

News and Comment

Science and Foreign Affairs: New Effort Under Way To Enlarge Role of Scientists in Policy Planning

It would be heresy today to deny that science should be considered in the formulation of foreign policy. But once homage has been paid to the impact of science on international affairs, precisely how can the scientist be useful to the State Department?

The answer is that the goal is not easily accomplished. Therefore, attempts to relate science to foreign policy have been approached cautiously, with an emphasis on evolving, rather than decreeing, a relationship between scientists and the people who prepare and direct foreign policy. The difficulties involved can be traced to both the diplomats and the scientists. The State Department is a huge, complex, going concern, tradition-bound and not eager to change its ways in order to include specialists in relatively narrow fields. (Until recently, for example, the Department staff handling atomic energy and space matters did not contain a single technically trained person.) At the same time, there is no abundance of accomplished scientists willing to put their careers aside, if only temporarily, for the strange world of the diplomatic service. And many of those who have done so, especially after a career in research, have found it difficult to adapt to their new environment. However, while the difficulties are not to be underestimated, the State Department, since World War II, has felt itself handicapped by a lack of scientific support and has been working, by fits and starts, to bring scientists into its operations.

Its effort in this direction, which began formally in 1951, has not been an altogether smooth or satisfactory one; by the mid-50s, when the State Department was afflicted by unusually severe budgetary problems, its science office was so shallowly rooted

that it was easily eliminated for economy reasons. In the latter years of the Eisenhower Administration, however, doubts about the wisdom of this move, and, finally, Sputnik, contributed to a revival of the office and a more forceful attempt to bring scientists into foreign policy formation. Recently the Kennedy Administration, which far excels its predecessors in bringing scientific experts into public affairs, has taken some modest steps to enhance the role of scientists in the State Department hierarchy. The Kennedy move is still attended by the same cautious approach that has prevailed since the first effort. Formally, it involves elevating the science adviser from the staff of the Secretary of State to the directorship of a newly established Office of International Scientific Affairs. The change is a crucial one in the precisely ranked State Department since it raises the science officer from the inconspicuous level of special assistant to the protocol equivalent of bureau chief and assistant secretary of state. Accompanying the prestige involved in this change is gentle pressure from the White House, and an apparent receptiveness within the State Department, to give the new office every opportunity to make its presence felt. It is generally agreed that the atmosphere has never been better for drawing science and diplomacy together.

Origins of Program

The roots of the State Department's interest in a formal relationship with science go back to early postwar days when several studies of relations between science and government concluded that the United States should develop a scientific foreign service. Starting in 1947, an experimental program in London brought more than a dozen scientists and engineers to the embassy staff over a 2-year period. Their duties were never clearly defined, and they had no formal line

of communication to the policy-making levels of the State Department, but no one appears to have been unhappy about their presence. They contributed to maintaining the close scientific relations that had developed between the United States and Great Britain during World War II, and their performance supported the conclusion that scientists should be incorporated into the State Department in much the same way that political specialists and economists had been. In large part, however, it appears that this view reflected respect for science more than any clear-cut understanding of just what the scientists would do once they joined the diplomatic ranks. And even today the task of integrating scientists into day-to-day diplomatic operations is one that is being worked out on a personal basis rather than according to a bureaucratic design in which duties and relationships are explicitly defined.

With the London experience as a guide, the State Department's program was formally started in 1951 with the establishment of an Office of the Science Adviser, headed by Joseph B. Koepfli, of California Institute of Technology, directly responsible to the man immediately below the Secretary of State. Science attaché posts, mostly filled by scientists on leave from universities, were established at several embassies, but the program failed to gain strength within the Department. Koepfli resigned in 1953 to return to California and was succeeded by an acting science adviser who held the office briefly. When he resigned, he was replaced by a foreign affairs officer. By 1955, as the various attachés resigned to return to their previous positions, the program was dead. The principal cause was the Department's critical financial situation, but the weakness of the program made it an obvious mark for elimination. Looking back, persons associated with it blame the program's plight on the demoralization that Senator McCarthy inflicted on the State Department. One former attaché remarked that "in those days, the foreign service people thought you were crazy if you openly said what you thought about McCarthy. And if you didn't tailor your reports according to what you felt they wanted to hear back home, you were very likely to have someone make some polite suggestions to you. I didn't want to put up with it, and why would anyone who could get away from it?"

