

elevated than following professional sport and less culturally demanding than the appreciation of artistic endeavor, and hence peculiarly appropriate in the affluent mass society."

Johnson said that "there is no disputing that basic research has played a significant part in the growth of the U.S. economy," but he said that it was difficult, if not impossible, to determine the extent, and like most of his colleagues on the panel he declined to attempt to answer the questions posed by the House committee.

Among the few panelists who attempted to provide direct answers to the House Committee's questions were Brooks and George Kistiakowsky, of the Harvard chemistry department. They took the position that a minimum annual increase of approximately 15 percent in university research support is essential to meet national requirements. Brooks also suggested "that 10 to 15 percent of the applied effort might be a good rule of thumb for the basic research effort." John Verhoogen, University of California geologist, suggested that in "little science"—designated by research costing less than \$20,000 a year—"ideally every scientist who is capable of raising a valid scientific question and contributing significantly to its solution" should be supported. He estimated that this would apply to at least 50,000 scientists. As for "big science," there was general agreement that because of its costs, there was a necessity to pick and choose among possibilities. And there was also general agreement with a view most forcefully advanced by Edward Teller, of the University of California, that graduate science training places insufficient emphasis on applied science.

One area of considerable agreement among the panelists was the view that the future of basic research in the United States is becoming closely tied to the fortunes of the National Science Foundation, and that increased support for NSF is essential if research is to thrive.

Alvin Weinberg, director of the Oak Ridge National Laboratory, warned that government agencies with narrowly defined technical objectives have been reducing their support of basic research because of budgetary pressures. "Whether or not basic physical science continues to flourish," he said, "will therefore depend largely on whether or not Congress encourages the growth and vigor of the Founda-

Members of the Academy's Panel on Basic Research and National Goals who participated in the preparation of the report to Congress are:

George Kistiakowsky, Harvard University, *chairman*
Lawrence R. Blinks, Stanford University
H. W. Bode, Bell Telephone Laboratories
Harvey Brooks, Harvard University
Frank L. Horsfall, Jr., Sloan-Kettering Institute for Cancer Research
Harry G. Johnson, University of Chicago
Arthur Kantrowitz, Avco-Everett Research Laboratory
Carl Kaysen, Harvard University
Saunders MacLane, University of Chicago
Carl Pfaffman, Brown University
Roger Revelle, Harvard University
Edward Teller, University of California, Berkeley
John Verhoogen, University of California, Berkeley
Alvin M. Weinberg, Oak Ridge National Laboratory
John E. Willard, University of Wisconsin

tion. Expansion of the National Science Foundation is perhaps our country's central political problem related to the support of science."

The House committee for which the report was prepared received it with a warm statement of appreciation. Chairman George P. Miller (D-Calif.) said: "It is my belief that this report represents not only genuine achievement and utility in itself, but a significant milestone in congressional methods of gathering talented, objective assistance to its use."

It appears, however, that the Academy, whose panelists labored with great diligence to produce their papers, is not so certain that a lengthy compilation of individual views is actually the best way to serve the requirements of busy congressmen.

The introduction to the report disclaimed any group responsibility for the views of the individual authors, stating that "neither the other members of the ad hoc panel, nor the Committee [on Science and Public Policy], nor the Academy assumes responsibility for the opinions expressed, except where explicitly stated." In explaining why it chose to present 15 papers rather than a committee report, it offered the statement that "it has been traditional for groups of this kind to develop a consensus as a basis for unanimity in the public statement of their findings addressed to the Executive Branch of the Government. We concluded that, in view of the nature of the legislative process, this may be less desirable in a response to a request from a Congressional committee."

Just why this should be the case wasn't made clear. But it is possible that the Academy is still uneasy about its new relationship with Congress and wants to feel its way before committing its prestige fully. One thing in favor of a closer relationship is the scientists' respect for Representative Emilio Q. Daddario (D-Conn.), chairman of the House Committee's subcommittee on science, research, and development. It is generally agreed that Daddario has been running his subcommittee in a responsible and intelligent fashion, and that the subcommittee is developing into an important channel of communication between the scientific community and the Congress.

—D. S. GREENBERG

Congress: House Subcommittee To Concentrate on PHS, NIH, FDA in Study of Parent Department

The organization and operations of the Department of Health, Education, and Welfare, the Austro-Hungarian Empire of the federal bureaucracy, is again under study, this time by a special subcommittee of the House Interstate and Foreign Commerce Committee's investigations subcommittee.

Commerce Committee chairman Oren Harris (D-Ark.) says, "The main purpose of the subcommittee will be to study the organization of the Department of Health, Education, and Welfare as it pertains largely to public health. We have particularly in mind the U.S. Public Health Service, including the National Institutes of Health

and the Food and Drug Administration.”

The HEW tent covers not only medical research and health agencies, but the Social Security Administration, the Office of Education, the Vocational Rehabilitation Administration, the Welfare Administration, and an assortment of federally aided institutions.

