 August 1965

MEMORANDUM FOR: Planning Group

SUBJECT: Agency Research

Attached is a revision of the first paper on R&D (PG-D-13)

25X1 as revised by [redacted] This should be placed in your package of papers for the semi-finals.

[redacted]
Executive Secretary

25X1

Attachment
Subject document

PG-D-13/1

AGENCY RESEARCH

Summary

Agency research must be entirely mission oriented. Both in funding and in organization it must be separated from development even though the separation will not in all cases be clean and exceptions may be necessary as in the instance of sensors for overhead reconnaissance (see monograph on overhead reconnaissance). ORD should be responsible for the control of research funds to insure that the programs are viable, not competitive, and are responsive to the highest priority problems in support of the DCI. This does not mean that all research will be carried out by ORD since case by case it may be necessary to allocate funds to other offices. The funds now assigned to research (as opposed to development) are less than one per cent of the total Agency budget. In the future we believe this fund should escalate to perhaps three to five per cent of the budget.

Discussion

Mission Oriented Research. Research on the process of human perception of a visual image or auditory signal, although basic in nature, provides the building blocks for development of systems to support NPIC, DDP, and other groups. In this sense, it is mission oriented.

[redacted] 25X

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Research Versus Development. This Agency, like DoD, NASA, and others, tends to lump research and development together. In most cases the funds for development far outweigh those for research. There is a distinct danger that the pressures to produce quick solutions to complex problems lead to the impoverishment of research. It is often accompanied by a reluctance to terminate a development program (Russian proverb: "The better is the enemy of the good.") This Agency must establish and protect a small percentage of its budget for research which is not to be diverted to the day-to-day technical requirements.

At this time, there is very little research undertaken by the Agency, perhaps as little as one to two per cent of the research and development budget for the Agency. That which is being done is scattered through ORD, OEL, NPIC, Commo, and TSD. To identify projects which are research would be difficult indeed since the exigencies of budget

presentation dictate that we provide a cover story for research in order to make it appear as development. The time has come when the Agency must focus on a few key research problems as, for example, those indicated in the following paragraph.

Key Areas for Research. There are a number of critical areas for research which can be enumerated. [redacted] 25X

25X [redacted]

Control of Research. Research by its nature tends to be more generalized than development and requires long term support and continuity. In addition, research should be undertaken only in high priority areas where results are applicable to many parts of the Agency. For these reasons, research funds should be centralized in one organization within the Agency to be used for the solution of problems of common interest.

Level of Research. A proposal that three to five per cent of the operating budget be set aside for research seems to be a reasonable one but should be re-examined in the light of future needs within the Agency and results of research undertaken by other government and private organizations.

In-House Research. The most difficult part of research is proper identification of the problem. Government, industry, and university research groups cannot provide us with the kind of assistance we need until we are prepared to study in depth the nature of our problems and assist in the translation of these problems into technically feasible solutions. This will undoubtedly require some in-house research but should not imply the establishment of a number of laboratories or indeed any laboratories until it is abundantly clear that it is necessary and that it will be necessary for many years.

External Contacts. The cornerstone of our research philosophy should be that we use the resources of other federal agencies, industries, and universities and that we "piggyback" on their research to the greatest extent possible. To this end we have devoted perhaps 50 per cent of our time for the purpose of establishing a network which connects us with national research and development. This includes complete access to DDC, SIE, NIH, NSF, AEC, and other research programs. The product of the network includes not only research reports but periodic meetings with key research and development personnel. The university community [redacted] and the various scientific advisory committees throughout the government. There are hundreds of leading scientists in the university environment who are in

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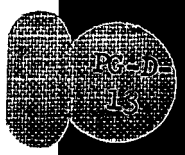
direct contact and frequent contact with us. Expanded contacts with industrial research groups is at an early stage of development but is accelerating rapidly as industry becomes aware of the fact that the Agency has a research and development mission. Security restrictions prevent us from disseminating requests for proposals in the usual sense, but we have asked industrial organizations to submit informal ideas to us for consideration and discussion before the submission of formal proposals. This has had a tendency to open up many fruitful discussions with industrial research groups without the necessity of their spending large sums of money for proposals for research which might not be of interest to this Agency. This is not to say that our contacts should not be even broader nor is it to suggest that we have our fingers on every piece of research under way in the United States. It should be pointed out, however, that a certain degree of discrimination is necessary as in other fields and that it is possible to select and maintain contact with relatively few individuals in a given field who, in turn, can guide and direct to us the appropriate research activities in their general area of knowledge.

PG-D-13
11 August 1965

MEMORANDUM FOR: Planning Group

SUBJECT : Research, Development, and Engineering

Attached are two papers covering the topics of research, development, and engineering. The first paper is primarily designed to define and explain the terms which we have used during our discussions. The second paper emphasizes research as distinct from development and engineering since it is an area which is relatively new to the Agency and requires special emphasis.



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Group I - Excluded from
automatic downgrading
and declassification.

PG-D-13
11 August 1965

Agency Research, Development, and Engineering

The purpose of this paper is to clarify the role of research and development in the Agency and to define some of the terms which are used rather loosely in our discussions.

Assumptions and Definitions

a. CIA is in the intelligence, not research and development, business.

b. Research, development, and engineering activities have been undertaken by the Agency for two major reasons:

(1) Intelligence collection and analysis have required technical collection systems primarily targeted against strategic weapons systems.

(2) Research, development, and enginnering by other government and private groups, although helpful in some respects, have not fulfilled the technical requirements of the Agency.

c. Historically, research and development in the Agency has been heavily weighted toward collection with relatively little effort in analysis.

d. Basic research - This term generally denotes attempts to understand the laws of nature without concern for their ultimate application. Examples might include the study of why grass is green ("Engine Charlie" Wilson) or the study of DNA and RNA as transmitters of genetic characteristics.

e. Applied research - This term generally denotes the application of research findings to a particular problem. An example might include the harnessing of nuclear energy to generate power.

f. Development and engineering - Once it has been determined that research knowledge can be applied to some practical problem, it is usually necessary to develop and engineer a prototype device and ultimately refine it to be used in a specific situation. For example, one first might develop a prototype nuclear reactor which generates power. This reactor would be further engineered and modified for special purposes such as a power plant for a nuclear submarine.

It is a mistake for the Agency to think in terms of basic and applied research and development. It is better to use the term mission oriented research and development. This implies that all of our research and development is oriented toward intelligence problems although in some cases this research is quite basic in nature.

Current Missions and Roles of Research and Development Activities in the Agency

Most research (excluding intelligence analysis) carried on by the Agency is done by ORD. OEL, OSA, OMS, and OCS are carrying on some research but primarily development in support of their specific missions. TSD does development and engineering in direct support to the clandestine services. The interface between ORD and other offices is being developed gradually as we develop experience but cannot be rigidly defined at this time. Much depends on the technical sophistication of the consumer.

During the next few years, there will be a greatly increased requirement for research and development with greater emphasis on the intelligence analysis problem. It is important that the Agency piggyback on other research and development programs as much as possible and that it define its priority research and development requirements carefully.

PG-D-13
11 August 1965

Agency Research

Research as used in this paper refers to the study and identification of improved methods of collection and analysis as distinguished from intelligence research (political, economic, etc.) carried out by the DD/I and other intelligence production units. The nature of the Agency's activities requires that it be abreast or ahead of the state-of-the-art with respect to research.

Significant research tasks may be defined by a particular office or division based upon its own needs. It is also necessary that some centralized organization review and define research requirements which apply to the Agency as a whole but may not be sufficiently obvious or important to many single offices.

Centralized control of research for the Agency is recommended not only to assure coordination and to avoid overlap but also to identify significant gaps and to assure that the support to research is adequate to permit a viable program which reflects the objectives of the DCI. This is particularly true in the Agency where security practices tend to prevent intra-agency exchange of information on research. Centralized control of research by an appropriate executive authority means centralized control of the allocation of funds for research.

Although a centralized system of control is recommended, specific research tasks should be performed by those groups best able to perform it. In many cases, the responsibility for research contracts will rest with the particular office or division which identified the research problem. The executive group would primarily direct research programs which affect several components of the Agency

25X1 [redacted] and research tasks which require technical skills not available in the user office or division.

Significant research contains a considerable element of risk, making it difficult to determine an exact allocation of funds. It is recommended that the Agency adopt the procedure followed by many large organizations of allocating certain

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percentage of its total budget for research. This percentage, which might run from 2% to 5%, would be administered by the executive organization. It is imperative that the central executive authority assure that research funds are used for research only and not for development tasks. It must also insure that research programs undertaken by the Agency have the potential of providing a major advance in the Agency's capabilities.

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1. Define mission-oriented research.

2. Explain need for research in future and how development gobbles up money.

3. Describe some critical areas where research is required.

4. Point up Agency organizations now involved in research and lack of concentrated focus on Key problems.

5. Point up need for central authority and general mission and authority.

6. Suggest, in some order of magnitude, the Agency's future research budget requirements.

7. Explain degrees of in-house research capability needed, and degree of knowledge of external research.

DRAFT
25 Aug 65

SYSTEMS ANALYSIS

I. Introduction

A. For purposes of this paper, systems analysis is defined to include three elements:

1. A systematic investigation of the intelligence objectives to be achieved by a particular program including, for example, programs or systems involving new collection devices;

2. A comparison of the cost, effectiveness and risks of alternative programs or systems for achieving these objectives, considering all aspects of the intelligence process related to the programs in question; and

3. The selection of an alternative which will permit the system as a whole (collection, processing, and analysis) to best approximate the achievements of the intelligence objectives with a minimal expenditure of resources.

II. Background

A. Over the past five-ten years the development of increasingly expensive and complex intelligence systems, involving many critical inter-relationships within the field of collection, information processing and intelligence production, has made systems analysis imperative for top level CIA management. New collection programs involving expensive vehicles and equipment as well as elaborate requirements for processing and analyzing masses of data makes

systems analysis most compelling both for CIA and for the intelligence community.

B. There is already a growing awareness of the need for employing this analytic method in the Agency. The DDCI and the Executive Director-Comptroller have recently authorized the establishment of a systems analysis capability in BPAM. Moreover, a number of components of the Agency have undertaken program analysis in varying degrees, although for the most part this has not been done with sufficient rigor and comprehensiveness.

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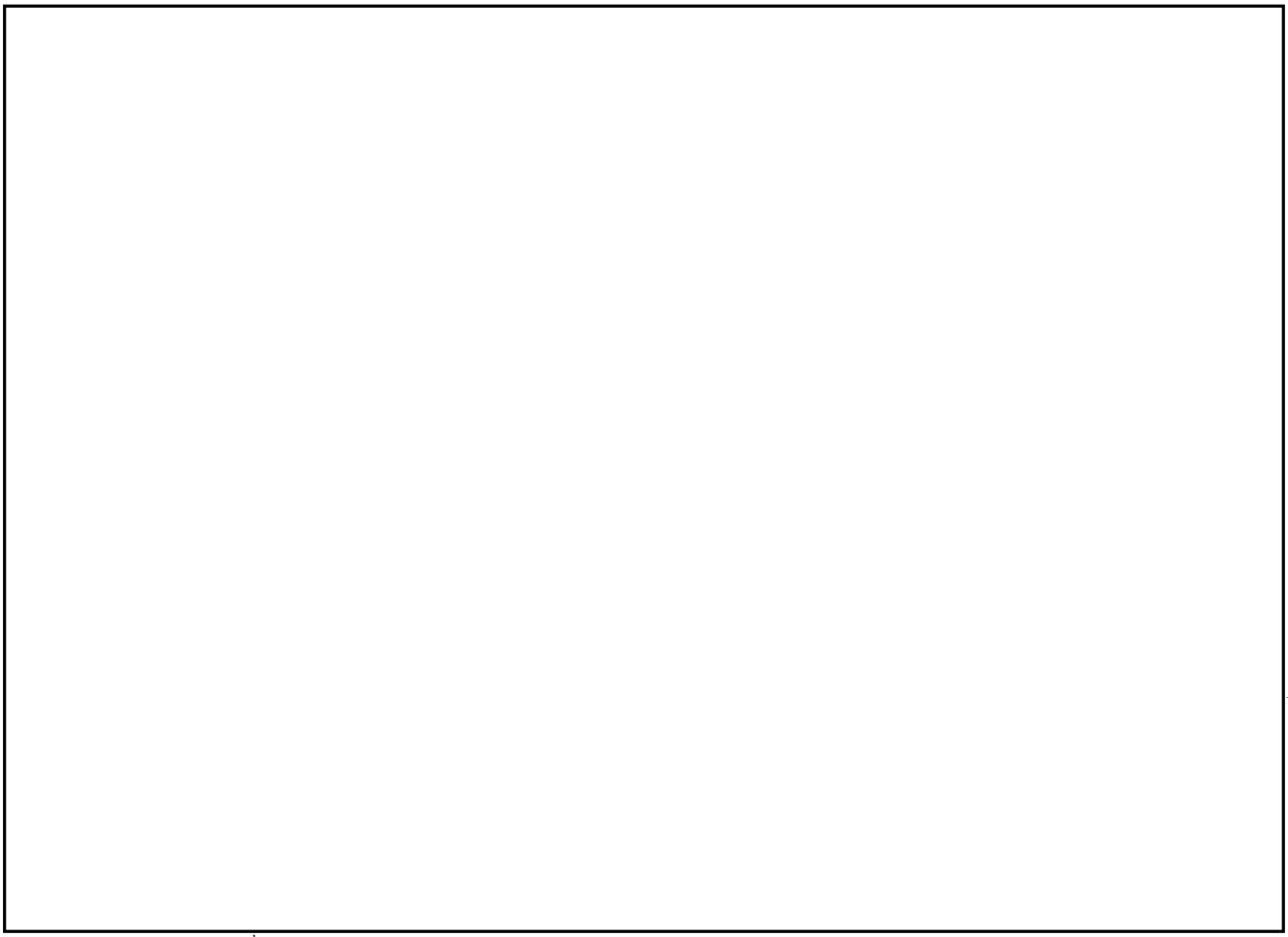

III. Problems Arising From the Absence of Systems Analysis

A. The Agency has already suffered from the absence of this kind of thorough-going program evaluation in the case of the U-2 and the early satellite reconnaissance vehicles. Incredibly good judgment and intuition were applied to the development of the collection vehicles and to many of the arrangements for formulating priority requirements, for information processing and for final use in intelligence production. However, serious problems have arisen which were predictable and could have been substantially mitigated through some form of systems analysis at the outset. Such analysis would have included consideration of the role of other means of collection and the various trade-off possibilities; the problems of developing a processing capability which would keep pace with the volume of information collected; and, the need for an analytic capability able to effectively exploit this material. For example:

1. Other collection activities continued much too long to acquire some of the very same material which was being obtained more effectively by these reconnaissance vehicles.

