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# National Science Foundation

During its 29-year existence the National Science Foundation has experienced moments of euphoric support and times of carping criticism. It now faces a period of uncertainty from which it could emerge either strengthened or weakened. Those who believe in the long-term benefits to society of programs carried on by NSF should follow closely and contribute to the in-depth review of NSF now under way. The review is being conducted by the subcommittee on science, research, and technology, chaired by Representative George E. Brown, Jr. (D-Calif.). The year-long effort will include an examination of the basic statutes under which NSF operates and could probably lead to legislation changing in some ways the scope and thrust of NSF. Chairman Brown, who approaches the task in an open-minded fashion, intends that the examination should be reflective, thorough, and broad-ranging. Part of the subcommittee's review will be based on a series of public hearings in which advice will be sought from individuals, organizations, and communities. Other sources of counsel will include a commissioned study and ad hoc advisory groups.

Why is NSF being placed under scrutiny at this time? One reason cited is that 10 years have elapsed since the last searching look. Congress has responsibilities for oversight and legislation which should be discharged. Some of us adhere to the late Sam Rayburn's dictum, "If it ain't broke, don't fix it." However, the temptation to improve a going concern is strong, particularly when, as in the case of NSF, circumstances in which it operates have changed. During the past 10 years the United States has lost much of its technological supremacy and ability to compete in foreign trade. Innovation has become one of the "buzz words" in Washington and it is natural that a possible role for NSF in fostering it has been identified. The past 10 years have also seen a great revolution in instrumentation. The new equipment is very powerful but it is very expensive. An inevitable move is on toward instrumentation centers. The past 10 years have also witnessed an important change in university science departments. Enrollments have leveled off or declined. Few new faculty positions are available. If graduates are to be placed, most of them must go to business and industry.

Representative Brown and the subcommittee reviewing NSF have identified at least 30 questions or issues for examination. They have not yet focused sharply on the matters that will receive maximum attention. However, given the spirit of immediacy that characterizes politics and the quick-fix attitude of Washington, the tendency will be to move NSF further toward applied research. One of the questions for discussion posed by the subcommittee is, "To what extent should NSF support research intended to provide solutions for society's problems?" Another comment and questions are, "We often characterize basic research as an investment in the future, and strongly imply future productivity, industrial innovation, etc. How should NSF's concern with innovation and/or productivity be expressed, if at all? What role or connection should NSF have with research in industry? Can or should NSF promote good research in industry or the linkage between university research and industry?"

A short answer to the last set of questions is that relations between academia and industry could be improved, but the participation and funds of NSF are not required. The government merely needs to change its potent policies with respect to inventions arising under grants.

In its studies and deliberations, the subcommittee will be reminded of the enduring values of basic research. The words have been spoken before. Nevertheless, they are true. Congress should reflect on how much it spends on immediate efforts that often amount to plowing the waves. In contrast, it should note how little is invested for the future.

This is an important period in the life of NSF. It needs the voices of those who understand the importance of fundamental research. It also needs some fresh ideas on how best to justify its continuing efforts.

—PHILIP H. ABELSON