Within 2 years, however, the State

Department was having second thoughts about the demise of its science advisory office. As the United States became more deeply involved in international scientific activities, such as cooperation involving atomic energy, the Department again sensed that it needed its own science staff to assist its regular officers, not only in relations with other countries, but in relations with other government departments. The program was reestablished early in 1958, with Wallace R. Brode, associate director of the National Bureau of Standards, as science adviser. At the same time, the science office was elevated to the staff of the secretary. By 1960, when Brode retired, to be succeeded by Walter G. Whitman, former chairman of the department of chemical engineering at Massachusetts Institute of Technology, science attachés had been attached to over a dozen embassies around the world. During Brode's and Whitman's terms of office, the science advisory function in the State Department became firmly established, and it is clear that although it is still in a rudimentary stage of development, it is here to stay. This is not so much because of its performance, which, according to almost everyone involved, is much in need of improvement, but rather because political leaders today accept it as an article of faith that science is inextricably involved in public affairs. A scientist at his elbow is the mark of the statesman who recognizes that the laboratory has become a decisive force in the world.

Whitman, who came to the State Department with the announced intention of staying no more than two years, has now been succeeded by Ragnar Rollefson, former chairman of the physics department at the University of Wisconsin and a longtime government consultant. His selection is generally regarded as a blessing for the State Department's science program. He has a long familiarity with relations between science and government and is known and respected among American and foreign scientists. In addition, conditions are ripe for the newly established office to become deeply involved in the formulation of many aspects of American foreign policy. Now that the science office is a familiar part of the scene, State Department hands who once tended to think it was usurping the functions of the jack-of-all-trades foreign service officer are increasingly pleased to have their own top-flight scientific advice to guide them in fields

where they previously had to rely on representatives of government agencies that may not see issues from the State Department's point of view.

The need is readily apparent in such areas as Soviet-American space cooperation, where ideally, political, scientific, and military judgments should be balanced in developing an American position that takes account of, but is not dominated by, the particular interests of the National Aeronautics and Space Administration or the Department of Defense. Heretofore the State Department relied on these agencies for the technical information that went into its own conclusions, and while no one in the Department claims that these agencies took too parochial a view, there is general satisfaction that the Department will have its own specialists in this field. They will be serving in the newly established office as a separate subsection for space affairs, with subsections for atomic affairs and general scientific matters.

Rollefson's familiarity with governmental process gives him no illusions about the difficulties involved in bringing his newly established office into the mainstream of foreign policy formulation. Since the office will actually have to make its own way in achieving this goal, personnel constitutes his greatest problem, and this is perhaps nowhere more apparent than in the problem of staffing the attaché posts, which now number 17, with two new ones about to be established.

I recently visited the science attachés in Rome, Bonn, Stockholm, Paris, and London and concluded that if the State Department finds it difficult to adapt itself to scientists, the scientists, with few exceptions, find it even more difficult to adapt themselves to the State Department. From the beginning of the attaché program it was decided that, as far as possible, each post would be filled by a widely recognized senior scientist whose professional standing in the United States would provide him with ready access to the foreign scientific community. This requirement has been met, generally, by recruiting scientists who were about to retire after university careers, but the available numbers have been reduced by a fairly firm insistence on foreign-language proficiency. The attaché is provided with a deputy (usually his junior by a generation) with training in a discipline different from his own. Attaché and deputy have then been dispatched to

the embassy with virtually no instructions but to make themselves useful to the diplomatic mission and to report back to Washington whenever they come across something they consider worth reporting.

The results, as might be expected, have been incredibly uneven. One attaché acknowledged that he was simply bewildered by the job and did not know what he was expected to do or whether he was performing to Washington's satisfaction. "I taught for most of my lifetime," he explained, "and I took no interest at all in politics or international affairs. Now, I'm in the thick of it, or I should be, and I wonder how much good I'm doing anyone here." He said that much of his time was devoted to handling requests for information from American scientists and scientists in the country where he was stationed.

At the other extreme is an attaché whose colleagues consider him a paragon in his profession—Edgar L. Piret, who came to the Paris post from the University of Minnesota, where he was professor of chemical engineering. Whereas several attachés commented that they have little or nothing to do with the ambassadors under whom they serve (one said, "I could be gone for a year before he'd notice it"), Piret quickly became a close adviser of Ambassador James M. Gavin. He has developed working relationships with French journalists, a number of whom consider him to be a first-rate source of information about American scientific developments, and from friendships that began when he studied and later taught in France, he has easy access to several high-level science administrators in the French Government. Within the State Department Piret's reports on French science developments and their relation to American foreign policy are considered models of the peculiar art of scientific-diplomatic reporting.

Although Rollefson is reserving judgment on a new recruiting approach until he can become better acquainted with his office's operations, he feels that personnel is the key to making the office a significant part of the State Department's policy machinery. There is no easy way to develop a training ground for the type of people he needs (Piret is evidence that the campus can be as good a source as any), but it appears likely that the insistence on senior, well-known scientists is likely to be changed. A

number of attachés and staff members in Rollefson's office favor recruiting among technically trained administrators in such agencies as the Atomic Energy Commission and NASA, and Rollefson agrees that the idea appears to have merit, but at present he is not rushing into any changes. On one point he is certain: the State Department's science program requires people with thorough scientific training. Proposals to recruit nonscientists and then provide them with some technical training leave Rollefson cold. "I think it is easier to pick up the politics than it is the science," he has said.—D. S. GREENBERG

Announcements

Plans to establish an **NIH Pacific office** in Tokyo early next year have been announced by the Public Health Service. The new office, to be headed by Heinz Specht of the National Institute of Arthritis and Metabolic Diseases, will represent NIH in its relations with Far Eastern and Asian medical research activities. Administrative officer will be M. James Peters, of the NIH Office of International Research; Alfred S. Lazarus, formerly with the Agency for International Development, will be the scientific representative of the New Delhi (India) branch of the Tokyo office.

