As weighed in intelligence scales,
found wanting.

THE SCIENCE ATTACHE PROGRAM

Wilton Lexow

World War II clearly demonstrated that science had joined economics as a no longer merely academic discipline but a practical factor to be reckoned with in the international arena. The Department of State, recognizing that this new factor would make itself felt more broadly than in strict application to weaponry, established as early as 1947 a Science Staff in its London embassy and a small Washington supporting element in its Bureau of Economic Affairs. It was not until 1949, however, that a full-dress study was made of the implications of the new factor for the organization and functioning of the Department.

In January of that year the National Security Council issued its first directive concerning the collection of basic scientific information abroad. It gave the State Department the primary responsibility for this function. Subsequent revisions of the directive [1] * have broadened "basic" scientific information to all scientific and technical information except what is primarily military. Acting upon this directive and upon the recommendations of the Hoover Commission report of 1949, the Secretary of State appointed Mr. Lloyd Berkner to study and submit recommendations on the role of the Department in national scientific policy and how it should organize and staff for these responsibilities. Berkner formed a committee which went into the problem in detail, with the aid of an advisory committee from the National Academy of Science and a Policy Survey Group in State.

The Berkner Report

In April 1950 the Berkner committee submitted its report, "Science and Foreign Relations." [2] It made nineteen general recommendations on the basis of conclusions reached in the examination of nine

* References are to the bibliography at the end of the article.

topics, each in a separate chapter. Some topics were functions to be performed, others the organizational means for performing them.

With respect to organization, the recommendations were clear and simple. The Department should set up a Science Office headed by a Science Adviser with assistants and a staff. Abroad, science attachés should be established in some fifteen U.S. embassies in non-Communist countries. Representation in Communist countries was not mentioned.

With respect to the duties to be assigned to this science office and the science attachés, however, the report foresaw and discussed at length a great range of activities—the collection and dissemination of foreign scientific information, support to international scientific activities, scientific exchange programs, technical assistance, service to U.S. scientists and scientific organizations, interagency liaison arrangements, and means for weaving scientific considerations into the process of formulating foreign policy. A classified annex dealt with the intelligence aspects of the program and recognized that the proposed attachés would of necessity bear the principal responsibility for these.

The scientific functions recommended in the report, it may be generalized, fell into three categories: collecting and reporting information, including intelligence information; promoting and protecting the interests of the U.S. scientific community; and monitoring the impact of science and U.S. foreign policy on each other. The subsequent history of the science program in the Department has to a great degree been that of the conflict for priority among these three categories. On this matter the Berkner report gave no guidance. It felt that relative emphasis in the program and the true role of the Department would have to "evolve out of experience . . . The exact blueprint will require Departmental drafting."

Ups and Downs

Acting upon the Berkner recommendations, the Department in 1951 placed scientific attachés in a number of embassies. Two years later the program was greatly curtailed because of difficulties in recruitment and increasing budgetary stringency. The five overseas posts filled in 1953 would have been cut to three in the budget proposed for FY 1955. After discussions with CIA and the National Academy of Science, the Department agreed to support five positions

from its budget, and four—London, Stockholm, Paris, and Tokyo—were actually filled.[8]

In June of 1955 the new Hoover Commission report on intelligence activities carried the recommendation, "That the responsibility for procurement of foreign publications and for collection of scientific intelligence be removed from the State Department and placed in the hands of the CIA, with authority to appoint such scientific attachés as may be necessary to carry on this work abroad."[17] Much to the dismay and embarrassment of the CIA and the State Department, this was published without classification. The implication of espionage undoubtedly became a serious hindrance in the recruiting of eminent scientists for attaché positions. In addition, more budget cuts resulted in the withdrawal of the remaining attachés at the end of their current tours of duty. Thus in 1956 there were no longer any science attachés at all.[6]

In February of 1956 the National Science Foundation issued a report on "The Role of the Federal Government in International Science" which hinted that the NSF should assume responsibility for the science attaché program. At about the same time CIA proposed to give financial support for an expanded program either to the National Science Foundation or preferably to the State Department. The Bureau of the Budget, however, refused to approve either NSF assumption of the program or the transfer of funds from CIA to the Department. These pressures from NSF and CIA, as well as from the scientific community as a whole, may have induced the Department to review its program, now withered to one professional and one secretary in Washington, and in the late summer of 1957 it was officially determined to re-establish it, beginning by looking for a suitable scientist to serve as Science Adviser.

This search was still under way on 4 October, when the Soviets launched Sputnik I and gave an enormous push to many a U.S. scientific program. In 1958 State appointed seven new science attachés.[9] In 1962 we had science attachés in nine of our embassies, and in January of 1965 there were 23 attachés in 17 embassies, two being assigned to each of six large ones. For comparison purposes about 25 foreign embassies have science officers or attachés in Washington.[11]

One disconcerting aspect of the State Department's revived program has been its inability to fill the vacancy at the head of the Office of International Scientific Affairs, the office now responsible

for the administration and direction of the science attaché system. This spot had been vacant for more than a year at time of writing (January 1966).[15]

Definition of Functions

The latest guidance from the State Department to the attaché makes him an integral part of the ambassador's staff with the functions of *advising* the chief of mission on scientific and technical matters, *reporting* in accordance with the embassy program, and *representing* the chief of mission and the U.S. government in scientific and related affairs.[12 16] This instruction gives him a tremendous latitude in choosing where to concentrate his effort. One science attaché reported that his entire time was devoted to aiding U.S. and host country scientists.[5] Another declared that facilitating the exchange of scientists and scientific equipment and meetings and communications to this end took most of his time.[8]