2. The interpretation and analysis capability was inadequate to keep pace with the flow of film and tapes and, over time, the backlog became intolerably large.

3./ An analytical capability to exploit this material effectively for intelligence production was not adequately considered during the R&D phase of this program.

IV. Immediate Need for Systems Analysis

A. Whatever the losses suffered by intelligence because of the failure to analyze systematically the entire spectrum of intelligence in relation to these programs they will be small in comparison with the waste and confusion which could occur if we fail to analyze properly -- at the outset -- the more expensive and complex systems that are already on the drawing boards or in more advanced stages of development. There will be numerous decisions during the R&D phases of development which will affect not only the program under consideration but many other related activities for collection, processing, and analysis as well.

B. Systems analysis of certain Agency programs is needed in part for the same reasons that have prompted its use in the Pentagon today, namely, for decisions related to the development of hardware programs. This would involve decisions as to what information is critical for intelligence, the alternatives for acquiring it, the kinds of equipment to be employed, the selection from among alternatives in terms of effectiveness, costs, time of delivery, etc. There are related decisions and considerations which will have a bearing on the functions we want the equipment to perform and the kind of equipment we select to perform it. As two examples:

1. An expensive new collection device may and probably will have several capabilities for acquiring different kinds of information. We must determine which of these functions

should be performed, to what extent, and in what combination. Answers to these questions should depend to a significant degree on the information which the offices responsible for intelligence production and intelligence operations believe would be of greatest importance and on the prospects we have for processing the information. This in turn hinges on read-out, collation, and indexing capability. These are dependent on processing equipment, ADP application, and the ability to obtain the funds and qualified personnel for all phases of the process. Decisions relating to the development of these capabilities must take into account the need for reasonable synchronization in the phasing and the possibility of trade-offs between all of these developments.

2. Decisions of this kind regarding new devices and new programs must take into account the relationship to and their impact on existing activities. For example, what is the relationship of a particular new collection device to programs of the clandestine services -- programs which are also employing new sophisticated collection equipment? Are they unnecessarily duplicative or usefully supplementary? Are there trade-offs involved in the sense that the existence of one program may obviate or reduce the necessity for the other?

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If so, what decisions should be made about the division of scarce linquistic talent and joint recruiting, etc.?

C. The foregoing emphasizes that the need for systems analysis in CIA -- and in the intelligence community as well -- is now a matter of urgency. Many important decisions of the Agency regarding major programs -- particularly programs centered on expensive new collection devices -- could gain substantially in savings and effectiveness through the application of this analytic approach.

D. Finally, it would not be the responsibility of a plans and programs staff to perform the entire analysis functions. The principal job of the staff would be to make certain that such analysis is carried out. This would mean, of course, there should be members of the staff who are trained and experienced in systems analysis. The staff would provide the professional and technical guidance for the analysis and whatever support is required to ensure appropriate coordination with interested components of the Agency and their external research contractors.

Recommendations

A. That CIA employ systems analysis in the selection and evaluation of major intelligence programs and that CIA study possible applications of systems analysis to major activities within the intelligence community.

B. That the responsibility for ensuring that systems analysis is applied to selected programs and for providing technical assistance and guidance be assigned to a plans and programs staff reporting directly to the Executive Director-Comptroller. Further, it is recommended that this function be integrated with the responsibilities for planning, scheduling and monitoring selected programs as we gain experience with the application of this technique; and that these functions be administered in close consultation with the Office of Budget, Program Analysis and Manpower (BPAM) but separate from BPAM. The functions of systems analysis would overlap and duplicate some functions currently being carried out by BPAM and the Inspector General. There should be a delineation of these functions at the time a plans and program staff is established.

C. That several projects be selected for systems analysis sometime within the next six months, [redacted] 25X

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25X1 [redacted] In undertaking this initial effort great care should be exercised to avoid overly detailed analysis requiring elaborate mathematical models. Moreover, since certain of these projects will have been under consideration for some time, this analysis should not be permitted to inordinately delay critical decisions. As we gain experience with this technique, our analysis can become more comprehensive and penetrating and perhaps more mathematical.

D. That a program be established for training selected CIA managerial personnel in systems analysis.

21 Aug 65

The Need for Systems Analysis in CIA

Recommendations:

1. That CIA employ systems analysis in the selection and evaluation of major intelligence programs and that CIA study possible applications of systems analysis to major activities within the intelligence community.

2. That the responsibility for ensuring that systems analysis is applied to selected programs and for providing technical assistance and guidance be assigned to a plans and programs staff reporting directly to the Executive Director-Comptroller. Further, it is recommended that this function be integrated with the responsibilities for planning, scheduling and monitoring selected programs as we gain experience with the application of this technique; and that these functions be administered in close consultation with the Cffice of Budget Program Analysis and Manpower (BPAM) but as a separate staff.

3. That the following actions be undertaken within the next six months: Initiate systems analysis of project _____ _____. In undertaking this initial effort great care should be exercised to avoid overly detailed analysis requiring elaborate mathematical models. Moreover, since these projects have been under consideration for some time, this analysis should not be permitted to inordinately delay critical decisions. As we gain experience

with this technique, our analysis can become more comprehensive and penetrating and perhaps more mathematical.

4. That a program be established for training selected CIA managerial personnel in systems analysis.

5. For purposes of this paper, systems analysis is defined to include three elements:

a. A systematic investigation of the intelligence objectives to be achieved by a particular program including, for example, programs or systems involving new collection devices.

b. A comparison of the cost, effectiveness and risks of alternative programs or systems for achieving these objectives, considering all aspects of the intelligence process related to the programs in question; and

c. The selection of an alternative which will permit the system as a whole (collection, processing, and analysis) to best approximate the achievement of the intelligence objectives with a minimal expenditure of resources.

Discussion:

6. Over the past five-ten years the development of increasingly expensive and complex intelligence systems have involved many critical

inter-relationships within the field of collection, information processing and intelligence production has made systems analysis imperative for top level CIA management. New collection programs involving expensive vehicles and equipment as well as elaborate requirements for processing and analyzing masses of data makes systems analysis most compelling both for CIAand for the intelligence community. There is already a growing awareness of the need for employing this analytic method in the Agency. The DDCI and the Executive Director-Comptroller have recently authorized the establishment of a systems analysis capability in BPAM. Moreover, a number of components of the Agency have undertaken program analysis in varying degrees, although for the most part this has not been done with sufficient rigor and comprehensiveness. Perhaps the most advanced effort is the comprehensive study undertaken for CIA by [redacted] for project [redacted] This study shows very clearly the kind of integrated systems analysis which could be carried out in a reasonably short period of time. It did not include elaborate cost-effectiveness models, but represented a major step forward in the employment of at least more systematic and comprehensive analysis and has enabled the Agency to anticipate many of the requirements which must be met by forward programming. Moreover, it has been structured in a way which will facilitate scheduling and program monitoring and took into account the priority objectives of the program with respect to critical needs of intelligence production.

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7. The Agency has already suffered from the absence of this kind of thorough-going program evaluation in the case of the U-2 and the early satellite reconnaissance vehicles. Incredibly good judgment and intuition were applied to the development of the collection vehicles and to many of the arrangements for formulating priority requirements, for information processing and for final use in intelligence production. However, serious problems have arisen which were predictable and could have been substantially mitigated through some form of systems analysis at the outset. Such analysis would have included consideration of the role of other means of collection and the various trade-off possibilities; the problems of developing a processing capability which would keep pace with the volume of information collected; and, the need for an analytic capability able to effectively exploit this material. For example:

a. Other collection activities continued much too long to acquire some of the very same material which was being obtained more effectively by these reconnaissance vehicles.

b. The interpretation and analysis capability was inadequate to keep pace with the flow of film and tapes, and, over time, the backlog became intolerably large.

c. Analytical capability to exploit this material effectively for intelligence production was not adequately considered during the R&D phase of this program.

8. Whatever the losses suffered by intelligence because of the failure to analyze systematically the entire spectrum of intelligence in relation to these programs they will be small in comparison with the waste and confusion which could occur if we fail to analyze properly--at the outset--the more expensive and complex systems that are already on the drawing boards or in more advanced stages of development.

and

are two prominent examples of these. There will be numerous decisions during the R&D phases of development which will affect not only the program under consideration but many other related activities for collection, processing and analysis as well.

9. Systems analysis of certain Agency programs is needed in part for the same reasons that have prompted its use in the Pentagon today, namely, for decisions related to the development of hardware programs. This would involve decisions as to what information is critical for intelligence, the alternatives for acquiring it, the kinds of equipment to be employed, the selection from among alternatives in terms of effectiveness, costs, time of delivery, etc. There are related decisions and considerations which will have a bearing on the functions we want the equipment to perform and the kind of equipment we select to perform it. As two examples:

a. An expensive new collection device may and probably will have several capabilities for acquiring different kinds of information. We must determine which of these functions should be performed, to what extent, and in what combination. Answers to these questions should depend to a significant degree on the information which the offices responsible for intelligence production and intelligenc operations believe would be of greatest importance and on the prospects we have for processing the information. This in turn hinges on read-out, collation, and indexing capability. These are dependent on processing equipment, ADP application, and the ability to obtain the funds and qualified personnel for all phases of the process. Decisions relating to the development of these capabilities must take into account the need for reasonable synchronization in the phasing and the possibility of trade-offs between all of these developments.

b. Decisions of this kind regarding new devices and new programs must take into account their relationship to and their impact on existing activities. For example, what is the relationship of a particular new collection device to programs of the clandestine services--programs which are also employing new sophisticated collection equipment? Are

they unnecessarily duplicative or usefully supplementary? Are there trade-offs involved in the sense that the existence of one program may obviate or reduce the necessity for the other? [redacted] 25X

[redacted] 25X

10. The foregoing emphasizes the need for systems analysis in CIA--and in the intelligence community as well--is now a matter of urgency. Many important decisions of the Agency regarding major programs--particularly programs centered on expensive new collection devices--could gain substantially in savings and effectiveness through the application of this analytic approach.

11. Finally, it would not be the responsibility of a plans and programs staff to perform the entire analysis functions. The principal job of the staff would be to make certain that such analysis is carried out. The staff would provide the professional and technical guidance for the analysis and whatever s upport is required to ensure appropriate coordination with interested components of the Agency and their external research contractors. This would mean, of course, there should be members of the staff who are trained and experienced in systems analysis.

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OD/ORR: [redacted] (10 Aug 65) 25X1

The Need for Systems Analysis in CIA

Proposal:

1. This paper proposes that systems analysis be included as a major responsibility of a CIA planning and management staff. This is suggested not only because of the promise of systems analysis as such in the management of Agency affairs but because much of the framework which is required for systems analysis is also essential for: (a) consistent planning and scheduling of certain major Agency programs; and, (b) for the review, evaluation and integration of these programs into the total intelligence framework regardless of whether they are monitored by the Program Evaluation and Review Technique (PERT), by the Critical Path Method (CPM), or by some other arrangement.

PG-D-12

Background:

2. The technique of systems analysis as an element of management is well known and has been successfully employed in both industry and government. The importance which Mr. McNamara attaches to systems analysis was reflected first in the requirement which he gave to his previous Comptroller, Charles Hitch, to carry out such analysis for US military programs and, more recently, was evidenced by his creation of an Office of Assistant Secretary of Defense for Systems Analysis, headed by Alain Enthoven.

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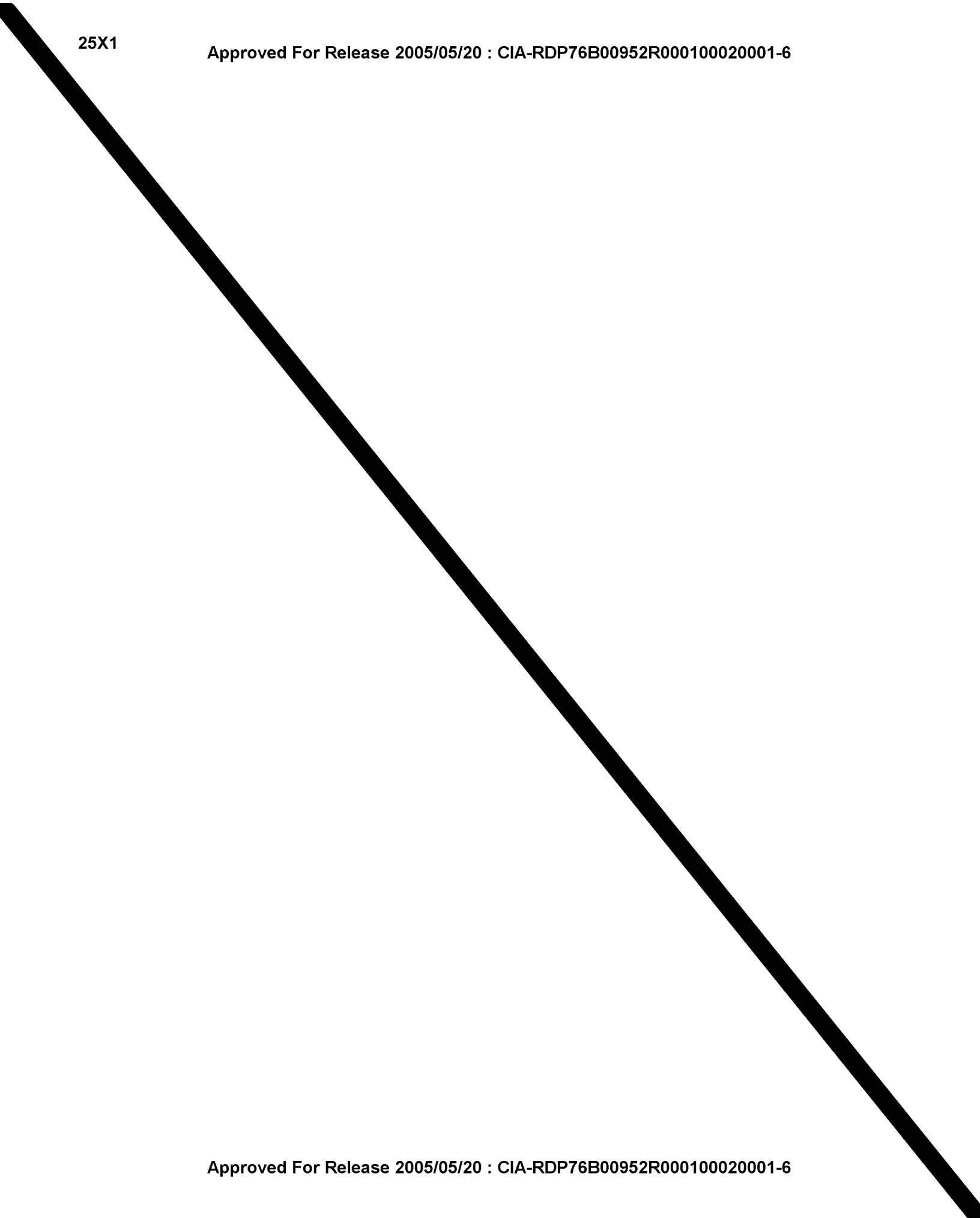
3. A definition of systems analysis and a discussion of its essential elements is attached to this paper. Very briefly, however, it can be defined as having three elements -- (1) "inquiry to aid a decision maker choose a course of action by systematically investigating his proper objectives, (2) comparing quantitatively where possible the cost effectiveness and risks associated with the alternative policies or strategies for achieving them and (3) formulating additional alternatives of those examined are found wanting." It is designed to assist the decision makers to choose a course of action which will yield "the best balance among risks, effectiveness and costs" and "to place each element in its proper context so that in the end the system as a whole may achieve its aims with a minimal expenditure of resources."

