

ment fee for the right to "record" a work on a computer tape which could be used over and over again in any number of informational systems without additional payments.

Above all, the "hardware" manufacturers and systems operators must be careful that their demands and practices do not hurt the generation and flow of

copyrighted scientific and technical information. They must avoid demands that might cause a sacrifice of human creativity to the convenience of their machines. And they must realize that assaults on copyright protection of literary property in the name of overriding public interest can only invite similar assaults on patent protection of

their machines and industrial processes.

When these accommodations in thinking and attitudes have been made on both sides, practical business solutions to the remaining problems must be sought and found. This may not be easy, but certainly it can be done, and done with fairness to all interests. "Be there a will, and wisdom finds a way."

NEWS AND COMMENT

Science Policy: When Congress Looks for a Leader NSF Is Usually Nominated

Since it was established 15 years ago, the National Science Foundation has maintained a measured rate of growth and an unobtrusive style. In Congress, however, a campaign to thrust a new "dynamism" on the NSF seems to be gathering momentum.

Hearings on a bill which would alter the scale and character of NSF operations are scheduled for 19 through 21 April, before the subcommittee on science, research, and development of the House Committee on Science and Astronautics. Chairman of the subcommittee is Hartford Democrat Emilio Q. Daddario, who is also author of the bill (H.R. 13696) which will be the subject of the hearings. Daddario's proposals were discussed in detail in an article by the congressman in last week's issue of *Science*.

In the Senate, early in March Senator Carl T. Curtis (R-Nebr.) introduced a resolution (S. Res. 231) which would also give NSF new marching orders. The resolution would request NSF to recommend changes in existing laws necessary "to provide for a more equitable distribution of [R & D] funds to all qualified institutions of higher learning to avoid the concentration of such activities in any geographical area and to insure a reservoir of scientific and teaching skills and capacities throughout the several States."

The attention being paid NSF is at least in part a symptom of dissatisfac-

tion in Congress over national science planning. This dissatisfaction is not new. Since the war it has been a chronic condition which recently has been growing acute.

In the act founding NSF in 1950, the agency was directed "to develop and encourage the pursuit of a national policy for the promotion of basic research and education in the sciences." The young NSF, which had plenty of other problems to occupy it, did not perform this function to the satisfaction of Congress or the Executive. This was reflected in the establishment of the President's Science Advisory Committee (PSAC), made up of nongovernmental experts, and later of the Federal Council on Science and Technology, composed of policy-making officials of the science agencies. A further step was taken early in the Kennedy Administration with the expansion of the Office of the President's Science Adviser into the Office of Science and Technology. Under the reorganization plan which created OST, there was a transfer to OST from NSF of functions which were to "enable the Director of OST [i] to advise and assist the President in achieving coordinated Federal policies for the promotion of basic research in the sciences," and (ii) "to evaluate scientific research programs undertaken by agencies of the Federal Government."

OST's performance to date has been rated fairly high in advising and evaluat-

ing, but as less impressive in promoting coordination. The fugitive state of federal science planning is one of the factors which account for the creation in late years of several subcommittees, in both the House and the Senate, concerned with science policy as well as science programs.

While the reasons for the growing demand for effective planning for federal science are multiple, several seem particularly noteworthy. Perhaps the most obvious cause is the leveling off in the past 3 years of the government's annual R&D budget at around \$16 billion. Since the R & D dough has lost its self-rising properties, problems have developed over finding funds to pay for new projects and also to defray the built-in escalation in costs of existing programs. Very expensive projects have come under closer scrutiny, and funds for young researchers just establishing themselves seem to be in particularly short supply.

In Congress, concern about geographical distribution of R & D funds is widespread and is producing such manifestations as the Curtis resolution. The experience of the postwar period has led Congress to believe that military R & D contracts and major research grants to universities are a sort of magic ingredient in regional development. Better science planning has come to be identified with broader geographic distribution of funds for scientific research and education.

In recent years the growing sophistication of the legislators has been evident in competition for such facilities as NASA's electronics research center and the PHS environmental health research facilities. The projected Midwestern Universities Research Association accelerator turned out to be a mirage, but the lessons learned in the MURA quest were not lost on the midwestern states. The biggest prize to date, the 200-Bev proton accelerator, has been the most earnestly sought after.

While parochial self-interest obviously

figures in congressional concern over science policy, it would be a mistake to assert that the concern can be traced solely to conventional pork-barrel motives.

