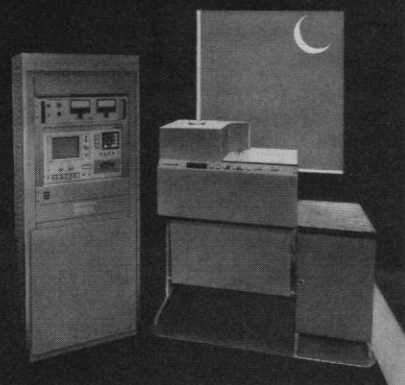


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U.S. Science and Technology: A Prescription for "Health"

The congressional Office of Technology Assessment (OTA) has initiated a long-range program on R & D policies and priorities. Three separate advisory panels have been established, with their work to be coordinated through OTA's statutory Technology Assessment Advisory Council (TAAC), chaired by Jerome Wiesner of the Massachusetts Institute of Technology. The three panels are to deal, respectively, with the health of the scientific and technological enterprise; the applications of science and technology, including industrial research and innovation; and the decision-making processes whereby the nation sets its policies and priorities with respect to the allocation of R & D resources and the utilization of scientific inputs in government policy generally.

The panel on the health of the scientific and technological enterprise, which I chair, would like suggestions from the technical community and from other interested and concerned individuals. We are particularly interested in receiving views on (i) what issues should be given priority on our agenda; (ii) what some of the perceived problems and strengths of the present system of overall management and support of research and development in the United States are; and (iii) how the future system might look. Our purview includes, but is not restricted to, basic research in universities and the system of advanced education in the natural and social sciences. We have adopted a provisional working definition of "health"—"the capacity of the U.S. science and technology enterprise to develop new knowledge and insights both for their own intrinsic values and for the contribution they can and should make to the solution of some of the major problems which face mankind and the nation." However, the panel would welcome suggestions for a better definition.

Currently we are engaged in defining the scope of its work and setting priorities for its study agenda. Illustrative of some of the issues that may be considered are the following:

- The development of objective criteria for assessing the health and performance of the science and technology enterprise, including its ability to maintain its capacity into the future.

- The validity of current national R & D priorities including priorities in fundamental science, taking into account both future social needs and probable scientific and technological opportunities. The issue involves the development of more systematic criteria for assessing scientific and technological priorities.

- The functioning of the overall research enterprise as viewed from the perspective of the working scientist: whether he is working on the problems that he considers most important and interesting, whether he has the freedom and opportunity to use his maximum capacities and training, and how he views his relationship to society and to social priorities.

- What alternatives might and should exist to the present traditional basic research and teaching careers for scientists and engineers who are trained to the Ph.D. level primarily through research apprenticeship.

- The future role and form of broad-purpose national laboratories and the specific requirements for a healthy and socially useful national laboratory system, including relationships with universities and industry.

- The proper allocation of government support among specific project grants to individual investigators, general research support to institutions, and support for individual scientists on the basis of promise and accomplishment with review of performance largely after the fact.

- The equity of access to the career opportunities provided by the scientific and technological system on the basis of capacity to contribute.

Communications and suggestions from persons in the technical community or from the general public concerned with the health and impact of science and technology would be welcomed by the panel. Such communications should be addressed to me.

HARVEY BROOKS

*Chairman, Office of Technology
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