Relevance to CIA Program Management:

4. It is the thesis of this paper that systems analysis can have important applications in the management of major CIA programs.

5. Over the past 5-10 years CIA alone, and in conjunction with other agencies, has been responsible for the development of increasingly complex and expensive collection systems. In the case of the U-2 and the first satellite reconnaissance vehicle incredibly good judgment and intuition ~~was~~ apparently were applied to the planning and implementation ~~of its~~ their development as ~~a~~ collection devices. While the arrangements for requirements, information processing, and the final analyses were planned and worked out in a fairly primitive way, the ultimate results were reasonably satisfactory. A number of decisions could have been made



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c. The need for development of an analytical capability to effectively exploit this material for intelligence production was not adquately considered during the R&D phase of this program and, as a consequence, the information from this new source was not used as fully and effectively as it might have been. This despite the fact that, to a great extent, certain intelligence production problems were predictable. [redacted] 25X

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25X1 [redacted] the point is that the material's use was delayed, the development of staffing complements was delayed and inadequate and the material was not fully and effectively analyzed for purposes of intelligence production.

6. Whatever losses have been suffered by intelligence because of the failure to systematically analyze the entire spectrum of intelligence in relation to these ~~new~~ programs they will be small in comparison with future deficiencies, waste and confusion when we consider the increasing cost and complexity of new systems and their relationship to other on-going programs. There will be numerous decisions during the R&D phases of development which will affect not only the program under

consideration but many other related activities for collection, processing and analysis as well. Systems analysis of certain Agency programs is needed in part for the same reasons that have prompted its use in the Pentagon today, namely for decisions related to the development of hardware programs, (e.g., what information is most critical to acquire, what are the alternatives for acquiring it, what kinds of equipment might be employed, which of the options should be adopted from among the contractors' alternatives in terms of capability, costs, time of delivery, etc.). In addition, however, there are a whole host of related decisions and considerations -- considerations which in turn will have a bearing on the functions we want the equipment to perform and the kind of equipment we select to perform it. For example:

a. If we are developing a new system which has a multiple capability for acquiring different kinds of information and performing a variety of functions, there is the question of which of these functions should be performed, to what extent and in what combination. This decision depends in part on what the offices responsible for intelligence production and intelligence operations believe would be of greatest importance; it depends on the prospects we have for processing various kinds of information and in what volumes, which in turn depends on various kinds of read-out, collation and indexing capability, which in turn depends on such things as processing equipment, ADP application, ability to budget for and to obtain the numbers of professional personnel required

with the proper skills, the ability to train people in skills which represent critical bottlenecks [redacted] 25X and the ability to budget for and to recruit professional, analytical personnel with the training and experience to effectively utilize the information. Decisions relating to the development of these capabilities must take into account the need for reasonable synchronization in the time phasing of all of these developments. All of these decisions are related as part of a system and there are numerous trade-offs involved.

b. Decisions of this kind regarding new programs must take into account their relationship to and their impact on existing activities. For example, what is the relationship of any new collection devices to programs of the clandestine services which are also employing new sohphisticated collection equipment. Are they unnecessarily duplicative or usefully supplementary, are there trade-offs involved in the sense that the existence of one program may obviate the necessity for the other. [redacted] 25X

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c. Finally, the Agency will want to compare alternative programs -- programs as they relate to all aspects of the intelligence process -- on some cost/effectiveness basis. It may not

be desirable, for example, to design a new collection device to perform at full potential in terms of the state of the art simply because the need for a volume of information and degree of detail cannot be justified beyond a certain point in the light of:

(1) the ultimate purposes for which the information is to be used;

(2) the cost of developing the equipment required to yield an output beyond this point; and

(3) the inability to effectively process information of a given quality in excess of a particular amount without imposing unacceptable costs and intolerable impediments on other programs.

Conclusions:

7. All of this is simply to argue that the Agency has a job of defining its objectives in relationship to major new programs, not only for the programs themselves but in relationship to their role in the entire intelligence system, that there are alternative ways of achieving these objectives and alternative combinations of alternatives that ought to be selected in a way which considers cost, effectiveness, timing and inter-related intelligence activities.

8. This is not to say that systems analysis of Agency programs will be carried out to a great extent through the use of complex models with elaborate calculations. Much of it can be done in a logical way with a minimum amount of quantitative calculation but structured within a systematic framework.

9. Finally, it would not be the responsibility of the management staff to perform the entire analysis function; rather it would be the principal job of the staff to make certain that such analysis is carried out. The staff would provide the professional guidance and methodology for the analysis and whatever assistance and guidance is required to ensure appropriate coordination with interested components of the Agency. This would mean, of course, there should be members of the management staff who are trained and experienced in systems analysis.

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OD/RR: [redacted] (9 Aug 65) 25X1

The Concept of Systems Analysis*

1. Systems analysis might be defined as an inquiry to aid a decision maker choose a course of action by systematically investigating his proper objectives, comparing quantitatively where possible, the costs, effectiveness, and risks associated with the alternative policies or strategies for achieving them and formulating additional alternatives if those examined are found wanting. Systems analysis represents an approach to, or a way of looking at, complex problems of choice under uncertainty, such as those associated with national security. In such problems objectives are usually multiple and possibly conflicting and analysis designed to assist the decision maker must necessarily involve a large element of judgment. 1/

2. The concept of systems analysis is by no means exclusively military but one that is used extensively by managers and engineers of large industrial enterprises such as telephone companies and producers and distributors of electric power. It offers a means of discovering how to design or to make effective use over time of a technologically complex structure in which the different components may have apparently conflicting objectives; that is, an approach to

* All of this material is quoted directly from Analysis for Military Decisions, R-387-PR, November 1964, [redacted] 25X1

25X1 [redacted]

1/ Page 4

choosing a strategy that yields the best balance among risks, effectiveness and costs. Its purpose is to place each element in its proper context so that in the end the system as a whole may achieve its aims with a minimal expenditure of resources.[2/]

3. Systems analysis should be looked upon not as the antithesis of judgment but as a framework which permits the judgment of experts in numerous sub-fields to be utilized -- to yield results which transcend any individual judgment. This is its aim and opportunity.[3/]

4. Decisions pertaining to choices of alternative weapons systems or force structures (or intelligence systems for collection, processing and analysis[4/]) and strategies for their employment are essentially matters for economic choice. Certain elements are common to such problems, although these elements may not always be explicitly utilized by the analyst.

a. The Objective (or Objectives). Systems analysis is undertaken primarily to suggest or, at the very least, to help choose a course of action. This action must have an aim or objective. Policies or strategies, sources or equipment are examined, compared and preferred on the basis of how well and how cheaply they can accomplish the aim or objective.

b. The Alternatives. The alternatives are the means by which it is hoped the objectives can be obtained. They need not be obvious substitutes or perform the same specific functions.

2/ Page 4
3/ Page 23
4/ Insertion not taken from the referenced publication

c. The Costs. Each alternative means of accomplishing the objectives implies the use of specific resources which can then be used for other purposes.

d. A Model (or Models). The model is a representation of the situations under study designed to predict the cost and performance of each alternative. It abstracts the relevant features of the situations by means which may vary from a set of mathematical equations or a computer program to an idealized description of the situations in which judgment alone is used to assess the consequences of various choices.

e. A Criterion. A criterion is a role or test by which one alternative can be chosen in preference to another. It provides a means for using cost and effectiveness to order the alternative.[5]

5. The central theme of this book has been that while model building, which is to say quantitative analysis, can assist the decision maker it must be tempered with experienced judgment and intuitive analysis and cannot entirely replace other approaches but it can help build a framework in which they operate more profitably. It is no magic device to eliminate all uncertainty from decision making and the systems analyst does not believe that he can read the future or that his models will prove a sure guide to tomorrow. He does believe, however, that it is necessary to use all of the available resources of experience, of judgment, of intuition -- and of analysis.[6]

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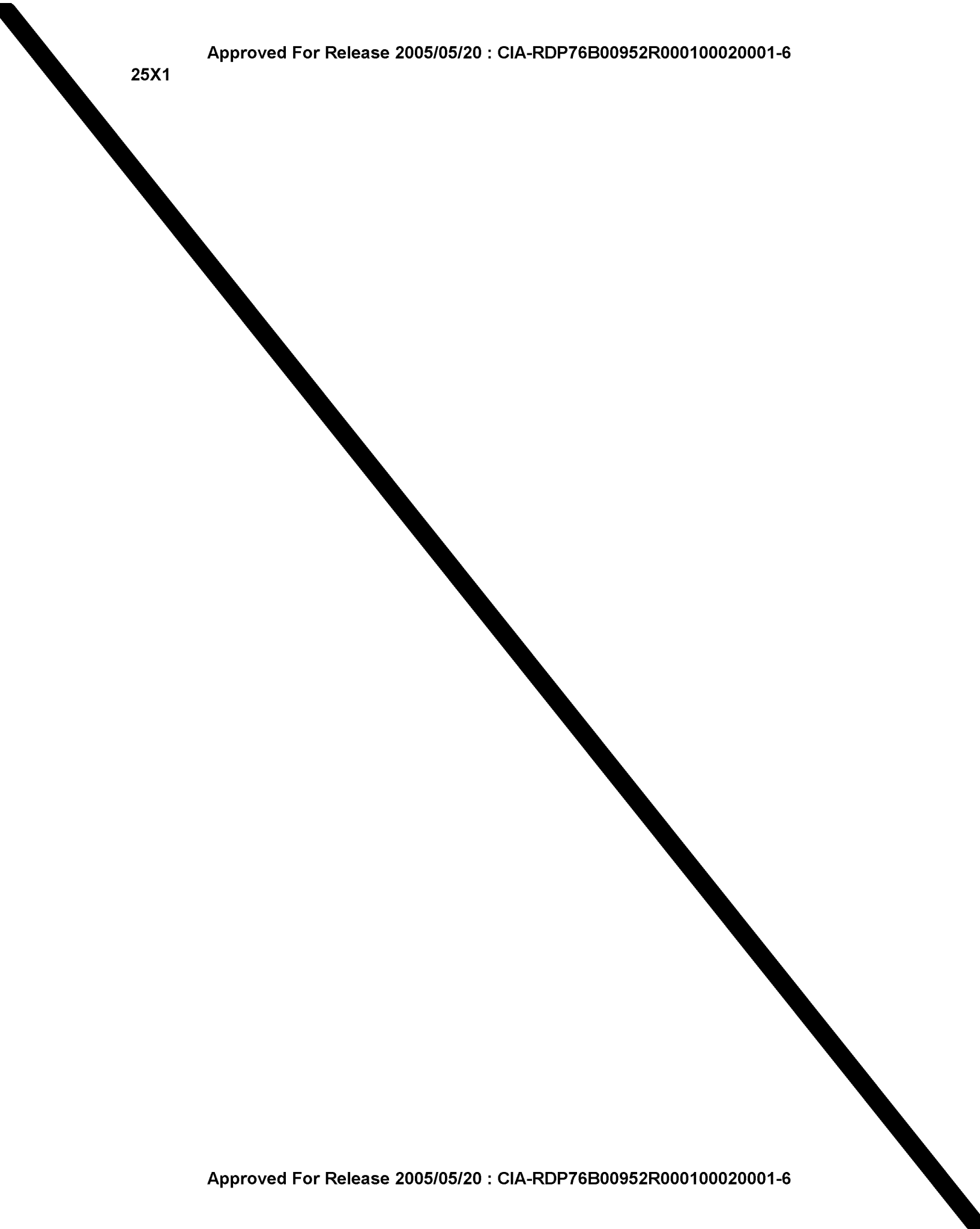

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PG-D-11/2
25 August 1965

AUTOMATIC DATA PROCESSING AND ANALYSIS

I. Discussion

A. The Planning Group has been exposed to facts which argue for the earliest possible employment of Automatic Data Processing techniques in intelligence processing. For example, achievements in photographic reconnaissance, both in the quantity of photography acquired and in the resolution of the product, have created a crisis in image processing and analysis. According to estimates of the National Photographic Interpretation Center, anticipated developments in photographic reconnaissance systems, unless matched by parallel developments in processing and analytical techniques, will by 1970 require that

25X1 NPIC personnel [redacted] and that the NPIC budget [redacted] com- 25X

pared with FY-65. [redacted]

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B. The allocation of additional personnel and additional money will no longer suffice. The highly skilled people required are not available in sufficient numbers to satisfy the needs of CIA alone, much less the anticipated needs of the intelligence community. The CIA can no longer afford the expense of employing brute force techniques for the resolution of problems which may be amenable to the application of advanced technology.

C. The examples we have cited above [redacted] 25X

25X1 [redacted] are typical of what we have come to know as the "data explosion." The problems have been created by preoccupation with collection programs. The "data explosion," in turn, has created an "analysis gap." The clearest evidence that such a gap may exist can be obtained from an examination of the Agency budget. We estimate that whereas approximately

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25X1 [redacted] will be allocated to technical collection programs in 1966, 25X1 [redacted] will be devoted to Automatic Data Processing (ADP), which appears to be the most likely tool for solving some of the critical processing problems which we anticipate.

D. Considerable effort by the Agency has been devoted to the study and analysis of computer applications within CIA. The use of computers in Agency accounting activities and specialized support applications (WALNUT, collection systems engineering and operations, and photographic mensuration) have been going on for some time and plans exist for the implementation of advanced computer programs to intelligence processes. Nevertheless, the effective application of ADP to the intelligence processes has not made sufficient progress due to some misconceptions. It is not true that to employ effectively Automatic Data Processing techniques an analyst must be a computer programmer, or that a successful programmer must acquire significant analytical

25X1 * Includes [redacted] NRO.

