

state & society

DOE and NSF set up joint nuclear-science committee

A permanent Nuclear Science Advisory Committee (NUSAC), headed by William A. Fowler, has been jointly established by the Department of Energy and the National Science Foundation to advise both agencies on support for basic nuclear science in the US. Such a committee was one of the major recommendations recently made by the Ad Hoc Panel on the Future of Nuclear Science, which was established two years ago by the Committee on Nuclear Science of the Assembly of Mathematical and Physical Sciences, National Academy of Sciences-National Research Council.

The establishment of a permanent committee has been recommended previously by the Pake Committee in 1966 and by the Nuclear Physics Panel of the Bromley Committee in 1970. These earlier panels apparently foresaw an organization similar to the long-established High Energy Physics Advisory Panel (HEPAP), which has advised the AEC, ERDA and now DOE.

According to Howel Pugh, head of the nuclear science section at NSF, the present impetus for organizing NUSAC came from several directions. First, there have been several strong recommenda-

tions recently for a permanent committee: by John P. Schiffer (Argonne) at the NSF Physics Advisory Panel in December 1975, by a resolution of the Division of Nuclear Physics of The American Physical Society sent to NSF and ERDA in the spring of 1976, and by the Ad Hoc Panel this year.

Secondly, the Ad Hoc Panel, which was headed by Gerhart Friedlander (Brookhaven), demonstrated that a nuclear science advisory committee could function smoothly, and it served as a model for how a permanent committee could be organized, given the intrinsic differences between a permanent committee and an ad hoc panel.

The organization of a committee that could advise both NSF and DOE was further facilitated by the recent action of DOE in placing nuclear physics under a protected basis—that is, freeing it from a mission orientation. This put it in a status similar to what it has in NSF.

Finally, the needs and present level of funding of nuclear science practically necessitated the formation of a permanent committee to advise both agencies. The Friedlander panel recommended an immediate step increase of 13% in oper-



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ating support for nuclear science, and additional increases that would make funding in fiscal year 1983 reach a level approximately 60% greater than that of

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Panel studies basic research in Department of Defense

Concern about the status of fundamental or basic research in the Department of Defense has led to the formation of two panels for studying the problem. One of these, the Defense Science Board Task Force on Fundamental Research in Universities under the chairmanship of Ivan L. Bennett Jr (Provost of NYU Medical Center), made its report in late 1976. The other, the Science Adviser's Working Group on Basic Research in DOD, headed by John K. Galt of Sandia Laboratories, is the first of a series of panels established by the Office of Science and Technology Policy through its Steering Committee on Basic Research in Mission Agencies.

The purpose of the OSTP panels, according to the charter of the Steering Committee, is to "review, in selected mission agencies, the existing and potential role of basic research, the policies that affect the conduct and utilization of basic research by those agencies, and the means to achieve the maximum possible

benefit." The working group on DOD is expected to make a report in March, while a second panel, looking at Department of Energy research, has recently begun meeting. Charles P. Slichter (University of Illinois) is chairman of the Steering Committee.

The OSTP working group on DOD has been holding two-day meetings once a month since last June and has listened to testimony from a wide spectrum of leaders in the military research establishment. At their initial meeting Frank Press, the director of OSTP, asked the panel to look at the role of basic research from the viewpoint of the agency, to examine trends in the resources expended for research as well as available policy statements, to determine what effect, either perceived or real, the Mansfield Amendment has had on the research program and to examine DOD-university relations and determine in particular how young people are being brought into the pro-

gram.

The major task of the Defense Science Board Task Force was to suggest ways of reestablishing research relationships between the universities and DOD. Academic interest in DOD-related problems declined over the last decade, primarily, according to the Task Force, because of academic disenchantment with and opposition to the Vietnam war and because of concern about the emphasis on research "relevance" that followed enactment of the Mansfield Amendment.

The Task Force noted that these factors have shifted the emphasis of DOD university research away from fundamental, long-range science toward more applied, shorter term, relevant subjects and projects. Moreover, because scientific advice to DOD has often been linked with support for fundamental research, the department has in recent years been confronted with a diminishing constituency of first-rate fundamental scientists

(including younger investigators) who desire to advise DOD.

The original Mansfield Amendment required that all DOD-sponsored research projects be relevant to some specific military application. The Task Force pointed out that when DOD initially responded oversimply by defining all research supported by DOD as relevant, it placed two burdens on research scientists that have been annoying and embarrassing. First, many applicants for support have been under the mistaken impression that they individually must demonstrate how their research will be relevant to a specific DOD mission. Although the DOD research management is supposed to do this, many scientists have preferred to develop their own rationales in order to avoid being tied too specifically to some weapon program. Secondly, the sweeping declaration that all DOD-sponsored research is relevant has sometimes drawn criticism upon a research project from an investigator's colleagues and students, even when the research in question is fundamental and self-initiated and the application may be unknown by the investigator.

