News and Comment

Foreign Grants: U.S. Reducing, but Not Ending, Support Program for Research Activities Abroad

A considerable amount of uncertainty and consternation seems to have developed abroad in connection with plans to reduce U.S. government financial support for basic research in foreign laboratories. Among foreign scientists, announcements of these plans have led to some misunderstandings and, curiously, a reduction in applications for U.S. support. It therefore may be useful to set forth the current status of U.S. support of foreign research; the thinking of the Bureau of the Budget, which sets financial policy for the executive departments; and the steps that are being taken by the research-supporting agencies to implement that policy.

In terms of research expenditures in the U.S. the sums currently going abroad to support basic scientific research by foreign nationals are relatively small—somewhere around $23 million distributed among approximately 57 nations. But since science budgets in other countries are usually nowhere near as ample as science budgets in the U.S., this country's contributions have come to play an important role in scientific communities abroad. In Great Britain, for example, NIH awarded grants totaling $1.6 million for biomedical research in fiscal 1964, while funds from all other sources for biomedical research in that country were estimated to total $57.8 million; in Sweden, the NIH contribution was $1.2 million, compared with $17.3 million from other sources.

Originally, the rationale for U.S. support of foreign research was that the existence of thriving scientific communities in U.S.-allied and Western-oriented nations is beneficial to this country's interests, and, in the early postwar days, the funds were in large part provided as a sort of foreign scientific aid program. But later, as many of the recipient nations achieved prosperity, the rationale was changed to provide support for scientific research that was deemed to be of importance to this country's scientific objectives. A guiding principle of this kind could, of course, be stretched to accommodate almost anything, but, in general, the principal objective became scientific quality rather than foreign aid.

Last year, as part of a government-wide effort to improve this country's balance of payments, all federal agencies were directed to take steps to reduce their dollar expenditures abroad. As far as foreign research is concerned, this directive principally affected the National Institutes of Health and the Army, Navy, and Air Force. The Department of Agriculture supports a good deal of research, but this is mainly financed with local currencies obtained by this country through the sale of surplus agricultural commodities. Therefore, Agriculture's foreign research programs are virtually unaffected by efforts to reduce foreign expenditures.

In consultations involving the Bureau of the Budget, the White House Office of Science and Technology, the State Department Office of International Scientific Affairs, and the research-supporting agencies, the following principles were worked out:

1) There would be no increase in foreign research support over the amount granted in fiscal 1963.

2) All existing commitments would be honored. Thus, if a grant was for a 3-year period, funds would be provided to fulfill the commitment.

3) Each agency would maintain programs for supporting research abroad, but would take steps toward gradually reducing its commitments.

4) Percentage reductions would not be imposed on the agencies; each agency would work out reductions consistent with its programs and the need to reduce the dollar flow abroad.

On the basis of these principles the Defense Department agencies, which spent an estimated $8.9 million in fiscal 1963, principally in Western Europe, decided upon an annual program designed to cut that amount in half over a 3-year period—20 percent the first year, 35 percent the second, and 50 percent the third.

NIH, which provided $14.7 million for foreign grants in the last fiscal year, decided upon smaller reductions. Its awards for the current fiscal year were reduced overall by 8 percent, for a total outlay of $13.5 million. And the reduction was allocated so that the largest amount was in funds going to "economically and scientifically advanced" Western Europe, Canada, Australia, and New Zealand, which, together, received approximately $7 million. As a result, according to an announcement from NIH's Office of International Research, "the funds going to these countries will be sufficient to meet all existing commitments, but will necessitate a reduction in new grants and renewal of previously supported projects of approximately 13 percent during the current year. . . . The funds available for less economically and scientifically advanced countries will be maintained at approximately the same level as in the previous year." What will happen in the next fiscal year, which starts 1 July, is a matter now under discussion between NIH and Bureau of the Budget officials. It appears likely, however, that the "advanced" countries, will receive a minimum of $5.5 million—as compared with $7 million this year—while funds for other areas will remain stable at approximately $6.5 million.

The NIH reductions, small as they have been, seem to have produced a degree of alarm in foreign scientific communities which is exceedingly disturbing to NIH officials. The drop in grant applications, according to one official, seems to come from the assumption that it is no longer worth the trouble to apply for NIH support. This assumption may in part come from the fact that each NIH institute deals directly with its foreign applicants, and that some of the letters turning down grant applications have been worded in a fashion that has caused alarm. (For example, a letter to a French applicant contained the follow-

ing: "We will do our best to take care of previously recommended grants with as little hardship as possible, but we do not have the funds to take on any further obligations.")

For the foreign scientists who have come to look upon U.S. agencies as sources of ever-growing support, the prospects are understandably displeasing. But, though U.S. funds going abroad will diminish over the next few years, U.S. support will continue to be provided, and it is altogether erroneous to assume that the United States is abandoning its programs of support for foreign research. The amount of dollars is going down, but simultaneously, the nations receiving these funds have been increasing support for their own scientists. (In the United Kingdom, for example, funds for biomedical research have nearly doubled since 1959.)