This mixture of missions results in a fragmentation of congressional jurisdiction. While the legislative committee for the health agencies is the Commerce Committee, the Social Security Administration falls under the sway of the Ways and Means Committee, and the Office of Education reports to the Education and Labor Committee. HEW also serves several masters among the Senate committees.

The new study recalls a series of hearings* focused directly on PHS held in the spring of 1963 by another House Commerce subcommittee, the subcommittee on health and safety headed by Representative Kenneth A. Roberts (D-Ala.), who was defeated in the debacle for Democrats in the November elections in his home state.

Chairman of the new special committee will be Representative Paul G. Rogers (D-Fla.). Other members are Democrats Lionel Van Deerlin of California and J. Oliva Huot of New Hampshire; and Republican J. Arthur Younger of California and Willard S. Curtin of Pennsylvania. Rogers is the only one on the special subcommittee who served on the Roberts subcommittee during the PHS hearings. Harris is chairman of the parent investigations subcommittee.

According to Harris, “A principal purpose of our proposed study will be to consider the conclusions and recommendations of the Wooldridge report.” [The Wooldridge report, made public in March, was the product of a committee of 12 distinguished nongovernment researchers, physicians, and administrators appointed by the White House to study the administration and quality of research at NIH (*Science*, 26 March 1965). Chairman of the panel was Dean E. Wooldridge.]

It is evident, however, that sheer growth in the budget and scope of activities of HEW is a factor in the new appraisal of the department. In announcing formation of the special subcommittee, Harris said, “There is grow-

ing concern in Congress over the rapid expansion of the size and activities of the Department of Health, Education, and Welfare.” He noted that NIH research funds rose from \$28 million in 1950 to \$570 million in 1963 and that HEW will administer expenditures of an estimated \$2.2 billion in the coming fiscal year for health research and training, public health services, and related consumer protection programs. He observed, “I think the time has come for us to take a hard look at how these expanded programs fit into the Department of Health, Education, and Welfare as a whole.”

The Roberts subcommittee study followed the conventional congressional practice of set-piece testimony by agency officials followed by questioning by committee members. Occasion for the hearings was a bill (H.R. 2410) “to amend the Public Health Service Act to provide greater flexibility in the organization of the service and for other purposes.” The bill was introduced by Harris at the request of the administration.

The subcommittee study ended inconclusively since no action was taken on the proposal. (A not very deeply submerged issue in the hearings was the question of the Surgeon General’s authority in the location of a new environmental health center, a question which was resolved only late last year with a Solomonic decision to cut the center into three parts (*Science*, 15 Jan. 1965).

Whether the new Rogers subcommittee will follow a different course remains to be seen. The Roberts subcommittee hearings and the Wooldridge report provide a foundation to build on, but the kind of action which results from the study will depend on how closely the subcommittee actually examines the management and the activities of PHS.

Several people are being added to the investigations subcommittee staff, and Rogers has made the statement that he is not going to hold hearings until a good deal of digging is done. This approach is likely to yield considerably greater results than the common congressional practice of using hearings to gather facts rather than to evaluate them critically.

Rogers says he wants to bring the study to a positive conclusion during the 2-year life span of the present Congress. The kind of action to be taken by Congress, Rogers says, must

be determined by the investigation. A modest reorganization of PHS administration on the lines of the Harris proposal in the last Congress is a possibility. But at the other extreme looms the perennial question of whether to break up HEW.

Advocates of partition are certain to press harder as the new school bill and, presumably, medicare swell the budget, the programs, and the staff of HEW and make the Department even more difficult to administer. HEW’s portion of the administrative budget is already over \$7 billion, which puts it in third place on the list of departments which spend the most; it follows the Department of Defense (\$50 billion a year) and the Treasury, which expends some \$11.5 billion of its nearly \$13 billion annual budget in paying interest on the public debt.

Suggestions for new departments always abound and ideas for separating HEW into two or three cabinet-level agencies have been promoted virtually since the department was created in 1953. The logic of creating a Department of Education, or of Education and Research, has perhaps been argued most strongly; but Congress has tended to resist giving cabinet status to what critics see as a “ministry of education” or a “ministry of welfare.” The new broad responsibilities of the Office of Education in education, manpower training, and poverty programs could change this. But, at any rate, the Rogers subcommittee study, in examining PHS and FDA in particular, is sure to draw attention to the peculiar structure of HEW in general.

—JOHN WALSH

Weather: New Report Sketches Anatomy of National Program and of Coordination Problem

The Science Policy Research Division, established last fall in the Library of Congress to provide a stronger source of science advice for the House and Senate, has made its debut with a report on federal weather programs.

The report,* prepared at the request of the House Government Operations Committee’s military operations subcommittee, chaired by Representative Chet Holifield (D-Calif.), is essentially

**Organization of Public Health Service*, printed for use of the House Committee on Interstate and Foreign Commerce, 1964.

* *Government Weather Operations*, available from the Committee on Government Operations, U.S. House of Representatives, Washington, D.C. 20515