The Task Force urged that DOD continue to emphasize the importance and relevance of supporting fundamental research in its dealings with the Congress, the Office of Management and Budget and the public. But at the same time they recommended that DOD not require the individual scientist to demonstrate the relevance of his research project or program; they suggested that research relevance should be judged not for an individual project or program, but rather for a whole field of discipline.

The Task Force recommended, as one way of indicating to the universities DOD's desire to reestablish ties with them, the allocation of annual increases of "new money" (up to an annual program level of \$100 million) for fundamental research. New funding would enable the offices of scientific research of each of the services to avoid abrupt curtailment of existing commitments and reallocation of funds, and it should stimulate program innovation.

The Task Force proposed that some form of peer-review mechanism for review and selection of proposals for research in the new program be developed by and for the offices of scientific research of each service. They cautioned, however, against adopting a review mechanism as elaborate as that used at the National Institutes of Health. In the past, DOD has been more prompt than other agencies in responding to research proposals—an advantage that the Task Force insisted should not be lost even if peer-review procedures are implemented.

Several ways of making the new program more visible and attractive were suggested. For example, in order to reverse the decrease in DOD's "constitu-

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ency," emphasis might be placed on the funding for new proposals received from faculty members who are nontenured (that is, younger) or who have not been supported previously by DOD funding. The Task Force also proposed that large departmental or multidepartmental contracts (\$1 million or more per year) or some form of "institutional general research grant" might be awarded, provided that appropriate administrative procedures are adopted.

The Office of the Under Secretary of Defense for Research and Engineering has been seriously considering these and other proposals made by the Task Force. In addition, according to George Gamota, who is administratively responsible for all 6.1 (research) work done in DOD, the Office has proposed on its own some novel management methods, such as the sponsorship of special workshops or conferences in certain scientific or technical areas to identify emerging problems, and committee reviews of proposals that do not fall within one discipline.

Proposals for new funding and administrative procedures are now being considered by the President. If Congress and OMB speedily approve the President's recommendations, they may go into effect with the fiscal year 1979 budget.

The position of Under Secretary of Defense for Research and Engineering is a redesignation of the former position of Director of Defense Research and Engineering; the new position carries with it overall responsibility for weapons acquisition as well as other responsibilities in the areas of communications systems, command and control systems and intelligence resources. William J. Perry, who had been serving as the Director since April 1977, was named by President Carter on 21 October to be the new Under

Secretary; his nomination was quickly confirmed by the Senate and he was sworn in on 4 November. Perry, who received his PhD in mathematics from Pennsylvania State University in 1957, was formerly a scientific adviser to both DOD and the National Security Council and President of ESL, Inc, Sunnyvale, Calif.

—CBW

Peterson takes over as director of OTA

Russell W. Peterson recently took office as the director of the Congressional Office of Technology Assessment. Peterson, the former Governor of Delaware and past chairman of the White House Council on Environmental Quality, has most recently served as the president of New Directions, a citizen's lobby examining global issues.

Upon receiving a PhD in chemistry from the University of Wisconsin in 1942, Peterson entered a 26-year career in industry, capped by the directorship of DuPont Corporation's Research and Development Division. Leaving industry for government, he was elected Governor of Delaware in 1969 and continued in that office until 1973. While Governor, Peterson also served as chairman of the National Education Commission of the States and as chairman of the National Advisory Commission on Criminal Justice Standards and Goals. Completing his term as Governor, Peterson was named chairman of the executive committee on the Rockefeller Commission on Critical Choices for Americans. In late 1973 he was appointed chairman of the White House Council on Environmental Quality and remained there until assuming the presidency of New Directions in 1976.

Peterson succeeds OTA's first director, Emilio Q. Daddario, who retired 1 July 1977 after serving three and a half years.

Slaughter and Krumhansl join NSF administration

John B. Slaughter and James A. Krumhansl have been appointed as assistant directors of the NSF for administering research in the physical sciences. Slaughter is in charge of the directorate for astronomical, atmospheric, earth and ocean sciences; Krumhansl holds a similar position for the mathematical and physical sciences and engineering.

Slaughter, who succeeds Robert A. Hughes, received his PhD in engineering science from the University of California, San Diego in 1971. He was an engineer at the Convair Division of General Dynamics Corporation from 1956 to 1960 and then served as physical science administrator of information systems at the Naval

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