It is now an established policy for U.S. agencies to support research abroad. It has been argued by some persons that the affluent nations of Western Europe and Scandinavia could quite easily make up the relatively small sums that have been coming from the U.S. and the fact that they could, if they wanted to, has no doubt contributed to the feeling of unease among foreign scientists. But there is no political or economic pressure for the U.S. to abandon its foreign research programs. The programs obviously provide dividends in science and international good will, and it is therefore reasonable to assume that they will continue.

—D. S. GREENBERG

Democratic Platform: "Science" Section Stresses Work in Space, Oceanography, and Atomic Energy

Unlike its Republican counterpart, the Democratic platform devotes a separate section to "science." But for the Democratic platform writers, science seems to manifest itself principally in such achievements as manned space flight, nuclear-powered weather buoys, and other examples of splendid technology.

It should be remembered, of course, that campaign platforms are among the least influential and least enduring political prose, and, therefore, no one should, and few do, take them seriously. But since it is necessary for the platform composers to go through a selection process, it is sometimes instructive to see what view of the past and vision of the future they choose to select among the various possibilities. In the case of the Democrats, it is plain that the platform writers, in quest of the greatest political mileage from the federal government's investment in research and development, fell in line with the popular assumption that science shows itself in gadgetry and spectacular machinery.

At platform hearings prior to the Democratic convention the platform committee received statements from three representatives of Scientists and Engineers for Johnson (*Science*, 21 Aug. 1964): George Kistiakowsky, professor of chemistry at Harvard, who was President Eisenhower's science adviser; Emanuel R. Piore, vice president of IBM, and Michael DeBakey, professor of surgery at Baylor.

The statement they presented included such recommendations as the adoption of a "dynamically long-range position in favor of committing a greater share of the nation's scientific resources to the service of humanity." And it called for "ever greater exploitation of the nation's scientific and engineering capacity, particularly research." In addition, they called for keeping the nation militarily strong while working for disarmament, they supported the test ban treaty, and they came out for civil rights and for governmental programs against poverty.

But on the matter which has been causing science a great deal of political and financial trouble over the past few years—namely, the distinction between basic research and the far costlier developmental activities—the platform writers received virtually no guidance; nor were they offered any guidance on the scope and achievements of the nation's research activities, outside of space, atomic energy, and oceanography.

Again, platforms aren't terribly important, and by themselves they rarely have any effect on what comes in the form of legislation, but since many members of Scientists and Engineers for Johnson are themselves troubled by political factors affecting research, it is unfortunate that they didn't make good use of an opportunity to give the politicians a fuller view of relations between science and government.

The Democratic platform employed a format of pledges for future action and an accounting of the past 4 years. Under the former, references to research and development were woven into discussions of various other matters, such as, under "Freedom and Well Being," "We will go forward with research into the causes and cures of disease, accidents, mental illness and mental retardation." The section headed "science," which follows in its entirety, was presented as part of the "record" of the past four years. (In the Republican platform, which was discussed in the 14 August issue of *Science*, there were many references to research activities, but they were not taken up under a separate heading.)

SCIENCE

In 1960, we declared—

"We will recognize the special role of our Federal Government in support of basic and applied research," mentioning in particular Space, Atomic Energy, and Oceanography.

Space. Since 1961, the United States has pressed vigorously forward with a 10-year, $35 billion national space program for clear leadership in space exploration, space use, and all important aspects of space science and technology.

Already this program has enabled the United States to challenge the early Soviet challenge in space booster power and to effectively counter the Soviet bid for recognition as the world's leading nation in science and technology.

In the years 1961–1964, the United States has:

*Successfully flown the Saturn I rocket, putting into orbit the heaviest payloads of the space age to date.

*Moved rapidly forward with much more powerful launch vehicles, the Saturn IB and the Saturn V. The Saturn IB, scheduled to fly in 1966, will be able to orbit a payload of 16 tons; and Saturn V, scheduled to fly in 1967 or 1968, will be able to orbit 120 tons or send 45 tons to the moon or 35 tons to Mars or Venus.

*Mastered the difficult technology of using liquid hydrogen as a space rocket fuel in the Centaur upper stage rocket and the Saturn I second stage—assuring American leadership in space science and manned space flight in this decade.

*Successfully completed six manned space flights in Project Mercury, acquiring 54 hours of space flight experience.

*Successfully flight-tested the two-man Gemini spacecraft and Titan II space rocket so that manned Gemini flights can begin late in 1964 or early in 1965.

*Developed the three-man Apollo spacecraft which will be able to spend up to two months in earth orbit, operate out to a quarter of a million miles from earth, and land our first astronaut-explorers on the moon.

*Taken all actions to conduct a series of manned space flights in the Gemini and Apollo programs which will give the