In these two instances when the intelligence mission went by the board, it appears that the attaché was left on his own, not only by the Department but by the ambassador, to fill whatever function he deemed most important; and scientists in this position are naturally most interested in satisfying the requirements of the scientific world. Perhaps some chiefs of mission are reluctant to meddle into the duties of such specialized members of their staff; perhaps some are not interested in the attachés' functions. A former ambassador facetiously said he "needed a science attaché like a cigar store Indian needs a brassiere." [13]

Of course it is a two-way street; the science attaché must fit into the non-scientific community of the embassy and prove that he is an asset to its whole endeavor. From a scientist on a two-year assignment this may sometimes be too much to expect.[5]

Now that after ten years the program is a going one, to the extent of placing the science attachés in foreign posts, the question is whether it will continue to receive the backing that brought about its revival. This will depend greatly upon its value to the State Department in the interaction between science and foreign policy and upon its value to the intelligence community as a consumer of scientific information. If the attachés continue, as many have, to serve primarily the interests of science and scientists, they will discourage this intelligence and foreign policy backing.

Within the State Department there have been some misgivings about the science attaché system.[7] After all, the Department is not a prime user of scientific information. On the detailed level its interest has been very slight, and assigning to it the responsibility for collecting scientific information doesn't automatically create such an interest. With respect to the influence of scientific and technical developments upon foreign policy, it seems probable that their effects are felt only in long term and do not require constant monitoring.[5] Furthermore, there is other policy machinery within the executive branch geared to monitor scientific developments worldwide.

Staffing Problems

There are other difficulties. Recruiting has not been easy. The scientist should ideally be an eminent person in the field. He should be known internationally in order to have the entrée he needs for collecting information in a foreign country. There are very few eminent scientists who can spare two years for such a job. In addition, many scientists, on finding out that some of its duties are on behalf of intelligence, will have nothing to do with it. They feel that association with "spying" may jeopardize their scientific careers. The public recommendation of the Hoover Commission certainly didn't help in this respect.[17]

Another requirement in recruiting is for special qualifications, both scientific and linguistic. A science attaché who can't speak the language of the country where he is assigned will be seriously handicapped. So will, from the intelligence viewpoint, one whose substantive scientific work does not lie in a priority field. The priority intelligence objectives have been and will probably remain in the physical sciences; biological subjects are in general of low priority. A biologist attaché can hardly be expected to report on nuclear physics; in fact he may become suspect if he is too curious about matters outside his own discipline.

There has in any case been a problem of orienting the science attaché to intelligence priorities. Perhaps it is expecting too much that a scientist unfamiliar with intelligence should fall right in with its priorities. He tends to follow his own interests or interpret the priorities as he sees them, so that he does hit-or-miss, shotgun re-

porting. By the time his two years are up, he is just beginning to get oriented.

One remedy might be to establish a corps of career foreign service scientists to fill at least some of the attaché posts.[5] These would have the status and the continuity of a Foreign Service Officer but would limit their activities to foreign scientific affairs. In the eyes of foreign nations they would probably be regarded in the same light as the agricultural attachés who report on important developments in agriculture abroad. During their home tours they would presumably be assigned to the Office of International Scientific Affairs. There is, to be sure, the drawback that they would gradually lose professional competence and stature by absence from the collegium of scientific study.

Desiderata

One of the biggest shortcomings of the science attaché program has lain in its not being extended to the Communist countries. All the attachés are located in countries of low priority for scientific intelligence. (Though sending one to Warsaw is now being considered.) It is not certain that a science attaché in Moscow could do us any good;[6] the Soviets would probably try to ignore him. On the other hand, he could not be systematically quarantined from all lectures, publications, and personal contacts; and a small amount of first-hand reporting from Moscow would be more useful to intelligence than ten times as much from London.

It looks from the intelligence viewpoint as though the science attaché's functions should be narrowed to that of fulfilling the State Department's responsibility for the collection of scientific intelligence information in accordance with priority objectives. He has been too convenient a focal point for the scientists to converge on with their many problems and requirements, most of which could be satisfied through other channels, including non-governmental channels. As a result, his reporting has been negligent of priorities and basically opportunistic, producing many reports of no intelligence value. As for the science-policy relationship, this is not a matter requiring such constant attention as to warrant a science attaché program.

Once the functions were so narrowed, the establishment of a limited career foreign service scientist cadre to improve the performance of them might at least be tried.

BIBLIOGRAPHY

1. NSCID-2 (Secret-Noforn).
2. "Science and Foreign Relations," Dep't. of State publication 3860, May 1950.
3. Dep't. of State Bulletin, 26 March 1951.
4. Dep't. of State Bulletin, 17 December 1951.
5. Scientific Monthly, Feb. 1955.
6. Scientific American, March 1956.
7. Bulletin of Atomic Scientists, Sept. 1957.
8. Bulletin of Atomic Scientists, Oct. 1957.
9. Dep't. of State Bulletin, 29 Dec. 1958.
10. Saturday Review, 3 Jan. 1959.
11. Dep't. of State Bulletin, 22 Feb. 1960.
12. Journal of Chemical Documentation, 3, 14 (1963).
13. Bulletin of Atomic Scientists, Dec. 1964.
14. Dep't. of State Bulletin, 25 Jan. 1965.
15. Washington Post, 21 Sept. 1965.
16. Dep't. of State, "Duties and Responsibilities of Science Officers" (undated—circa 1962-1963).
17. Commission on Organization of the Executive Branch, Report to Congress, Intelligence Activities, June 1955, Superintendent of Documents, U.S. Printing Office.