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skills. It is not true that the effective utilization of ADP equipment will require organizational adjustment of a disruptive character. While it is advisable to have centralized control of technical knowledge in ADP programs, it is not necessary to centralize control over component computer systems. Yet these contentions, and more appear to have rather wide currency. The man-machine relationship as it will develop through the application of ADP programs to the intelligence process will be its own best denial of the misconception and organizational anxieties arising from them can best be relieved by training and indoctrination of our personnel in the principles and applications of ADP.

E. The past five years of study, debate and the limited application of ADP have effectively paved the way for a more aggressive application of ADP techniques to Agency programs. The program which has been described for the logical and progressive application of ADP is basically valid. However, the schedule should be accelerated and, unless the CIA undertakes to do so on its own initiative, a program may well be imposed

upon us by external elements which will exacerbate those very problems which our conservatism has heretofore sought to minimize.

F. With regard to specific applications, the equipment and techniques now exist for the rapid application of ADP to many management tasks including budget, inventory control, personnel records, contract data, etc. Planning for the application of machine processing to information filing and retrieval is well advanced and its implementation probably can be accelerated. These applications will develop into a capability for data manipulation and then evolve into true analytical programs from which relationships among various types of events and data through the application of correlation techniques can be derived. There will be a necessity for greater utilization of large data bases in analytical programs and for experimentation to develop new processes having direct application to the substantive intelligence activities of the Agency. Hopefully, predictive processes will evolve with time and experience.

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H. The application of machine processing techniques to Agency managerial, operational and intelligence programs probably will develop a momentum which will tend to compress the schedules now envisioned. Such a program must be supported, however, by adequate research programs in intelligence processes, if the program is not to become prohibitively expensive because of false applications and false starts. We believe that, in addition to the investment in qualified personnel and equipment, provision should be made to fund and staff research programs of the following magnitude:

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Research Funding and Manpower Requirements	FY'66	FY'67	FY'68	FY'69	FY'70
Funds ($ million)	[redacted]				
Technical Staff					

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II. Recommendations: It is recommended that:

A. The DCI direct each Deputy Director to review his programs for the application of ADP to his operations and processes as a matter of high priority and to submit within 60 days a phased and costed program.

B. The CIA Planning Staff prepare within 90 days a phased and costed Agency program for ADP, based on Directorate submissions, for review by the Executive Director-Comptroller and approval by the DCI.

C. The Deputy Director for Science and Technology be directed by the DCI to implement the approved Agency ADP program as executive agent and to act as Chairman of an ADP executive coordination committee consisting of the Deputy Directors concerned. The committee should report to the DCI quarterly.

D. The DD/S&T establish and staff an intelligence sciences laboratory to study and apply on an experimental basis new techniques in ADP and analysis to Agency programs as a service of common concern.

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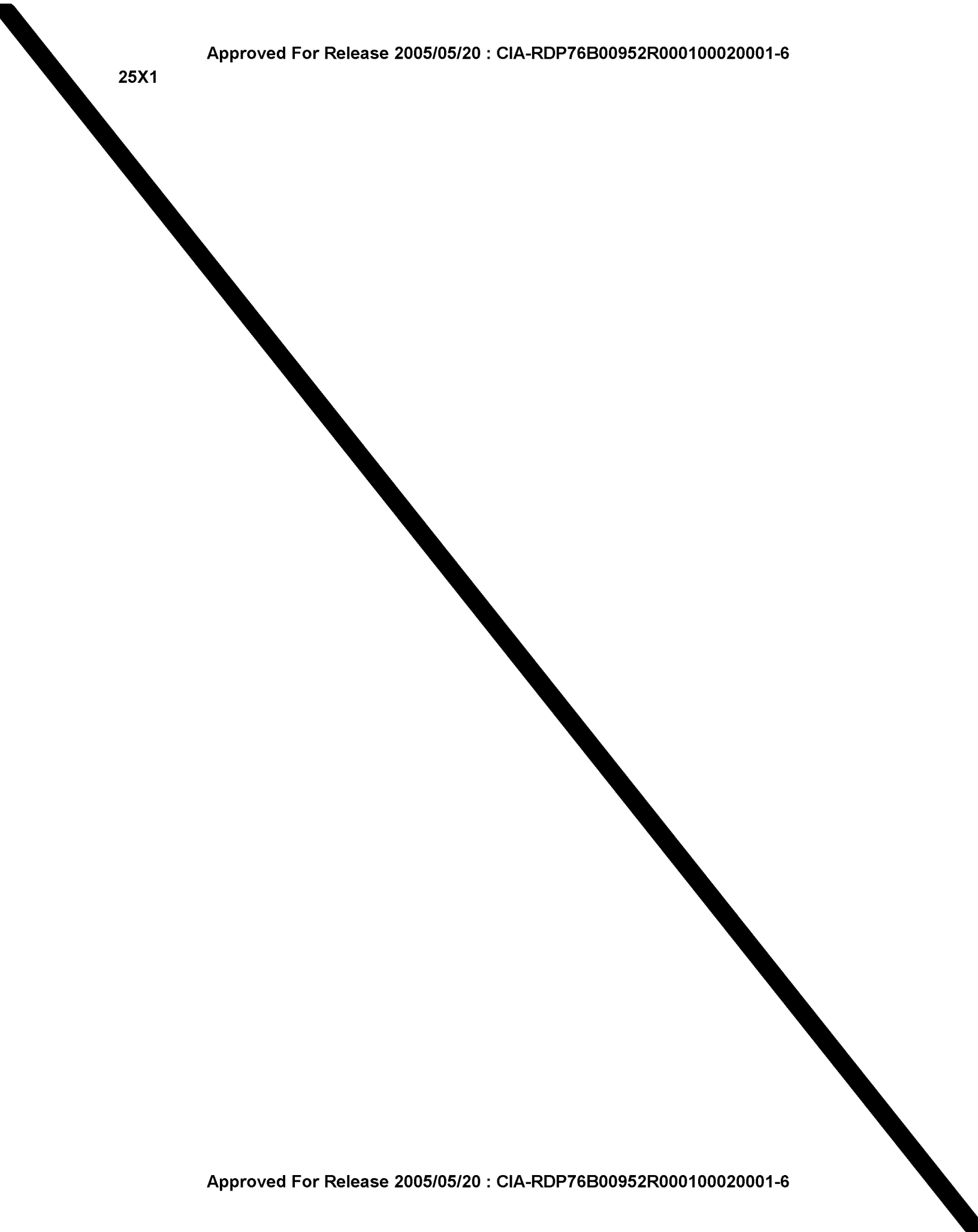

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PG-D-11/1
16 August 1965

MEMORANDUM FOR: Planning Group

SUBJECT : Automatic Data Processing

1. In the course of its deliberations, the Planning Group has been exposed to facts which appear to argue for the earliest possible employment of Automatic Data Processing techniques in intelligence processing. Notwithstanding the large effort which has been devoted to the study and analysis of computer applications, the use of computers in Agency accounting activities and specialized support applications (WALNUT, collection systems engineering and operations and photographic mensuration), and the plans which exist for the orderly (and somewhat leisurely) implementation of advanced computer programs to intelligence processes, we have been impressed with the number and the character of problems which have been identified of immediate concern which appear to be most amenable to solution by automatic data processing techniques.

2. For example, achievements in photographic reconnaissance, both in the quantity of photography acquired and in the resolution of the product, have created a crisis in image processing and analysis. According to estimates of the National Photographic Interpretation Center, anticipated developments in photographic reconnaissance systems, unless matched by parallel developments in processing and analytical techniques, will by 1970 require that NPIC personnel requirements [redacted] and that the NPIC budget [redacted] compared with FY-65.

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SUBJECT: Automatic Data Processing

3. We believe that the classical reaction to problems such as these, which involves the allocation of additional personnel and additional money, will no longer be possible or desirable. The highly skilled people required for these programs are not available in sufficient numbers to satisfy the needs of CIA alone, much less the anticipated needs of the intelligence community, and it is clear that the CIA can no longer afford the luxury of employing brute force techniques for the resolution of problems which are to a large extent amenable to resolution by the application of advanced technology.

4. The examples we have cited above [redacted] 25X
25X1 [redacted] are typical of what we have come to know as the "data explosion." The problems have been created in large measure by the historic preoccupation of the intelligence community with collection programs and their successful resolution. However, faced with the consequences of a "data explosion" we are now anticipating a "processing gap." The clearest evidence that such a gap may exist can be obtained from an examination of the Agency budget. We estimate that whereas approximately $___ million will be allocated to advanced collection programs in the period 1966 through 1970, only $___ million, according to present plans, will be devoted to Automatic Data Processing (ADP), which appears to be the most likely tool for solving some of the critical processing problems which we anticipate.

5. The effective application of ADP to the intelligence processes are being delayed by a number of myths. It is not true that to effectively employ or utilize Automatic Data Processing techniques an analyst must be a computer programmer, or that a successful programmer must acquire significant analytical skills. It is not true that the broad application of machine techniques will necessarily result in fewer analysts or supporting personnel. It is not true that the effective utilization of ADP equipment will require organizational adjustment of a disruptive character. Yet, these contentions, and more, appear to have rather wide currency. We are convinced that the man-machine relationship as it will develop

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SUBJECT: Automatic Data Processing

through the application of ADP programs to the intelligence process will be its own best denial of the myths and that the organizational anxieties arising from them can best be relieved by training and indoctrination of our personnel in the principles and applications of ADP.

6. The past five years of study, debate and the limited application of ADP have effectively paved the way for a more aggressive application of ADP techniques to Agency programs. The program which has been described for the logical and progressive application of ADP is basically valid. However, we are convinced that the schedule should be dramatically accelerated and that, unless the CIA undertakes to do so on its own initiative, a program will be imposed upon us by external elements which will exacerbate those very problems which our conservatism has heretofore sought to minimize. To do so efficiently will require the appointment of a highly qualified and experienced individual to oversee, direct and guide the implementation of ADP to the processes and programs of the CIA. To function effectively such an individual should be responsible to, and derive authority directly from, the DCI. He should not, in our view, attempt to implement and coordinate these programs from the Directorate level. In addition to his role as a policy advisor to the DCI on ADP, he should have authority to approve all ADP programs and expenditures of the Agency.

7. With regard to specific applications, we believe that equipment and techniques now exist for the rapid application of ADP to many management tasks including budget, inventory control, personnel records, contract data, etc. Planning for the application of machine processing to information filing and retrieval is well advanced and its implementation probably can be accelerated. We would expect these applications rapidly to develop into a capability for data manipulation and then to evolve into true analytical programs from which relationships among various types of events and data through the application of correlation techniques can be derived. We foresee the opportunity

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SUBJECT: Automatic Data Processing

to utilize large data bases and analytical programs in the development of true predictive processes possessing a high degree of confidence and reliability and having direct application to the current intelligence and indications intelligence activities of the Agency.

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9. The application of machine processing techniques to Agency managerial, operational and intelligence programs probably will develop a momentum which will tend to compress the most optimistic schedules which we can now envision. Such a program must be supported, however, by an adequate basic and applied research program in intelligence processes, if the program is not to become prohibitively expensive because of false applications and false starts. We believe that, in addition to the investment in qualified personnel and equipment, provision should be made to fund and staff research programs of the following magnitude:

Funding and Manpower Requirements	FY'66	FY'67	FY'68	FY'69	FY'70
Funds ($ million)	[redacted]				
Technical Staff					

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10. Recommendations: Accordingly, we recommend the following:

a. The appointment of an advisor to the DCI on ADP programs with responsibility for all ADP projects, programs and funding approval.

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SUBJECT: Automatic Data Processing

b. The implementation of all ADP programs capable of being immediately employed by the Agency.

c. The acceleration of current schedules for ADP to compress significantly the lead times now envisaged for short, mid- and long-range applications.

d. The augmentation of basic and applied research programs in intelligence processes.

e. The approval of funding programs to assure the availability of financial assets adequate for the accelerated programs.

f. The establishment of Agency-sponsored or in-house training programs on ADP to more effectively employ available ADP assets and to prepare for the acceptance of more extensive applications.

g. The early recruitment and/or training of ADP staffs adequate to support the programs recommended above.

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AUTOMATIC DATA PROCESSING

The term Automatic Data Processing will be understood to include machine manipulations of all kinds and extend from very simple data processing tasks through complex and sophisticated analysis procedures.

Equipment and techniques are now well developed for application to most management tasks. These include such things as maintaining budgets, inventory control, and similar functions.

We are currently in the process of applying machine processing to information filing and retrieval. As these processes are used by various elements of the Agency, it may be anticipated that further application of these techniques will occur.

While the foregoing tasks have been considered to lie primarily in the domain of data processing, we may expect this work will develop some capability for data manipulation. This will involve various kinds of indexing, and filing, and retrieval in ways which were perhaps not originally foreseen as desirable or possible. This type of manipulation may also be regarded as analytical in nature. At the present time, identification of analytical tasks is lagging the technical ability to perform this type of work.

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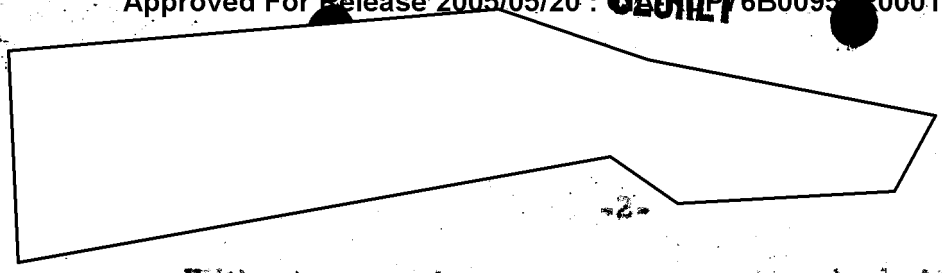

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Without regard to sequence, several analysis tasks can be identified. These tasks should be defined and structured as rapidly as possible so that currently available techniques can be brought to bear significantly on them. Intelligence research can be performed on data which could not be adequately manipulated in the past due to the magnitude of the data base involved. In particular, such research can derive relationships among various types of events and data through the application of correlation techniques. This work can be combined with war gaming and provide a basis for the generation of artificial or predictive intelligence. The results obtained through predictive and artificial intelligence can then be checked in real time, and weighing adjustment made to various factors. Thus artificial intelligence, and the programming techniques used, may be improved with respect to confidence and reliability.

