

TO: A. B. Darling

1 July 1952

FROM:

SUBJECT: CIA Activity in Scientific Intelligence

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Scientific information, within the framework of National Security interests, may be considered to exist at three levels:

1. Raw intelligence, constituting facts of current discovery and applicability not evaluated beyond assessment of probable reliability.

2. Processed intelligence, constituting ordered and assembled intelligence material fully evaluated in the light of existing scientific knowledge and theory.

3. Scientific research, constituting positive development and transcending scientific intelligence, the latter being only one and frequently a minor area of data available for such research.

. It is probable that the line between 2 and 3 above has not always been clearly recognized within CIA, and particularly in OSI. It is obvious that item 3 above is no concern of CIA or any part thereof. However, it is of concern to non-intelligence components of the other IAC agencies, such as the Office of Naval Research, Bureau of Ordnance, Air Material Command, AEC, and others.

CIA has properly two classes of customers for production of matters under item 2 above. One class is the components of the other IAC agencies enumerated in the previous paragraph, as well as other elements of the government such as RDB. This class has use for such information because of its possible effect on the course of military scientific development in the US. The second class is made up of the IAC agencies as such, particularly including ONE within CIA. Their interest is in the presentation of enemy scientific

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capabilities for national security planning, and among the IAC components of the Defense Agencies and the JCS, for specific war planning.

The evolution of the role assigned to CIA in the field of scientific intelligence is best understood if we first define the gap in our intelligence that needs to be filled. High-level consideration of the problem from 1946 on pinpointed one deficiency: the lack of current and continuing factual information on what was going on in the USSR. This definition of what was critically needed was clearly expressed as late as 1950, when the ad hoc committee to review the state of our atomic energy intelligence reported to the NSC on 9 June '50 that the problem of providing adequate intelligence on Soviet atomic energy activities is not separable from the general problem of intelligence against the USSR. This clearly indicated that the deficiency was in (intelligence) collection rather than in the ability to process information once it had been obtained in raw form.

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Concurrently, as the USSR became more clearly and more universally recognized as the target (of US defense and intelligence activity), it also became more obvious that espionage must be the chief source of (current and) continuing factual information on what was going on in the USSR. Since CIA was given the mission of espionage as a service of common concern, this threw upon CIA the main burden of building up the flow of raw intelligence on the USSR.

Processed intelligence, the specific assignment of OSI, should be viewed (in this context) as a function, a channel of transmission

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between collection at one end and utilization in foreign-policy planning, both diplomatic and military, at the other. The job that needed to be done was in one respect more humble, and in another more complex, than appears to have been recognized and accepted by OSI. Furthermore, the area of CIA authority was more touchy and delicate than in almost any other field. This is because, except for contributions to national estimates, in which the finished product of OSI is the raw material of ONE, the whole range of scientific intelligence is within the sphere of competence and responsibility of the Defense Establishment and its (component) services.

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Historically the recognition of the need for specialists and special skills in guiding the collection and carrying out the processing of scientific intelligence began with the creation of the Technical Section within SI/OSS in May, 1943. Its first job was low level processing, the screening and reviewing of (incoming) raw intelligence in preparation for sending such reports on to the customer agencies. It very soon took on the job of preparing collection directives in response to customer needs. In this work it serviced 32 different elements of the Government, mostly in the Armed Services and including the Manhattan Project. It should be noted, however, that the Technical Section was a sub-unit of a collecting branch, and not a processing branch itself. There is no evidence that the Research and Analysis Branch addressed itself particularly to the field of science, though it did prepare such reports in response to military requirements.

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The Technical Section, geared directly to the collection mission, was preserved in FSRO/SSU; became Special Division, Technological under OSO/ACIG in December, 1946, and has had uninterrupted existence up to the present. It is now the Technological Guidance Staff, and has six branches embracing the principal subject subdivisions of scientific intelligence: 1 2 3 4 5 6

The other stream of inheritance to CIA in the field of scientific intelligence was the Manhattan Project Foreign Intelligence Section, which, by arrangement between General Vandenberg and [redacted] [redacted] STAT was transferred to CIG, after an interval was placed in the Scientific Branch of ORE, later was placed, apparently very loosely, in OSO, and finally became a component of OSI. Within its field of atomic energy intelligence, this group had a wide and comprehensive charter, including guiding collection, processing reports, making digests and estimates, and arranging dissemination.

