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Upgrading Policy Analysis: The NSF Role

Each year public and private organizations commission or perform thousands of policy-focused analyses in which issues of science and technology are centrally important. This blizzard of risk assessments, decision analyses, and the like plays an increasingly important role in the processes of managing, governing, and regulating our technological society. While they may require a few days or several years to perform, such analyses are inherently short-term. They must use available strategies, analytical tools, and science to inform and enlighten the policy-making process.

Many of these analyses have been disappointing. Too often the boundaries and assumptions are not adequately defined and justified; scientific and other uncertainties are inadequately characterized; issues of value are not clearly delineated and may be confused with issues of fact; analytical techniques are inadequate; and virtues such as simplicity, robustness, flexibility, and transparency are lost in a haze of technical verbiage.

Improving the quality of policy analysis that involves science and technology is the responsibility of many groups, both public and private. The National Science Foundation, charged with the support of basic research in science and engineering, has a unique opportunity to contribute. It could support research, development, and selected demonstrations related to basic strategies, tools, and assumptions in science- and technology-related policy analysis; encourage the development of mechanisms for the critical review and evaluation of analyses and analysis methods, both in the interest of quality control and in the expectation that we can learn from past experience; support selected "model" policy studies with substantive science or engineering content which could serve as benchmarks against which day-to-day analyses could be measured; support policy studies on important problems that fall between the cracks of mission-agency agendas; support graduate education in this field; and finally, encourage a modest portion of basic research to be more responsive to policy-focused needs.

Until recently, NSF has supported some of these activities but has not undertaken a broad program to support fundamental long-term improvement of the field. Since the late 1970's NSF's policy resources have been concentrated in its Division of Policy Research and Analysis (PRA). Particularly in its early years, PRA devoted some of its resources to long-term fundamental work. However, the provision of policy analysis support to various federal agencies has always been part of its mission. In recent years it has spent more and more of its resources on studies that are responsive to the immediate and, often, political needs of these agencies.

In recent months, PRA has moved aggressively to restructure its activities. It has assumed a higher profile in servicing the needs of OSTP, OMB, EPA, and other federal agencies, doing some work in-house and obtaining some outside assistance from groups such as consulting firms through "basic ordering agreements" rather than the traditional grant mechanism. It also plans a variety of longer term grant programs. It is not yet clear how substantive these will be, how much science and engineering they will involve, or how closely they will be tied to federal agency agendas.

For several reasons a different and more drastic reorientation of PRA should be contemplated. NSF is not, and has never been, a good place for a federal policy analysis job shop. Despite possible political appeal, the long-term risks of such work to the foundation, particularly to its reputation as a dispassionate and objective research organization, are considerable. NSF could have a far greater impact, and in a manner more consistent with its traditional role, if steps were taken to substantially reduce its direct involvement in policy support for federal agencies and its efforts were concentrated on building a long-term substantive program designed to improve the quality and fundamental capabilities of science- and technology-focused policy analysis. The choice deserves careful reconsideration. —M. GRANGER MORGAN, *Head, Department of Engineering and Public Policy, Carnegie-Mellon University, Pittsburgh, Pennsylvania 15213*