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At the present time our use of ADP seems to lie somewhere between information retrieval and the initial stages of data manipulation. In some equipment currently under procurement, real time analysis and evaluation of data is being used. 25X1

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The great need at the moment is for identification of the ADP applications in specific terms. For example, initial scanning of satellite photography might be accomplished through a combination of pattern recognition and machine data manipulation techniques. However, a very powerful effort will be required in order to bring the definition of the requirements, as well as the potential and limitations of these techniques against this problem, into concrete terms. It is evident that a coordinated Agency effort in the application of ADP is required: it is equally evident that the details of the needs can only be formulated by the intelligence specialist involved. Only logistics experts can realistically estimate the different forms in which management data may be required; only ORR economists can estimate the total number of relevant factors for predictive operations, etc.

Management decisions on whether or not actual computer hardware would be centrally controlled, or whether computer hardware would rest with various sub organizations, appears to be trivial in terms of the basic problem and should not be allowed to confuse the difficult decisions 25X1

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that need to be resolved and implemented now to apply ADP processes. Security of information also should not be a stumbling block to progress in this area since adequate safeguards can be provided as required.

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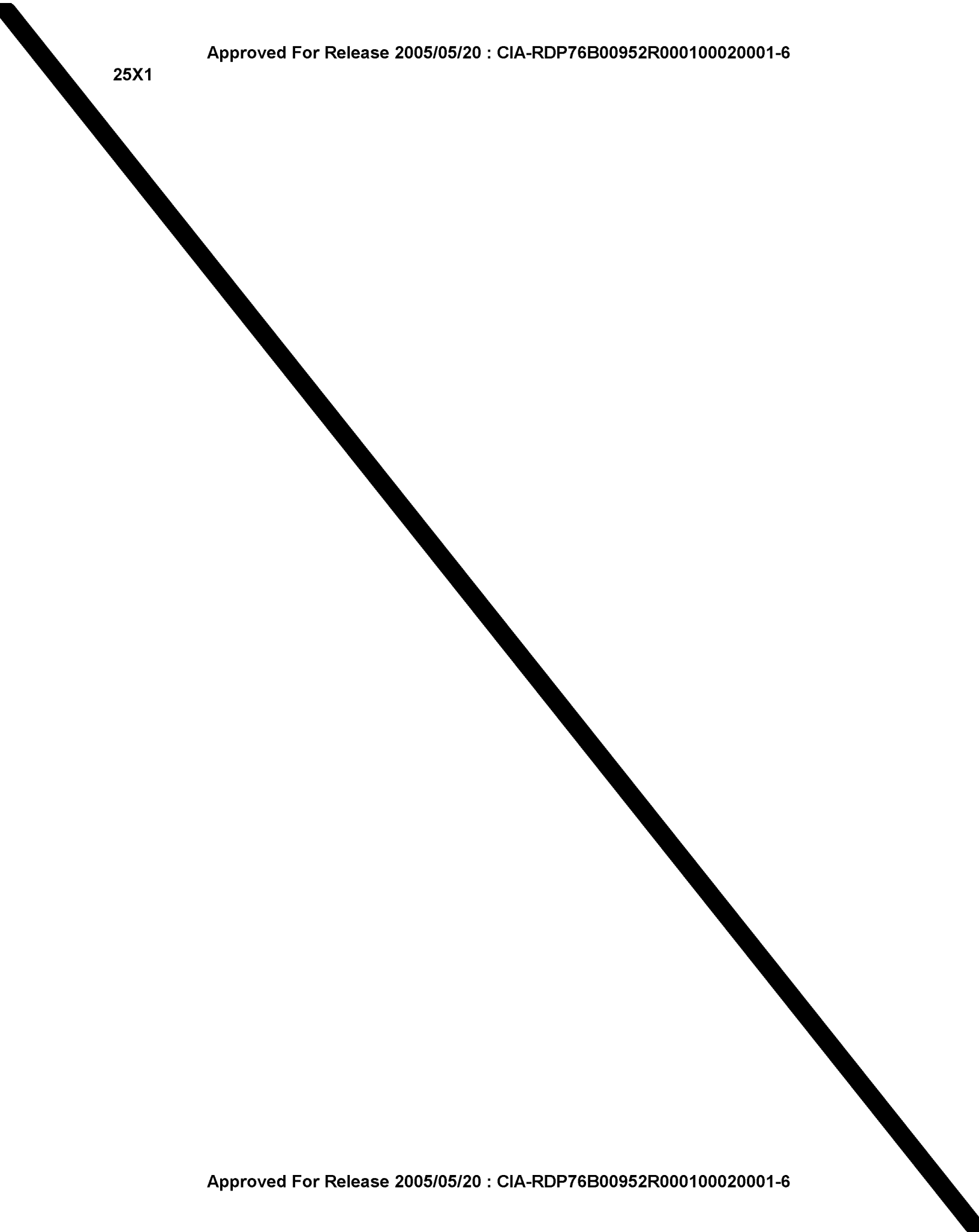

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OVERHEAD RECONNAISSANCE

I. Requirements and Systems Integration

A. The Director of Central Intelligence with the advice and assistance of the United States Intelligence Board (USIB) has the responsibility to establish requirements for present systems operationally employed and for future systems, including the timing of their collection to be responsive to intelligence. These requirements must reflect our needs not only for strategic intelligence but also for early warning. Perhaps because of the nature of the collection devices, the DCI and the Board have a notable record of effective control over the last ten years. This has been true because this collection system lends itself to very direct guidance. But it is also unquestionably true that the participation of the DCI and the Board in this matter has been because of the sizeable costs involved, political and physical risks, and the very high productivity with its impressive impact on intelligence research and estimates of major concern to the policymakers. Whatever the reasons, this control must be continued and strengthened, being adapted to meet the ever changing demands of more sophisticated collection mechanisms.

B. The Board's concern, however, has lagged in taking into account the full impact once the results of the collection are available. True, the DCI and the Board did agree to establish a National Photographic Interpretation Center under NSCID 8, making what was previously an Agency facility more directly responsive to the needs of the community.

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Individually some agencies of the Government have engaged in extensive construction and development of photographic interpretation centers to meet their departmental needs

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But our projections for the future clearly show there must be a more vigorous effort toward resolving the various factors which contribute to our predicted inability to handle the massive amount of information which is portended for the future. These factors include the formating of the information at the time of collection so that it may be integrated with previous materials and exploited by available hardware, the development and application of automatic data processing and other automation techniques to readout functions, and the coordination of the output of processing and exploitation for maximum efficient use by analysts. In the future, cost-effectiveness studies will have to be employed to aid the Board in discharging its responsibilities with full impact at the appropriate time.

II. Operations

A. The U-2 experience especially from 1955 to 1960, the first contemporary project of this Government in the overflight of denied areas of major and comprehensive significance, was a joint CIA-U.S. Air Force project under the executive direction of the CIA. All factors seem to

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point to the management relationship which was developed at that time by individuals in control in CIA (Mr. Dulles, General Cabell, and Mr. Bissell) whose background, experience, and talents were an important element in making that arrangement work.

B. We have tended to generalize this experience to all overhead reconnaissance without taking proper account of the unique factors at work.

C. Again, the transfer of CORONA responsibility to the Agency at the termination of SAMOS was an extension of the management arrangements functioning in the U-2 case, a very heavy factor being the necessity to conduct the CORONA program as covertly as possible. However, the need was seen at that time and toward the end of Mr. Bissell's stay to establish a national reconnaissance organization because of the obvious expansion of the Government's efforts in space fields bearing on reconnaissance. The plan extended the jointness then existing between CIA and the USAF, and therefore was still hydraheaded. It might have worked to our satisfaction with

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Mr. Bissell at the head. But when he departed, there being no noteworthy and logical candidate of his station from the Agency, the executive agency leadership understandably gravitated to the USAF (Department of Defense) which had, while chafing (but tolerating) the U-2/CORONA arrangement, always felt that the management of such projects was essentially DoD business, most particularly Air Force. Apart from the Air Force's historic role in the air, DoD assets were essential and the largest sums of money involved were directly related to installations and hardware normally their province.

D. If there is to be a national reconnaissance organization, it must be subject to the direction of the Secretary of Defense and the Director of Central Intelligence. The latter must be in a position to exercise an influence in the operational circumstances of the NRO and this can be achieved without CIA, under his direction, operating all of the overflight programs. In this he gains additional strength from his responsibilities to the President and as Chairman of the Board in defining requirements and in exercising influence in the selection and use of reconnaissance capabilities. In the latter regard, it is a fair

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conclusion that the U-2 has been under the collection control of the Board except for the brief period in late 1962 and the recent situation in Southeast Asia. However, it is to be noted that even when SAC (not CIA) has been overflying Cuba it has been subject to the Board's control to the degree necessary. It is quite clear that the control of KH-4 and KH-7 since the early stages of the operational status of each has been directly controlled by the Board.

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E. The OXCART research and developmental stages seem in retrospect at those times and in those conditions to have been entirely a proper assignment to CIA. We doubt it will fly over Russia. It will probably fly over China and at that time it may well be that all the factors point to CIA management. It is quite likely that it will fly over many other areas of the world which cannot be construed as denied in the same sense as the USSR and China. And it may well be that there is no good reason why in those instances it needs to be operated by CIA.

F. It is proper and highly desirable that the Agency took the initiative in the development of ISINGLASS, but whether it needs to

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be operated by the Agency, if indeed it is to become operational, is not clear.

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I. The determination of operational responsibilities in the field of overflight reconnaissance cannot be judged from history alone nor from the claims regarding the relative bureaucratic excellence of the DoD or the CIA. In each case there will be required a reasoned examination of the factors obtaining at the time and a decision based on this process. The Secretary of Defense and the Director of Central Intelligence will always be confronted with claims of their respective departments. And these they will always have to resist in reaching a conclusion which is most viable and profitable for the United States Government. Their leadership and the climate of discussion which

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they establish and which they insist must prevail, will go far to make it possible for the DoD and the CIA to work closely together which is obviously essential.

III. Research and Development (R&D)

A. In strategic overhead reconnaissance, experience since 1955 (the development of the U-2) has amply demonstrated that the Director must maintain a capability in CIA for research and development in sensors and associated platforms to provide him with a dependable source of new and advanced ideas, to evaluate new proposals from any source, and to insure sufficient competiton to permit choices. The Agency has a good research and development record both in terms of the fruitfulness of ideas and of the speed with which they have been brought to fruition. The research and development for the U-2, the

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B. The concept that the Director should have an R&D organization under his control involved in this area of research is generally accepted. The present concept of funding for it, however, is not satisfactory. Research and development of ideas up to the point where they can be subjected to competitive examination or to cost-effectiveness analysis should not be, as it is now, subject to exclusive funding control by an outside source such as the NRO. It is imperative either that the funding for the Agency's R&D in this field should be established in its budget or that some greater flexibility in our relations with the NRO must be achieved.

IV. Recommendations: That the mission role of the Central Intel- Agency in strategic overhead reconnaissance programs is as follows:

A. To support the Director of Central Intelligence and the United States Intelligence Board

1. In establishing the requirements and timing for on-going systems,

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2. In selecting the systems which will provide maximum intelligence benefit with maximum economy, and

3. In insuring that the products of new systems provide materials and information in a form and with a timeliness which will permit effective use and integration with the products of other sources.

B. To operate overhead reconnaissance systems by assignment where specific considerations demand.

C. To fund and engage in research and development in sensors and associated platforms which can collect information from overhead, whether from a manned or unmanned vehicle. (This is not an exclusive assignment inasmuch as other agencies of the Government, specifically DoD agencies, will also be so engaged.)

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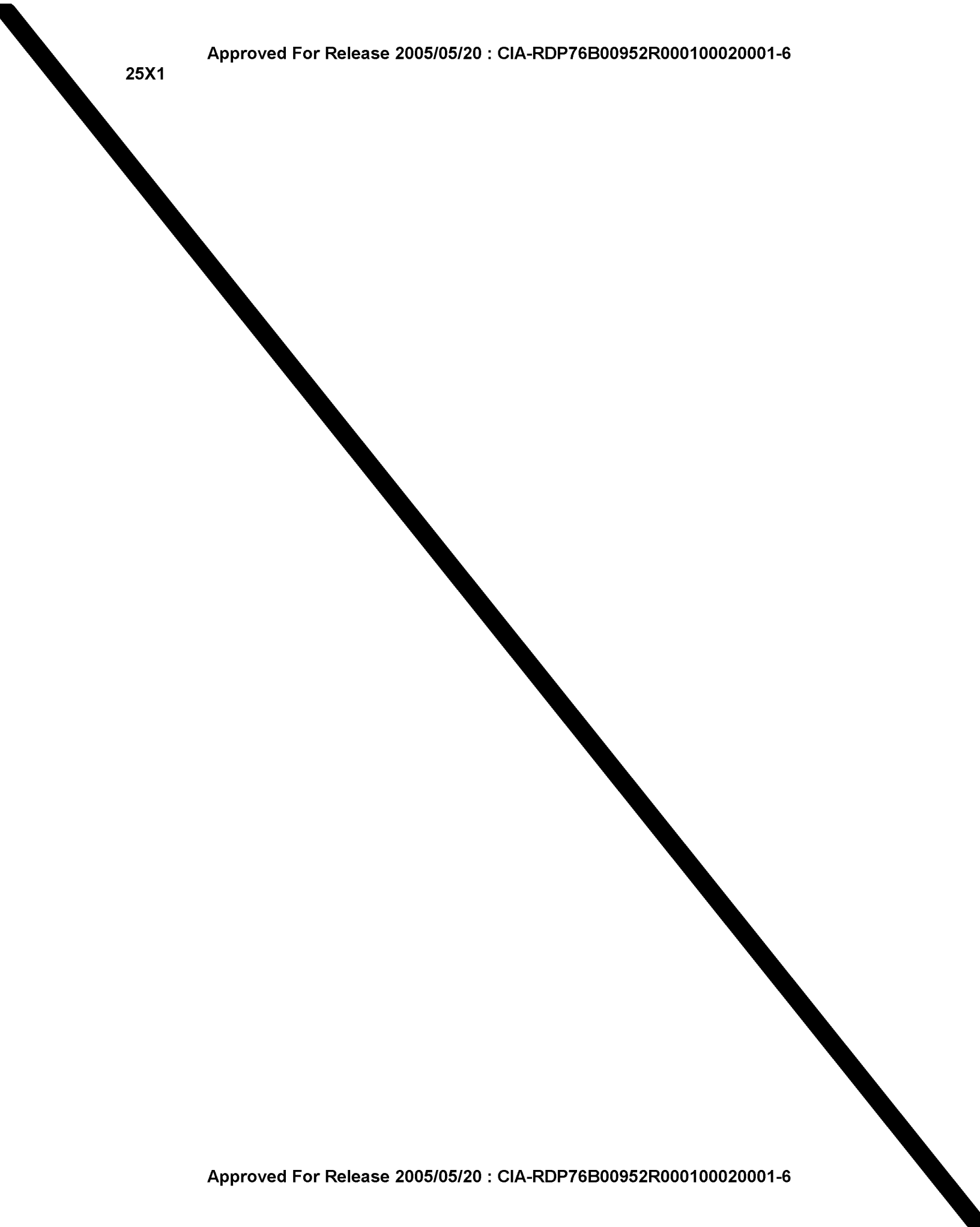

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PG-D-10/1

14 August 1965

MEMORANDUM FOR: Planning Group

SUBJECT: Overhead Reconnaissance

Attached is the revised version of PG-D-10 prepared by Mr. Reber. Please include this document in your package for discussion during the semi-finals.

