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## Women/Minorities in Science and Technology

In response to recent budget cuts at the National Science Foundation, scientists and engineers deplored in turn the effects of budget decisions on international science programs, social and behavioral sciences, and science and engineering education. The rationale for the excisions and the manner in which they were accomplished baffled and disturbed many, who believed that legislative processes for arriving at such decisions were ignored. Less prominent have been protests against cuts in programs designed to increase the participation of women and minorities in science and technology.

Past arguments for inclusion were phrased in such a way that only demands for rights were heard. This seems unfortunate at a time when such rights are unpopular, or at least considered unaffordable. Some scientists and engineers—male and female, minority and nonminority—have voiced the other reasons for supporting increased participation of women and minorities in science and technology. They have called attention to the waste of the brainpower of 60 percent of the population while we need to build capacity in all of the population to meet the challenges to our nation's scientific and technological preeminence. They have spoken of the role of women and minorities in addressing issues of health, national defense, and productivity. They have pointed out that personnel shortages in critical areas of science and technology can be met, while maintaining quality, by better utilizing the talents of these groups, and they have talked about the diversity of perspectives and experiences which are brought to science and technology by a heterogeneous mix of participants. Science has not been served well by our past prejudice and discrimination; we have lost time, talent, and ideas.

Although the battles for access, advancement, status within the professions, equal treatment, and equal pay are not finished, women made tremendous gains during the 1970's. This is not true of minorities. Quirks of statistics obscure the fact, but minorities saw little real progress over the last decade. Problems of access for minorities begin at the precollege level, in the science and mathematics education which students receive from the early grades on. The historical barriers, lower expectations of teachers, and poor overall quality of training offered by the schools affect these students most. Minority scientists, calling for access for the youth who would follow them and recognizing that quality is a part of equality, demand improvements in training, increased course requirements in mathematics and science, and a return to rigor.

Buck passing, however, is rampant. The federal government says that precollege education belongs to the states and local governments—to the states that originally led minorities to seek federal redress and to the local governments of many inner cities which are suffering under declining tax bases, increased need to provide basic human services, and little sympathy or money from state legislatures whose suburban and rural factions have traditionally remained unimpressed by these facts.

The Administration's suggestion that the private sector be involved is a reasonable one, but can be expected to work only for efforts which industry sees as being in its own interest. Where national and private sector interests intersect, there is no problem. History tells us, however, that public and private sector needs not only match imperfectly, but often conflict. For this country to attend to the health of science as well as provide for the common defense, see to the physical and mental health of the people, and increase national productivity necessitates greater participation of women and minorities in science and technology. Seeing to the health of science and technology is a legislated federal responsibility—where the interests and activities of other sectors intersect as well as where they do not. We must protest cuts in programs for developing the capabilities of women and minorities, not only for the sake of these groups, but also for the sake of science and for the sake of our nation.—SHIRLEY M. MALCOLM, *Office of Opportunities in Science, AAAS, Washington, D.C. 20036*