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OSI, in simplest terms, came into existence because of the extreme desire for current information on scientific progress in the USSR. Its success, in the eyes of its customers, was to be measured in the increase in the flow of such information. Because everyone was agreed that espionage was the chief hope for such information from such closely guarded areas of the world, OSO was the chief hope for increased collection. However, other areas had lesser potentials and were equally in need of guidance. These included Foreign Documents and Contact Divisions within CIA and overseas elements of State, Army, Navy and Air. Complex as the job of collation, digesting and estimating by OSI may have been in prospect, it was secondary to the

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job of insuring that there would be something to collate.

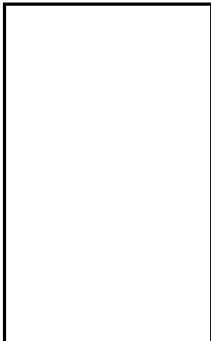
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In starting its job, OSI logically asked itself two questions: What do our customers want? What can our suppliers give? OSI had to have partial answers to both these questions in order to start to work. But it also had to prove its capacity to produce in order to win the confidence and respect of its clients and thereby dispose them to supply the necessary answers. This is the dilemma that has been with CIA from the beginning. The agency came into existence as the junior partner with senior authority at least by statute. But regardless of statute, as a practical matter it had to earn its position in the intelligence family. [Where successful cooperation has been achieved, it has been the result of the gradual development of a mutual exchange with benefits accruing to both partners.]

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There is evidence that OSI started out expecting all doors to be opened to it as a preliminary to its getting to work. This meant on the one hand complete details of the activities of the research and development activities of the armed services and other elements of government charged with the creation of new weapons and equipment; on the other hand, complete details about the agents, contacts, sources and operational activities of the intelligence collecting offices and elements. By asking so much before offering anything in return, OSI created an atmosphere of mistrust and standoffishness in many of the areas where close harmony was essential to success.

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assignment within the Agency. There is no question that it was intended to be the clearinghouse and coordinating core of all scientific intelligence. To persons with a background in the freemasonry of science, the compartmentalization of the intelligence process must present a maze of frustration. The distinction between the second and third levels of scientific information within the Government, as defined above, was far from sharp and clear. Yet the second level was as far as OSI was chartered to go, and when it appeared to the Army or Navy that it intrude into the third level, sharp resistance was inevitable.

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When OSI came into the picture, the Technological Staff, OSO, was growing to maturity in its function as a channel between consumers and OSO field collection. It had its several branches for atomic energy, biological warfare, etc., and had recruited scientists in these various special fields to provide competence in scientific terminology and understanding. It also had intelligence personnel of long experience who understood the methods and difficulties of field collection and had developed a close working relationship with the geographic divisions which were in command of the field stations. Thus the customers, in addressing collection directives to OSO, came in direct contact with an element of CIA which understood both the subject matter of science and the techniques and capabilities of field collection. The function of translating between these two fields was an essential one that was being performed more and more adequately. So far as production of intelligence in OSO was concerned, the situation was progressing satisfactorily. The

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difficulty at this time and in this particular area lay in the fact that espionage operations against the USSR were extremely difficult and many years short of full and fruitful development. The total take was inadequate to the needs of the customers, and in prospect would continue so for some years.

The optimistic and unrealistic expectation for OSI was that it would stimulate a quick and substantial increase in this take, an expectation for which there was no basis in fact. The second expectation for OSI, more realistic, was that it would do for the entire Agency, and indeed the entire intelligence community, what OSO's Technological Staff was doing for OSO alone. OSI would guide and collate the production, not only of OSO, but of Contact Division and Foreign Documents Division within the agency and the collecting elements of the other IAC agencies. And with this total product flowing through its hands, it would be able to assimilate and make estimates on a wider body of material and in turn provide more comprehensive guidance for subsequent collection.