[redacted]
Executive Secretary

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Attachment
Subject Document

Copies
1 Ch/PG
2-4 DD/S
5-8 DD/I
9, 10 DD/P
11-13 DD/S&T
15-18 BPAM
19 NIPE
20, 21 C/Staff

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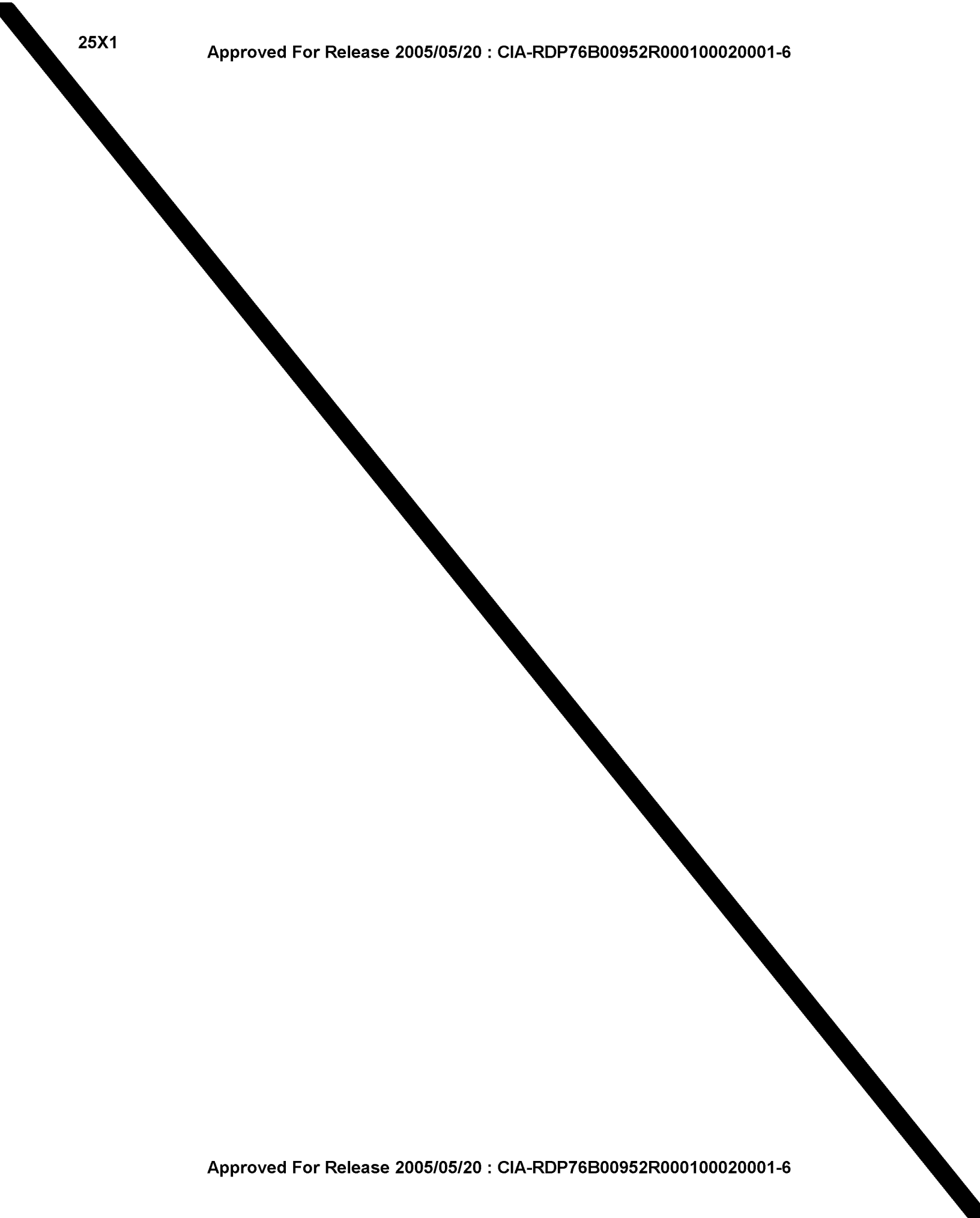

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(2) In selecting the systems which will provide maximum intelligence benefit with maximum economy, and

(3) In insuring that the products of new systems provide materials and information in a form and with a timeliness which will permit effective use and integration with the products of other sources.

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Discussion

Research and Development (R&D)

1. The Director of Central Intelligence and the Central Intelligence Agency must be appropriately involved in the development of intelligence collection systems and their application if the DCI is to discharge his responsibility to the President and the National Security Council. The degree of involvement will vary with the nature of the collection system, its importance in terms of political and physical risk, cost, and productivity.

2. In strategic overhead reconnaissance, experience since 1955 (the development of the U-2) has amply demonstrated that the Director must maintain a capability in CIA for research and development in sensors and associated platforms to provide him with a dependable source of new and advanced ideas, to evaluate new proposals from any source, and to insure sufficient competition to permit choices. The Agency has a good research and development record both in terms of

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funding for the Agency's R&D in this field should be established in its budget or that some greater flexibility in our relations with the NRO must be achieved.

Operations

4. The U-2 experience especially from 1955 to 1960, the first contemporary project of this Government in the overflight of denied areas of major and comprehensive significance, was a joint CIA-U.S. Air Force project under the executive direction of the CIA. All factors seem to point to the management relationship which was developed at that time by individuals in control in CIA (Mr. Dulles, General Cabell, and Mr. Bissell) whose background, experience, and talents were an important element in making that arrangement work.

5. We have tended to generalize this experience to all overhead reconnaissance without taking proper account of the unique factors at work.

6. Again, the transfer of CORONA responsibility to the Agency at the termination of SAMOS was an extension of the management

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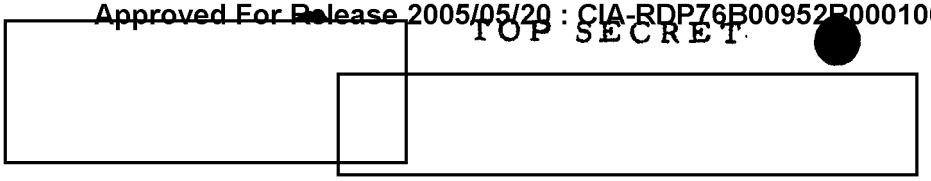

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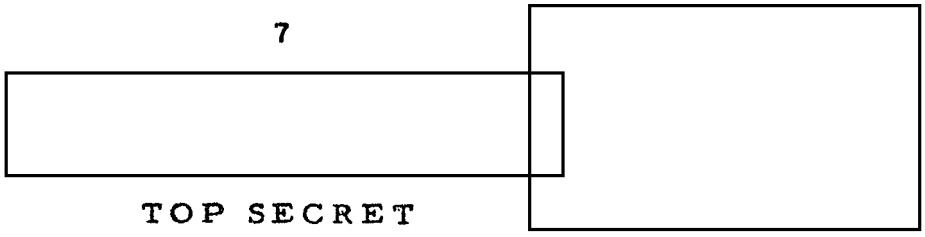

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7. Leaving aside hot war, there can be no question but what all the factors point clearly to the necessity for a continuation of the control of the National Reconnaissance Organization by the Secretary of Defense and the Director of Central Intelligence. The latter must be in a position to exercise an influence in the operational circumstances of the NRO and this can be achieved without CIA, under his direction, operating all of the overflight programs. In this he gains additional strength from his responsibilities to the President and as Chairman of the Board in defining requirements and in exercising influence in the selection and use of reconnaissance capabilities. In the latter regard, it is a fair conclusion that the U-2 has been under the collection control of the Board except for the brief period in late 1962 and the recent situation in Southeast Asia. However, it is to be noted that even when SAC (not CIA) has been overflying Cuba it has been subject to the Board's control to the degree necessary. It is quite clear that the control of KH-4 and KH-7 since the early stages of the operational status of each has been directly controlled by the Board. [redacted]

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8. The OXCART research and developmental stages seem in retrospect at those times and in those conditions to have been entirely a proper assignment to CIA. We doubt it will fly over Russia. It will probably fly over China and at that time it may well be that all the factors point to CIA management. It is quite likely that it will fly over many other areas of the world which cannot be construed as denied in the same sense as the USSR and China. And it may well be that there is no good reason why in those instances it needs to be operated by CIA.

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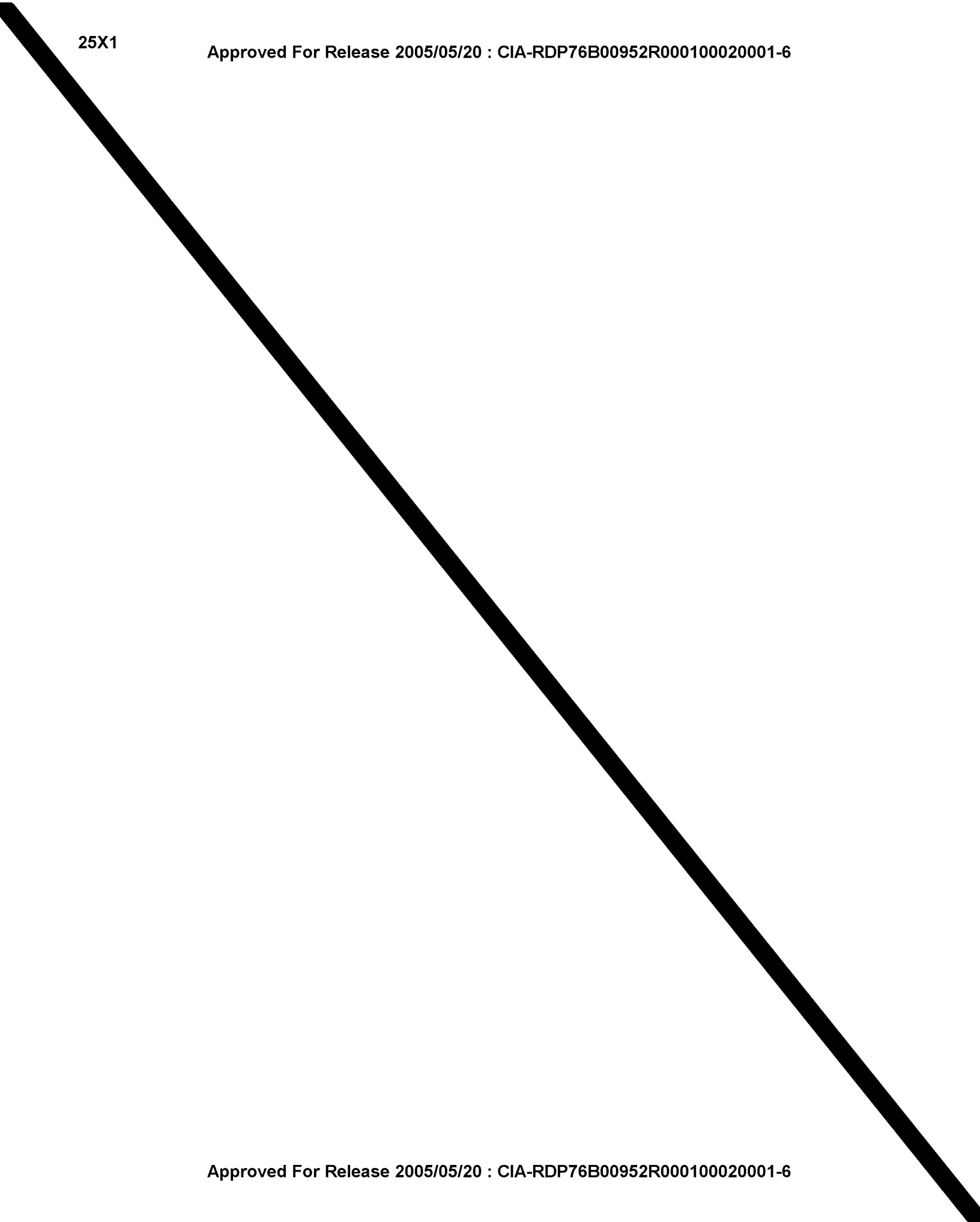

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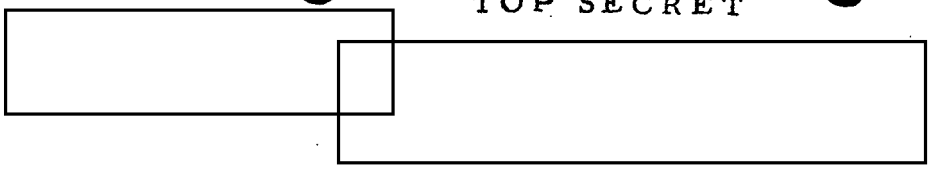
12. The determination of operational responsibilities in the field of overflight reconnaissance cannot be judged from history alone nor from the claims regarding the relative bureaucratic excellence of the DoD or the CIA. In each case there will be required a reasoned examination of the factors obtaining at the time and a decision based on this process. The Secretary of Defense and the Director of Central Intelligence will always be confronted with claims of their respective departments. And these they will always have to resist in reaching a conclusion which is most viable and profitable for the United States Government. Their leadership and the climate of discussion which they establish and which they insist must prevail, will go far to make it possible for the DoD and the CIA to work closely together which is obviously essential.

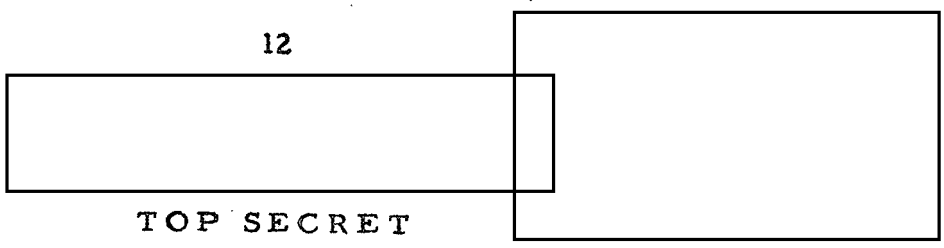
Requirements and Systems Integration

13. The discussion above has referred to the importance of the control by the DCI and the Board of the requirements against which systems are developed and operationally employed, including the



timing of their collection to be responsive to intelligence. Perhaps because of the nature of the collection devices, the DCI and the Board have a notable record of effective control over the last ten years. This has been true because the nature of this collection system lends itself to very direct guidance. But it is also unquestionably true that the participation of the DCI and the Board in this matter has been because of the sizeable costs involved, political and physical risks, and the very high productivity with its impressive impact on intelligence research and estimates of major concern to the policy makers. Whatever the reasons, this control must be continued and strengthened, being adapted to meet the ever changing demands of more sophisticated collection mechanisms.

