Degree Completion by Women and Minorities in Sciences Increases

Women are moving rapidly to obtain the education required for a professional career in science or engineering, but their employment and advancement opportunities still trail those for men. The proportion of earned degrees in these fields by women have grown dramatically during the 1970's.

Their share of bachelor's degrees in engineering has risen from less than 1 percent in 1970 to 10 percent in 1980. At the doctorate level, their share of physical science degrees has increased from 4.5 percent in 1970 to 10.6 percent in 1979; in the life sciences from 12.8 percent to 23.4 percent; in psychology from 23.5 percent to 40.8 percent; and in the social sciences, from 11.9 percent to 23.7 percent. Women earned 23 percent of M.D. degrees in 1980, up from 8.5 percent in 1970; and 12 percent of first professional degrees in dentistry, up from 1 percent in 1970.

Minorities also have increased their share of degrees in science and engineering.

Blacks were 2 percent of freshman engineers in 1970 and are 6 percent in 1980, while their share of earned bachelor's degrees has risen from less than 1 percent to 2.3 percent during those years. Hispanics were 0.6 percent of the entering medical class in 1970 and 1.5 percent in 1980. Their share of M.D. degrees rose from 0.2 percent in 1970 to 2.6 percent in 1979, although their representation in medical school faculties is still below 1 percent.

Minorities earned 10.9 percent of all Ph.D.'s awarded to U.S. citizens and permanent visa immigrants in 1979. Among the minority doctorates, Asian Americans dominate in the sciences, Blacks in education, and Hispanics in humanities. Minorities (Blacks, Hispanics, Asian Americans, and American Indians) constitute 18 percent of the U.S. population, and 8.2 percent of all U.S. doctorates.

Despite these increases, women's opportunities for employment and advancement still lag behind men's.

Unemployment rates for professionally trained women continue to be two to five times higher than for men in the same field with the same level of training and the gap increases at higher degree levels. Among all science and engineering Ph.D.'s in 1979, only 0.8 percent of men were unemployed and seeking work compared to 3.4 percent of women. The difference occurs in every field.

Employment of women in higher education has grown slowly during the decade, as college enrollments began to level off, but their progress up the academic ladder continues well behind that of men from the same class in the same field. Less than 10 percent of all professors, but 52 percent of all instructors in 1980 are women, who constitute 26 percent of full-time instructional faculty. Women are 12.1 percent of all doctoral scientists and engineers employed in higher education, but they are 23 percent of nonfaculty Ph.D. staff and only 7.2 percent of tenured doctoral faculty.

The federal government is a major employer of scientists and engineers, including women and minorities. However, women of all races are still well behind their male counterparts in grade level, and thus in salary. For example, among 8250 chemists employed in November 1979, 16.5 percent were women (including 2.2 percent minority women) and 12.5 percent were minorities. Both majority and minority women earn 80 percent of men's earnings, while minority men earn 90 percent of the salary average of all men.

The Scientific Manpower Commission has published a new 200-page supplement to *PROFESSIONAL WOMEN AND MINORITIES—A Manpower Data Resource Service*, which updates to 1980 a comprehensive statistical picture of the professional work force in the United States, detailing the participation of women and minorities in the natural and social sciences, engineering, arts, humanities, education, and all of the professions. This comprehensive reference study, designed for use by manpower planners and affirmative action personnel in educational institutions, industry, and government, was first published in 1975. Its statistical tables are updated and supplemented annually.

The four-part reference book includes basic information on affirmative action; manpower data in all fields from more than 200 sources; annotated recruitment resources, both for specialized fields and for general recruitment of professional women and minorities; a detailed bibliography; and a comprehensive cross index. Approximately 400 tables and charts with breakdowns by sex and/or minority status provide historical and current data on enrollments, degrees, and on general, academic, and federal work force participation of women and minorities by field and subfield.

PROFESSIONAL WOMEN AND MINORITIES—A Manpower Data Resource Service by Betty M. Vetter and Eleanor L. Babco is available for $120 from the Scientific Manpower Commission, 1776 Massachusetts Avenue, NW, Washington, D.C. 20036.

BETTY M. VETTER
Scientific Manpower Commission

Call for Nominees—SFR Award

Submission of entries in the 1981 selection of the AAAS Award for Scientific Freedom and Responsibility is invited. Established in 1980 (see *Science*, vol. 210, p. 1115), the $1000 prize will be awarded annually to honor scientists and engineers whose exemplary actions, often taken at significant personal cost, have served to foster scientific freedom and responsibility. The new prize is intended to encourage awareness of the importance of moral principles in science and engineering.

A candidate for the award will be recommended to the chairman of the AAAS Board of Directors by a committee of judges which includes members from the AAAS Committee on Scientific Freedom and Responsibility. The deadline for receipt of entries is 30 June 1981. Nominations and requests for information should be sent to: Scientific Free-