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Changing Research Emphasis

Faculty members are being accused, by themselves and by others, of devoting too much attention to their individual scholarly interests and too little to the big problems that worry the world and the nation. Scientists are increasingly concerned over the uses to which their findings are put and over their own responsibility for the ways in which new knowledge is exploited. Some academic leaders are asking how the universities can take a more effective role in analyzing and helping to solve some of the large social problems.

The values and attitudes being challenged will not change easily, for the traditional academic emphasis on individually chosen problems of research and scholarship is part of the concept of academic freedom, is widely judged to be the most effective way of advancing knowledge, and has been strongly reinforced by extensive federal use of individual grants, each judged by a group of the applicant's peers. Not only in science departments but in the professional schools as well, the highest prestige has often gone to fundamental research and individually selected studies rather than to work on practical problems and collectively determined areas of investigation.

Nevertheless, a change now seems likely. The force of money will push in the same direction as the growing concern over social issues, and will tend to increase the percentage of the total R & D effort that is centrally or collectively planned and to decrease the percentage individually and locally planned. The social and environmental problems that are high on the national agenda require concerted, large-scale work, and, increasingly, basic research does too; no one can now construct his own accelerator, atmospheric research laboratory, oceanographic vessel, urban renewal project, national collection of social statistics, or other expensive research tool or facility.

Some private foundations have decided that work on the large problems is the order of the day, and an analysis by the Battelle Institute* of trends in federal financing shows a government shift in the same direction. The authors analyzed federal expenditures from 1961 through 1969 for 12 functional areas, such as health, national security, and housing and community development. They also took account of the 1968 Republican and Democratic party platforms, the actions and expressed intentions of the 90th Congress, and other indicators of the trends of the coming decade. Two conclusions emerged most strongly.

1) Functional areas which have had a large research and development component—such as national security, health, and education—will have a relatively smaller part of their total budgets for R & D in the years ahead, and those which have had a relatively small R & D component—such as transportation, communications, and community development—will have a larger share for research in the future.

2) In comparison with the R & D funds each area has had in the recent past, the most rapid future growth can be expected for welfare; health; commerce, transportation, and communications; labor and manpower; housing and community development; and natural resources and the environment. Growth will be smaller, or negative, in funds for R & D in the areas of national security, education and knowledge, space, and agriculture.

Budgetary trends by themselves will not suddenly change academic values, but they are important signs of a growing demand for concerted work on the big problems of society. If the universities do not move with this trend, other agencies will carry out the necessary research.

—DAEL WOLFLE

* Leonard L. Lederman and Margaret L. Windus, *An Analysis of the Allocation of Federal Budget Resources as an Indicator of National Goals and Priorities* (Report No. BMI-NLVP-TR-69-1 to the National Aeronautics and Space Administration), Columbus, Ohio, 10 February 1969.