14. The Board's concern, however, has lagged in taking into account the full impact once the results of the collection are available. True, the DCI and the Board did agree to establish a National Photographic Interpretation Center under NSCID 8, making what was previously an Agency facility more directly responsive to the needs of the



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community. Individually some agencies of the Government have engaged in extensive construction and development of photographic interpretation centers to meet their departmental needs [redacted] 25X

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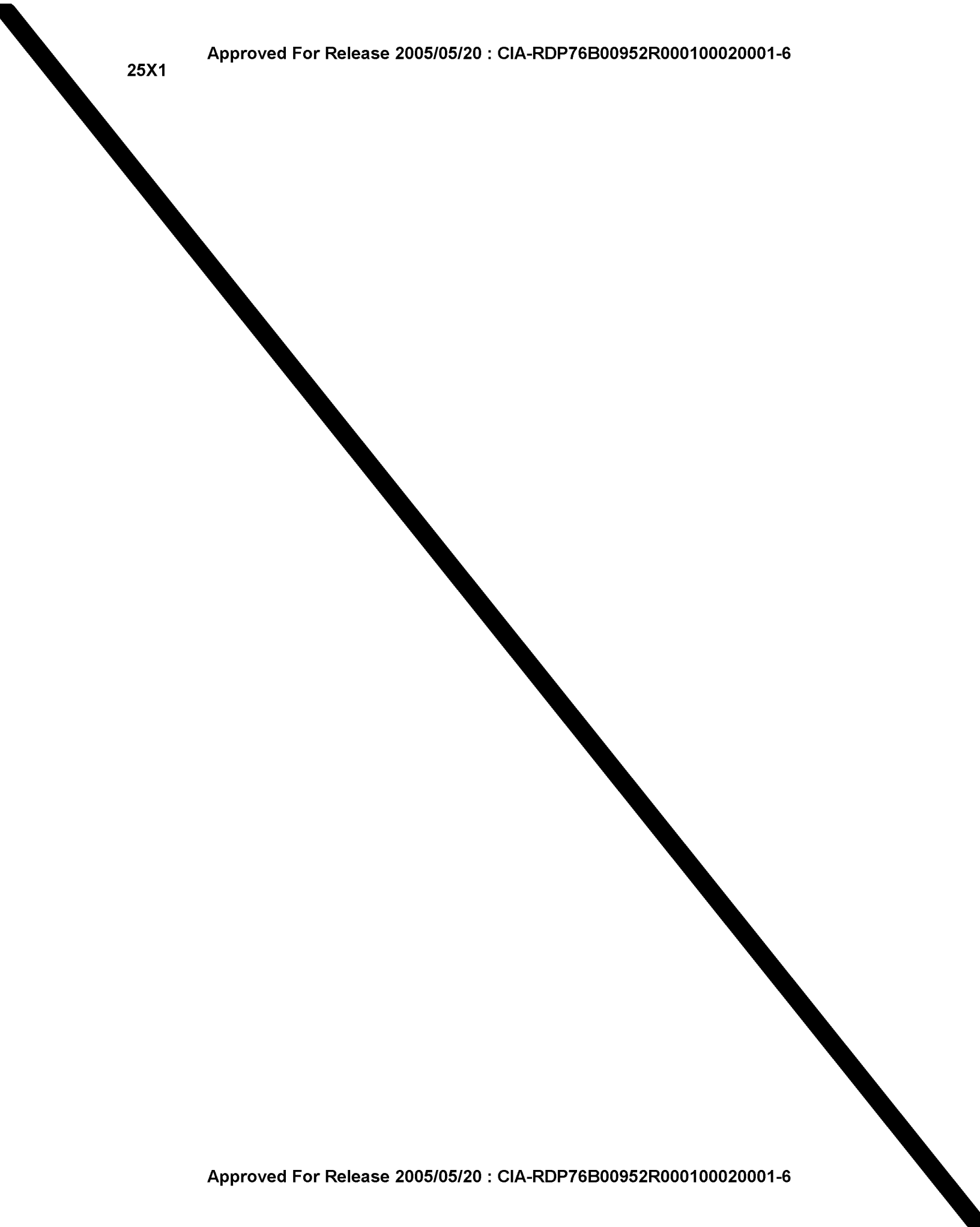

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9 August 1965

MEMORANDUM FOR: Planning Group

SUBJECT: Overhead Reconnaissance

1. The mission and role of the Agency in strategic overhead reconnaissance programs is as follows:

a. To engage in research in sensors of every sort which can collect information from overhead, whether from a manned or unmanned vehicle. (This is not an exclusive assignment inasmuch as other agencies of the Government, specifically DoD agencies, will also be so engaged.)

b. By assignment, to carry on the development of projects emerging from a or on projects the research for which has been done by the military but development has been discontinued.

c. By assignment where specific considerations demand, to operate systems.

d. To support the Director of Central Intelligence and the United States Intelligence Board in establishing the

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requirements for on-going systems and to aid them in selecting the systems which will provide maximum intelligence benefit with maximum economy.

2. Comment: The DCI and the USIB must exercise ultimate control over the selection and employment of overhead reconnaissance systems to meet overhead intelligence requirements. This does not mean that to achieve control the CIA under the direction of the DCI must perform the research, the development, and the operations. This would only be possible through a vast expansion of the Agency's funds and personnel. There are far too many existing military programs, facilities, and installations to warrant such a budgeting arrangement. There are today and there no doubt will be in the future selected instances in which all of these functions, or almost all of them, will have to be performed by the Agency. They should be however, where a confluence of factors point to the Agency as the most appropriate Government unit for this purpose.

3. Discussion: The U-2 experience especially from 1955 to 1960, the first contemporary project of this Government in the overflight of denied areas of major and comprehensive significance, was a joint CIA-U.S. Air project under the executive direction of the CIA. All factors

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seem to point to the management relationship which was developed at that time by individuals in control in CIA (Mr. Dulles, General Cabell, and Mr. Bissell) whose background, experience, and talents were an important element in making that arrangement work.

4. We have tended to generalize this experience to all overhead reconnaissance without taking proper account of the unique factors at work.

5. Again, the transfer of CORONA responsibility to the Agency at the termination of SAMOS was an extension of the management arrangements functioning in the U-2 case, a very heavy factor being the necessity to conduct the CORONA program as covertly as possible. However, the need was seen at that time and toward the end of Mr. Bissell's stay to establish a national reconnaissance organization because of the obvious expansion of the Government's efforts in space fields bearing on reconnaissance. The plan extended the jointness then existing between CIA and the USAF, and therefore was still hydraheaded. It might have worked to our satisfaction with Mr. Bissell at the head. But when he departed, there being no noteworthy and logical candidate of his station from the Agency, the executive agency leadership understandably gravitated to the USAF (Department of Defense) which had, while chafing (but tolerating) the U-2

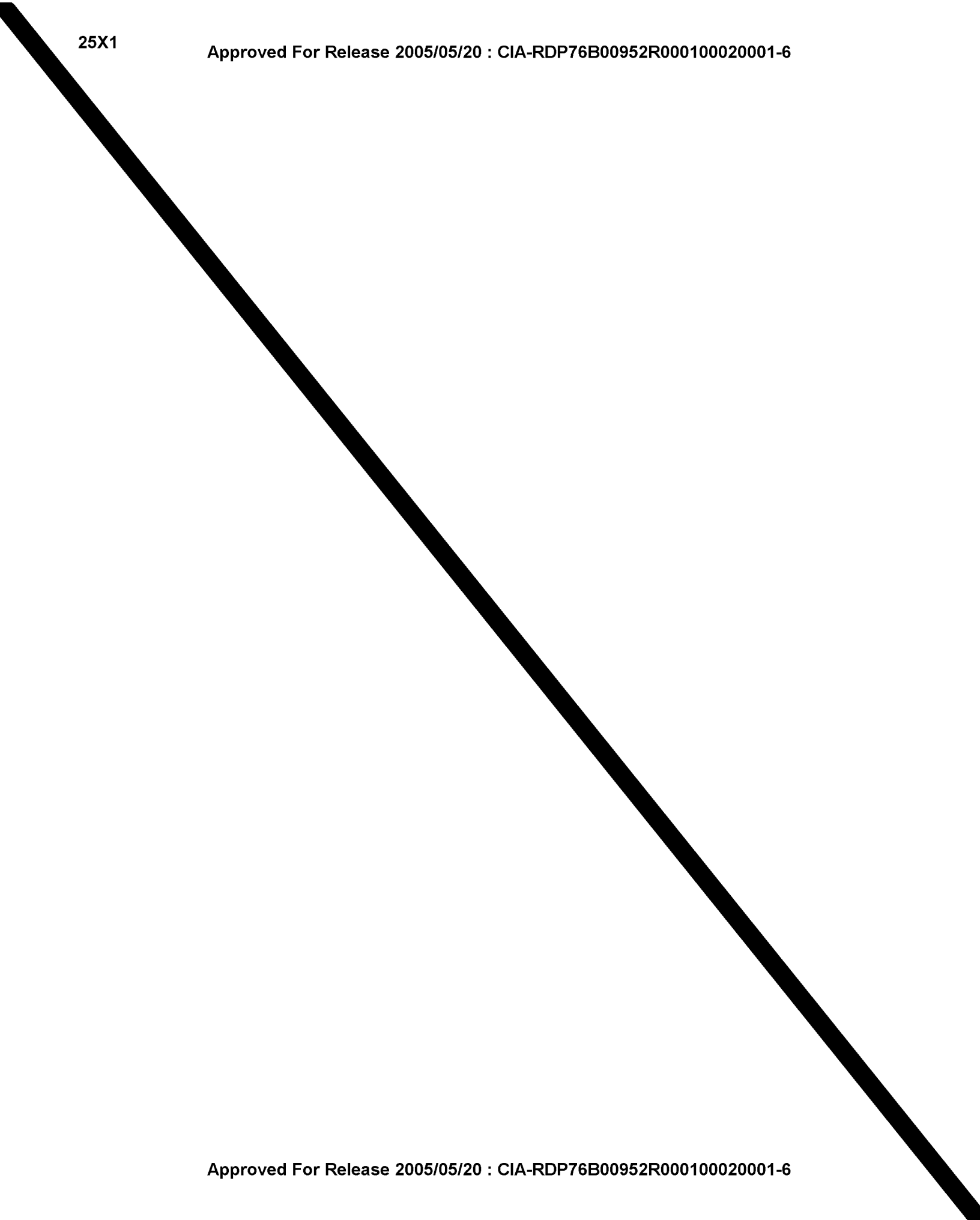
CORONA arrangement, always felt that the management of such projects was essentially DoD business, most particularly Air Force. Apart from the Air Force historic role in the air, DoD assets were essential and the largest sums of money involved were directly related to installations and hardware normally their province.

6. Leaving aside hot war, there can be no question but what all the factors point clearly to the necessity for a continuation of the control of the National Reconnaissance organization by the SecDef and the DCI. The latter must be in a position to exercise an influence in the operational circumstances of the NRO and this can be achieved without CIA, under his direction, operating all of the overflight programs. In this he gains additional strength from his responsibilities to the President and as Chairman of the Board in defining requirements and in exercising great influence in the selection and use of reconnaissance capabilities. In the later regard, it is a fair conclusion that the U-2 has been under the collection control of the Board's or its agent, COMOR, except for the brief period in late 1962 and the recent situation in Southeast Asia. However, it is to be noted that even when SAC (not CIA) has been overflying Cuba it has been subject to the Board's control to the degree necessary. It is quite clear

25X1 that the control of KH-4 and KH-7 since the early stages of the operational status of each has been directly controlled by the Board (or COMOR). 25X

7. The OXCART research and developmental stages seem in retrospect at those times and in those conditions to have been entirely a proper assignment to CIA. We doubt it will fly over Russia. It will probably fly over China and at that time it may well be that all the factors point to CIA management. It is quite likely that it will fly over many other areas of the world which cannot be construed as denied in the same sense as the USSR and China. And it may well be that there is no good reason why in those instances it needs to be operated by CIA.

8. It is proper and highly desirable that the Agency took the initiative in the development of ISINGLASS, but whether it needs to be operated by the Agency, if indeed it is to become operational, is not clear.



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11. The determination of operational responsibilities in the field of overflight reconnaissance cannot be judged from history alone nor from the claims regarding the relative bureaucratic excellence of the DoD or the CIA. In each case there will be required a reasoned examination of the factors obtaining at the time and a decision based on this process. The Secretary of Defense and the Director of Central Intelligence will always be confronted with claims of their respective departments. And these they will always have to resist in reaching a conclusion which is most viable and profitable for the United States Government. Their leadership and the climate of discussion which they establish and which they insist must prevail, will go far to make it possible for the DoD and the CIA to work closely together which is obviously essential.

J. Q. Reber
SA(COMOR)/DDS&T

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Proposals for Reorganization Within CIA More Along Geographic Lines

Objective:

1. A reorganization of CIA more along geographic lines would have the following objectives:

a. To bring the organization of major intelligence producing components more into conformity with the geographic organization of its principal customers -- notably State, DOD and the White House Staff -- in order to more effectively meet the needs of these customers.

b. To centralize the expertise and intelligence production on particular geographic areas in a manner which will enable the Director and other CIA officials to obtain information and advice on any country or geographic area from one point in the Agency.

c. To facilitate the programming of intelligence production on all foreign areas in a way which will ensure maximum coverage of priority intelligence topics and will minimize unnecessary duplication.

d. To ensure that the best available information and professional talent within the Agency is brought to bear both in intelligence production and intelligence briefings on any foreign area.