One of the cosponsors of the Curtis resolution in the Senate was Senator Fred R. Harris (D-Okla.), who happens to be chairman of the newest of the science subcommittees, the Senate Operations Committee's subcommittee on government research. In defending his subcommittee's budget on the floor of the Senate on 16 February, Harris listed several questions in which the subcommittee is interested and which it proposes to examine. They make up a fairly accurate summary of the major questions which Congress would like answered. Harris listed them as follows.

First. Are the large expenditures for research and development and the various component research project expenditures necessary and justified?

Second. To what extent are improved administrative procedures required to guard against or eliminate unnecessary or improper overlapping and duplication among the Federal agencies?

Third. How may we establish broad national policies for making value judgments on how much emphasis will be given to various fields of research concerned, as compared with others, and for the best use of our limited national research manpower resources?

Fourth. How may we better provide for the dissemination of research results for governmental, institutional and industrial use?

Fifth. How may we be more certain of fairness in the distribution of Government research contracts among potential research contract recipients, particularly institutions of higher education?

It is not only the cynics who believe that the location of some science facilities and even the award of some grants have been influenced by legislators in particular seats of power. But most lawmakers accept the principle that the national interest as well as local interests must be served in matters affecting science, and that these matters should not be classed with rivers and harbors projects and new post offices. So long as the machinery for making the big decisions on locating facilities remains makeshift, however, pork-barrel temptations in federal science will remain strong.

The prominence of NSF in most congressional proposals to reconstruct this machinery is nearly inevitable. PSAC and OST belong to the Executive and are really out of reach of Congress. NSF isn't. And NSF, after all, was

originally created as an agency with unique responsibility for promoting scientific research and education.

The Daddario proposal for revamping NSF's basic law has as a chief point the return to the National Science Board of the top-level policy-making function which it was originally given and has never exercised. The board, which is made up of distinguished nongovernmental members of the scientific community, has acted essentially as policy maker for the Foundation, not for federal science.

The attitude of the board and of NSF toward the proposal will presumably be made clearer in the coming hearings, but there are signs that Daddario's proddings are not unwelcome. Any important changes, it is safe to predict, however, would be preceded by a period of quiet, high-level diplomacy to secure the support of PSAC and other interested parties for any alteration of the board's role.

What seems to be developing in federal science's ruling triad—Congress, the Executive, the science establishment—is a feeling that the need for comprehensive planning for science is growing urgent and that old patterns of action should not be repeated. In the past, if one planning body proved unsatisfactory, another was created, as the NSF, PSAC, OST progression and the proliferation of congressional committees suggest. Now the view seems to be that it is finally time to name the place where the buck stops.

—JOHN WALSH

Congress: Private Universities Say Unemployment Pay Should Not Cover Their Faculty, Students

Private colleges and universities and some other nonprofit, tax-exempt organizations currently find themselves more closely concerned than they are accustomed to be with the deliberations of the tax-writing House Ways and Means Committee.

The committee has been considering a major revision of the unemployment compensation law, the first since it was enacted in the heyday of New Deal social legislation in the mid-thirties. And administration proposals, which the committee has been pondering, include a recommendation that employees of nonprofit religious, charitable, and education organizations be brought under coverage of the law.

Until now, nonprofit organizations eligible to receive tax-deductible contributions have not been required to participate in the program. In most states voluntary participation has been possible, but relatively few educational or health service institutions have taken up the option.

In general, the private institutions now oppose inclusion of their employees in the program—at least, inclusion on the same terms as employees of regular business enterprises. Their arguments have been of two main sorts. First, it is pointed out that these institutions perform a public service function and should not be treated as ordinary profit-making enterprises. Second, it is claimed that conditions in the nonprofit education and health institutions differ from those in the general employment market. It is argued that involuntary unemployment is rare among professionals in this sector, that even employment of blue-collar workers is very stable, and that, therefore, taxing these institutions would put an unwarranted financial burden on them.

It is noted that publicly supported institutions performing the same functions would almost certainly not be included in the extension of coverage. Private institutions argue they would suffer from application of a double standard. Bringing the employees of state and locally supported institutions into the program could conceivably be done. But there are doubts about the constitutionality of such a course, and it is unlikely that Congress would include public employees.

When hearings on the administration proposal were held last summer there was some feeling that the educational institutions involved had not pressed their case as effectively as they might have. In part this would appear to be the result of the noninvolvement of the public institutions. Representatives of the public institutions have, in general, more experience in lobbying and fewer inhibitions about it—or, if lobbying is too pejorative a term, about pursuing legislative goals.

In recent weeks that deficiency seems to have been remedied by the efforts of some of the larger private universities in getting their story across to the legislators.

The total cost to the private nonprofits of inclusion in the unemployment compensation program on a regular basis was not estimated in any detail at the hearings, but individual