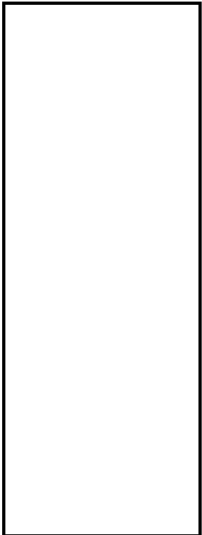
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The present estimate of the other IAC agencies as to the effectiveness of OSI is unknown to me. There is some evidence, from personal contacts and strictly non-official, that the Office of the Secretary of Defense still feels unable to get in touch with a part of CIA which appears to them to be knowledgeable as to the whole range of CIA scientific intelligence collection.

The present state of effectiveness of OSI in its relationship to

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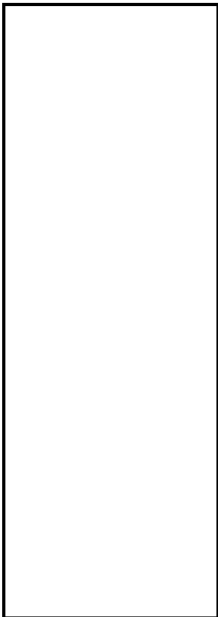
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but with still room for much progress.

At one point in its career, OSI considered a project for the preparation of background manuals for collection, to be carried out by the Scientific Intelligence Committee, an undertaking of particular urgency and value from the viewpoint of collection. However, according to OSI's own statement, this undertaking was "deferred by pressure of higher priorities."

In guiding collection by Contact Division, there continues to be an extreme urge on the part of OSI to operate by arranging conferences between OSI personnel and original sources of information. This as an expedient can and frequently does work satisfactorily. But it tends to reduce coverage since it is limited by the availability of OSI personnel for travel about the US. If written requirements susceptible of effective fulfillment by contact specialists throughout the US could be developed into more general use, it is obvious that far wider coverage would result. One other factor worthy of note is that Contact Division headquarters still maintains its own liaison with the Air Material Command at Wright Field. It is fairly obvious that the reason for this is that ^{the Command} AMC feels that Contact Division headquarters is a more direct, informed and knowledgeable channel to the point of actual fulfillment of their requirements than OSI would be. The drawback is that AMC thereby activates the collecting capacity of Contact Division alone, and loses the theoretical advantage of activating the collecting capacity of the entire intelligence community through OSI's broader control and liaison. However, the relationship and participation of OCD to any Agency-wide

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collection directive in the scientific field may also be pertinent to this, and may result in what appears to the customer - in this case AMC - as still another middleman to add remoteness to the relationship between customer and client.

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In guiding collection by OSO, OSI has made substantial strides in the past year. Despite this, only a minor part of the scientific collection in OSO has the benefit of OSI guidance. From the OSO viewpoint, one of the most valuable services that OSI could perform would be to establish priorities for scientific collection, to the point of a flat statement that information on uranium production was more urgently needed than information on radar development. No such statements of priorities have yet been forthcoming. Another service of great value is the preparation of guides and questionnaires which translate the abstruse topics of scientific importance into the capabilities of field collectors whose knowledge of science is at the lay, rather than the expert, level. One such guide was completed in October, 1951, after several months of cooperative endeavor. It was in the field of chemistry, directed at a specific intelligence target, and worked out a long series of low-level indicators, details that any alert laymen could observe and understand, which, when reported, would provide the desired answers to the scientific question posed. While only one item in a large field, this detailed guide was a milestone in the development in the relationship of the two offices, since it successfully linked two unrelated types of skill and knowledge into an effective team operation.

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on a much lower plane than OSI's own definition. Certainly any consideration that slights OSI's mission of producing processed and coordinated scientific intelligence is incomplete and unbalanced. However, there are certain elements in the overall problem which justify placing this mission as secondary in time even if not in importance:

1. From the customer's standpoint, the critical lack in US intelligence on scientific development in the USSR is in obtaining the raw information rather than in interpreting it once it is obtained.

2. Scientific research as such is of no concern to CIA except as it serves as a tool for obtaining current and continuing information about the USSR.

3. Conclusions and estimates regarding scientific development in the USSR can never be better or sounder than the raw material on which they are based.