An **Institute of Speleology** has been established at the University of Kentucky to promote research in all aspects of cave science. Fields of research include ecology and systematics of Coleoptera and other invertebrates, mammalian ecology, limnology, and ichthyology. (Thomas C. Barr, Room 14, Funkhouser Biological Sciences Bldg., University of Kentucky, Lexington)

Grants, Fellowships, and Awards

Biomedical laboratory researchers are invited to apply for a \$15,000 medical writing award, sponsored by the W. B. Saunders Publishing Company. The recipient may write a monograph or a series of journal articles reviewing his research; publication rights will not be claimed by the company. A candidate should be a resident of the Americas, but the laboratory work to be reviewed

may have been done elsewhere. Applications, indicating briefly the character of the research and where it has been pursued, should be accompanied by a short résumé of the investigator's scientific background and a bibliography of important papers. Applications should be submitted between *1 January* and *1 May 1963*. The award will be made in October. (Robert F. Loeb, W. B. Saunders Co., West Washington Square, Philadelphia 5, Pa.)

One-year fellowships for **cancer research** at a foreign institution are available through the International Union Against Cancer. Funds, provided by the Eleanor Roosevelt Cancer Foundation, will be granted to experienced investigators on the staff of universities, teaching hospitals, research laboratories, or similar institutions engaged in either the experimental or clinical aspects of cancer research. Stipends are based on the applicant's current salary and the salary of persons with comparable qualifications in the place where the applicant expects to study. Travel allowances are available for dependents. (International Union Against Cancer, P.O. Box 400, Geneva 2, Switzerland)

The National Science Foundation has announced that the next closing dates for receipt of **basic research proposals** in the life and social sciences are *15 January* and *1 February 1963*, respectively. Notification of the foundation's action will be made within 4 months. Proposals received after these dates will be reviewed after the summer closing dates of *1 May* (social sciences) and *15 May* (life sciences). (National Science Foundation, Washington 25, D.C.)

Applications are being accepted for the 1963 Lalor Foundation awards for research on the basic phenomena involved in **fertility** and the early stages of reproduction in various forms of life. The awards, open to individuals of any nationality, range up to \$8000 per year. Preference will be given to university and college faculty and staff members who are less than 41 years old.

The foundation will also grant awards for summer or short-term postdoctoral research at the Marine Biological Laboratory, Woods Hole, Massachusetts, or elsewhere, for appropriate projects in the fields specified. These will not exceed \$1000 for a single

man or woman, \$1200 for a married man working at his home institution, and \$1350 for a married man with his principal program at another institution. Deadline for receipt of applications: *15 January*. (Lalor Foundation, 4400 Lancaster Pike, Wilmington 5, Del.)

A limited number of fellowships and research assistantships are available for predoctoral training in the **bioengineering** aspects of water supply and pollution control. Fellowships vary from \$3000 to \$3500 per annum, depending upon the recipient's previous training. (Anthony F. Gaudy, Jr., School of Civil Engineering, Oklahoma State University, Stillwater)

Publications

A report on the toxicity of various **antimicrobials and antioxidants** has been released by the World Health Organization. The report (No. 228), the sixth of the Joint FAO/WHO Expert Committee on Food Additives, appraises the most relevant literature on studies of acute, short-term, and long-term toxicity in relation to biochemical and metabolic findings in various species. Also included are monographs on octyl and dodecyl gallates, boric acid and borates, and hexamethylenetetramine. (Columbia University Press, International Documents Service, 2960 Broadway, New York 27)

A bibliography of approximately 100 publications issued during recent years by the Public Health Service's Division of **Hospital and Medical Facilities** is now available. Entitled *Hill-Burton Publications*, the booklet covers regulations, community planning, organization and administration, design and equipment, research and demonstration, and reports and analyses. (Superintendent of Documents, Government Printing Office, Washington 25, D.C. \$0.25; single copies available free of charge from the Public Health Service, Washington 25, D.C. Order PHS publication 930-G-3)

A list of approximately 4500 U.S. Atomic Energy Commission **research and development reports** that are offered for sale by the U.S. Department of Commerce is available free of charge. (Office of Technical Services, U.S. Department of Commerce, Washington 25, D.C.)