

about our operations in a way we have never done before. To be sure, I don't agree with every detailed recommendation of the report as to whether each and every one will help toward their objectives although some obviously will. My analysis of the report is that the subcommittee has decided that the foundation is a successful and worthwhile endeavor and that its usefulness can be enhanced both in the sense of engaging in new operations and in that of making existing programs more effective."



HAWORTH

Others at the foundation also believe that Daddario has performed a valuable service in his analysis of NSF operations and that his subcommittee is an enlightened group of legislators. Various sources, however, have expressed reservations to the report both inside NSF and beyond.

The principal charge is that the Daddario subcommittee is trying to turn the clock back. Originally the foundation was assigned by law the responsibility to coordinate the basic research programs of the entire government. It did not, however, fully discharge its responsibility in this respect. "I think the Science Foundation was initially given responsibilities to do things which we later concluded it should not have been asked to do," says former presidential science advisor Jerome Wiesner, in the Daddario hearings. "This is the role which, as an operating agency, as a funding agency, we concluded it could not really play. It can play an advisory role, a statistics-gathering role, a leadership role, but it cannot play the kind of government-wide decision-making and coordinating role that was originally visualized for it."

More immediate reasons for NSF's failure, as Don K. Price in *The Scientific Estate* indicated, concerned the compromised authority of the NSF di-

rector in his relation to the National Science Board and the organization of NSF on the basis of scientific disciplines rather than purpose. The Daddario subcommittee, however, in its legislative recommendations, would attempt to correct both these shortcomings.

Diffusion balances centralization

There is perhaps a deeper reason behind the inability of the foundation to take a more prominent role in US science policymaking decisions. Operation of science policy, says the Federal Council for Science and Technology, "reflects the pluralistic character of most political processes in the United States. This character militates against a neat division of functions, and it results in a sharing of functions. This pluralism has the effect of diffusing power. In science policy, the continuing task is to sustain the most effective balance between diffusion and centralization of power."

An additional criticism of the Daddario report concerns its recommendation for an annual report on the status and health of science. As the Federal Council points out, "there can be no such thing as 'the plan', just as there is no simple, single, national science policy. There are many plans, each representing a valid way of looking at science and technology. . . . This sort of process is a familiar one in political affairs. . . . But the entire process of planning is so intricate that it is not possible or desirable to undertake to integrate all of the different kinds of planning. The interaction of different kinds of planning are not fully predictable. For this reason, the system must be flexible and open. . . . The feedback process, resulting in the correction of errors, is the substitute for omniscience."

Answering the charge of turning the clock back, Daddario says "there is nothing in the report or in the proposed legislation that can be construed as rescinding the 1962 NSF reorganization plan number 2 (which gave major assignments to the foundation)." As to the subcommittee recommendation for an annual report on science, he says, "Certainly no master plan was ever contemplated.

But when you consider the feedback process reflected in the Congress through its own attention to the issues . . . you see the way we must insure that information, logically organized and usefully presented, begins to flow. In that way the feedback will adjust the thinking of the Congress. . . ."

How then can the legitimate desires of Congress for a clear view of the overall research and development picture and for stronger science policy leadership be satisfied? Or will Congress adjust to a more subtle appreciation of the workings of government science policy? It is reported that many of the recommendations of the Daddario subcommittee have a good chance of passage in this, an election year session. As a minimum, many of the foundation's operations which NSF director Haworth has encouraged in the engineering and social sciences will be given greater impetus and direction. It also appears possible that Congress, through the Committee on Science and Astronautics, will obtain the right to authorize all NSF funds before appropriation, in the same way the Joint Committee on Atomic Energy reviews Atomic Energy Commission budgets.

Other committees study problem

At the same time, other groups in Congress will be studying the government-science relation. Rep. Reuss's subcommittee on research and technical programs is holding hearings on redeploying federal research facilities for new tasks once their missions have been completed; Sen. Nelson will conduct hearings on the use of systems analysis techniques in manpower conversion; Sen. Harris's group will seek a total overview of the government's involvement in research.

What this will all add up to in the larger issues of government science policy, no one can possibly foresee. Daddario has said, "We believe science can play in the political leagues without being corrupted or unduly influenced by the character of the other players." Certainly for both Congress and the oligarchy that formulates science policy and determines budgets, days of intense debate, compromise and accommodation inevitably lie ahead.