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Limitations

2. There are, of course, many alternative organizational arrangements that could be adopted in an effort to achieve these objectives; but before considering some of these alternatives, it might be well to review some of the practical limitations to the establishment of an organization strictly on geographic lines.

a. We must ~~recognize~~ understand at the outset that State, Defense, and the White House Staff all recognize the importance of having functional components and experts separate and apart from the basic geographic organization. In State, for example, there is a component for Political-Military Affairs (G/PM); a Bureau of Economic Affairs, a Bureau of International Organization Affairs; a component responsible for International Scientific and Technological Affairs and, of course, there are functional components as well as geographic components in AID. Within the Department of Defense there is a new Assistant Secretary for Systems Analysis who represents one of the Agency's principal customers for military-economic intelligence, and, as is well known, there are a whole host of other functional non-geographic components covering such subjects as space, research and technology, logistics, etc. In fact, the Pentagon is organized much more along functional than geographic lines. While most members of the White House Staff have some geographic identification, there are also staff members concerned with scientific, economic and military affairs. Therefore, it would appear that,

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if one of our objectives is to establish an organization which roughly parallels that of our principal customers, we must recognize the continuing need for functional compartments.

b. The great majority of intelligence support presently rendered to officials and operating components within CIA and to policy and action officials within the Government by ~~those~~ components of the Agency now concerned with economic, scientific, military and geographic intelligence do not require extensive coordination in any geographic context but are keyed almost exclusively to the category of intelligence for which the producing office is responsible.

c. It is essential to recognize that the recruitment, training, and professional development of specialized personnel such as geographers, economists, scientists and military intelligence experts can best be carried out in an organization which integrates these disciplines. The universities, in their efforts to establish centers of area concentration such as Russian centers, etc., have long recognized that, while it is possible to establish a corps of area experts, they must draw their economists, scientists, geographers, etc., from the parent departments without destroying their identification with these departments. The Agency has been able to recruit, train and hold highly qualified personnel in these special fields by giving them top jobs with the prestige, position and research environment which is keyed to their chosen profession. We have avoided submerging these professional personnel under the control of other professionals who do not fully under-

stand the importance of expanding the frontiers of knowledge through intelligence research in their particular field of specialization. The Agency has, to a significant extent, developed its reputation through the research production of its top professionals in these various fields of functional specialization.. Most of this work has been carried out with relatively little supervision from generalists concerned with geographic areas beyond the sort of broad guidance which normally takes place in the preparation of National Intelligence Estimates, Current Intelligence and Special CIA Memoranda.

d. We also ~~understand~~ should recognize that the effective employment of consultants depends to a great extent on the contacts between our top professional employees working out of functional intelligence components and those experts working in similar fields for industry, research foundations, the universities, etc., on the outside.

e. One great advantage in centralizing functional expertise is that it gives the Agency greater flexibility in employing these personnel on the most important problem of the moment. Some of the same shipping experts who were following the situation at the time of the missile buildup in Cuba are now watching the shipping situation in Vietnam. Overland transportation specialists who were concerned with the capacity of the Trans-Siberian railroad to support Communist forces at the time of the Korean War were shifted to a study of Chinese logistic capabilities on the northern borders of India at the time of the Sino-

Indian border conflict and now are concerned with Communist logistics in the Vietnam war. These functional specialists must not only be flexible enough so that they can shift from one crisis situation to another but, while tending the crisis, they must also continue sufficient basic research on other areas and continue sufficient file maintenance so that their information base will be adequate to meet the next crisis. A great many more functional specialists would be required if geographic, transportation, agricultural, various scientific, military and other specialists were to be parceled out to a number of geographic offices.

f. It is also important that one office be responsible for the recruitment and career management of these functional specialists. This is true because of the scarcity of these human resources, the high attrition rates and the need to develop backup personnel for top professionals in key jobs. When O/NE takes a 25X1 [redacted] when an outside research organization lures away a 25X1 [redacted] or when the President takes a 25X1 [redacted] there must be key people in the pipeline who can fill these gaps and the selection must be made from a pool of competent professionals in a specialized field.

g. The political scientists and historians can more readily organize their research and output on a geographic basis because their respective disciplines, almost by definition, involve synthesis and a feeding on the findings of analysts in other specialized fields. This has long been recognized in CIA in existing arrangements for pulling together intelligence production

from more technical areas, largely through the use of political scientists, historians and area experts. These arrangements have been developed to a high degree by the Office of National Estimates and the Office of Current Intelligence. In addition, the special CIA memos issued by the DD/I are largely written by geographic area specialists from these two Offices.

Alternative Arrangements

A. Alternative 1

3. One of the more extreme alternatives for achieving centralization of the Agency's activities along geographic lines would be to merge into geographic offices not only all of the intelligence production (DD/I) components concerned with each geographic area but the area divisions of the clandestine services as well. There are a whole host of problems which would argue against a sweeping change of this kind -- problems arising not only from reasons of security but from reasons of operational management as well. Moreover, such arrangements would yield very little with respect to the centralization of information and expertise which could not be achieved more effectively in other ways.

B. Alternative 2

4. A second alternative would be to merge those producing activities of the DD/I which presently have a geographic orientation and add to these components certain specialized political intelligence functions. We could hypothesize a reorganization which would:

a. Take components of the O/NE staffs and parcel them out among a series of geographic offices, retaining the O/NE Board as a separate entity under the DCI. This would leave the Board

responsible for the coordination, presentation and ultimate publication of the NIE's and would assign to the various geographic offices the job of preparing what now amounts to the staff draft.

b. All of the geographic components of OCI would be assigned to geographic offices, leaving a current intelligence staff under the DD/I responsible for current intelligence publications, the Watch Committee, the National Indications Center and perhaps the Operations Center as well. Contributions to current intelligence publications would be the responsibility of the geographic offices in much the same manner as economic contributions are now provided by the Office of Research and Reports. SIDOS would also be drawn from the geographic offices.

c. Additional personnel for the geographic offices would be drawn from [redacted] from the Biographic Registry and from the DD/I Research Staff. There may be other similar activities which could be drawn on, including perhaps certain of the strictly research, analysis and information sections of the DD/P divisions. 25X1

5. Each office would have, in addition to the usual staffs (Admin, Publications, Programs and Planning), a panel of consultants and an advisory committee drawn ex officio (or on the basis of expert knowledge) from other components of the Agency (e.g., the Office of Eastern European Intelligence would have on its advisory panel key personnel from offices concerned with economic, military, geographic and scientific research, as well as appropriate representatives from the clandestine services).

6. Each of these geographic offices would then have the responsibility for providing contributions to NIE's, to current intelligence publications, to the special CIA memoranda, and to ad hoc responses for the DD/I and the DCI, the White House Staff, policy and action officials in the Executive Branch and the Congress. Each Office Director would be looked to by the DD/I, the DD/P and the DCI as the man responsible for all information on that area, or at least knowing what information is available regardless of where this information can be obtained within the Agency. A representative from this Office would head all task forces established by the Director on major questions falling within that Office's area of responsibility and transcending the responsibility of any single Office such as OSI or ORR. Each Office Director, or his nominee, would be designated as the Director's representative with appropriate counterparts around town. For example, the Director for the Office of Far Eastern and Southeast Asian Intelligence would be assigned as the principal contact for Chet Cooper on the White House Staff and Bill Bundy, the Assistant Secretary of State for Far Eastern Affairs.

7. In addition, there would be separate Offices for economic and military research; basic intelligence, including geographic research; scientific intelligence; and, perhaps, political research, depending on whether it was judged desirable to have political research (including contributions to the NIS's) as a part of the geographic offices or not. One reason for placing this responsibility in a separate office would be to ensure concentration on subjects which require some depth of research and understanding in order to meet continuing and long-term

intelligence needs. There is always the danger that the integration of research personnel with those responsible for current intelligence, national estimates and ad hoc responses will result in little time for research with all resources being applied to the hot problem of the moment.

8. Directors, or appropriate nominees of the functional offices, (OSI, ORR, OBI, etc.), also would be designated as a DCI representative with key officials in certain other departments and agencies. For example, a representative from ORR would be a principal Agency contact with: the Assistant Secretary of State for Economic Affairs; the Assistant Secretary of Defense for Systems Analysis (on certain matters of military intelligence research); Francis Bator, principal economist for the White House Staff; etc.

9. There would be a number of advantages in adopting this alternative of a combined geographic/functional organization:

a. It would combine into a number of geographic offices all or most of the intelligence generalists concentrating on a particular area of the world and would provide the Agency with greater flexibility in the utilization of these personnel whether on national estimates, current intelligence, special task forces, or whatever.

b. It would facilitate professional personnel training and management.

c. It would provide one point in the Agency for the Director and the DD/I to obtain complete information on any geographic area.

d. It would provide one point of contact in the Agency for officials around town concerned with the acquisition of information on questions relating to particular geographic areas, and it would enable the Director to designate a person from each of the geographic offices as his man, thereby perhaps facilitating the Agency's liaison with key policy officials and enabling the Agency to maintain a closer awareness of policy discussions and decisions. This would not only improve the timing and relevance of intelligence support but would sharpen our understanding of current developments and would improve the focus of our intelligence programs.

e. It would facilitate intelligence production programming and development of intelligence requirements on any given areas.

10. There are, of course, a number of disadvantages as well. One of the most important would be that those offices responsible for national intelligence and current intelligence would have less direct control over the personnel responsible for the intelligence inputs. This would present serious work-out problems on matters of both scheduling and content. There is also the problem of the psychological attitude and aptitude of the individual professional as it relates to his working environment. An individual who may be terribly good in the more contemplative atmosphere of NIE work may find the daily tempo of current intelligence not to his liking. In addition, of course, there would be all sorts of horrendous bureaucratic problems associated with a merger of this kind -- problems of grade structure, slotting, placement of key individuals, problems of esprit and morale. In brief, the kinds of problems that have been faced

before and eventually resolved in similar situations but, nevertheless, the kinds of problems that should be avoided unless we anticipate major gains from the change.

Variant on Alternative 2

11. A variant method of implementing alternative 2 would be the division of the DD/I area into three major components -- support, production, and research.

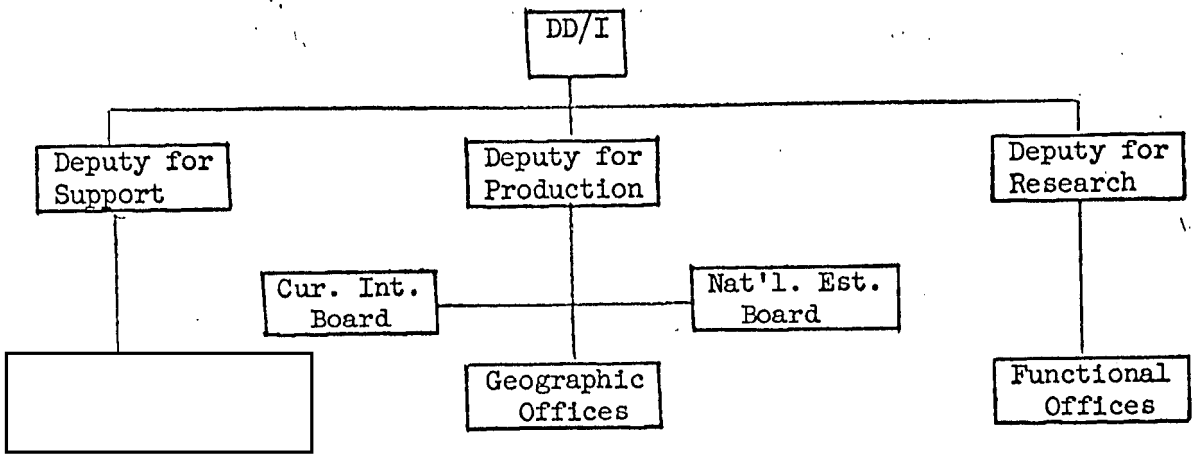
12. The intelligence support component would be in recognition of the fact that much present DD/I strength is not directly concerned with the production of finished intelligence at the national level, but with supporting such production. [redacted] 25X1

25X1 [redacted] the Office of Central Reference, and probably the National Photographic Interpretation Center, fall into this category. Aggregating these offices into a single component would relieve the DD/I of the necessity of time-consuming direct responsibility for supervising major activities.

13. Secondly, basic research could be continued on a functional basis, much as at present but at somewhat reduced strength. This would comprise military, economic, political (if desired) and geographic offices. The precise organizational breakdown and the link to scientific and technical intelligence would be a matter of convenience. This would keep alive a strong functional organization, which we believe is most important for reasons stated earlier.

14. Thirdly, at the heart of the DD/I would be a production component, or center, composed of the existing Offices of Current Intelligence and National Estimates, augmented by limited additions from other existing offices of the DD/I. This production component would be organized

geographically (Western Europe, Southeast Asia, Latin America, etc.). It would be the group of offices directly in production support of the DD/I, and contain the experts on individual countries and regions who would support or represent the DD/I and DCI as required. Publication of NIE's and of current intelligence journals could be the responsibility of, respectively, a National Intelligence Board and a Current Intelligence Board. Staff support would come from the individual regional offices. Organizationally, the DD/I area would look as follows:



25X1

C. Alternative 3

15. There are, of course, an infinite variety of less sweeping alternatives which center around some form of committee or task force arrangement which draws on the competence of existing offices. This, obviously, can vary from the most formal and permanent arrangement to the most ad hoc and the most informal. The recent establishment of the Vietnam Task Force is probably considered permanent for the duration of the Vietnam crisis and is clearly a formal arrangement which is designed to serve the Director. It not only will have a fulltime staff with representatives from both the DD/I and the DD/P, but it will have the right to

draw on any component of the Agency. It will be expected to know, at least in general terms, everything that is going on within CIA that relates to the Vietnam situation, and it will be expected to give some guidance to the programming of the various producting offices.

16. It would be possible, of course, to achieve some of the objectives outlined in the beginning of this paper simply by establishing task forces along the lines of that set up for Vietnam to cover crises and major continuing problems with which the Agency is concerned. This will include task forces on such topics as the Dominican Republic, Cuba, Berlin, the Congo, etc.

17. A modification of this arrangement would be to establish a formal structure of geographic committees covering all foreign areas of the world. Each committee might have a small permanent staff with the best available man from either the DD/P or the DD/I selected as chairman. Like the Vietnam Task Force, it would mobilize all of the talent and information within the Agency on whatever problems were sufficiently important to warrant the committee's and the Director's attention and would have priority in levying assignments on any Agency component. In addition, such committees would have the responsibility of overseeing the programs of all Agency activities which relate to the committee's area of responsibility. The chairman of the committee would be responsible for maintaining contact with top officials around town concerned with the chairman's geographic area.

18. Any such committee arrangements would not be particularly helpful in developing more flexibility in the use of professional personnel and would not go as far as alternative 2 in reducing the fragmentation which presently characterizes the Agency's efforts on practically

all geographic areas. On the other hand, it would avoid much of the pain, ~~and turmoil associated with the pain, turmoil~~ and other disadvantages which were spelled out in connection with alternative 2.

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Fundamentally it would seem that there are three general kinds of alternatives to existing organizational arrangements for producing intelligence on foreign areas, ranging from the most extreme as posed in alternative 1 to the more moderate re-arrangements outlines in alternative 3 which would overlay the present structure with the system of task forces or committees. Within these three categories there are obviously an infinite number of shapes into which the bureaucratic molecules can be formed.