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Women in Science

Ten percent of the active American women physicists with a Ph.D. degree received their degrees in the 1977–78 academic year. These 66 new women doctorates amounted to 6.8 percent of the total Ph.D.'s awarded last year. This representation of women among physics Ph.D.'s has increased steadily from only 2.6 percent in 1972. But almost half of this increase is due to the total number of physics doctorates decreasing from 1438 to 971.

But the problems of women physicists are not fully reflected in these figures. Compared to their male counterparts, women physicists experience five times as much unemployment, are paid less, and work in positions of lesser rank. All this adds up to a waste of talent and a demonstrable inequality of opportunity and incentive for young women interested in physics.

The American Physical Society's Committee on the Status of Women in Physics has studied this situation since 1971, and believes that two major obstacles to scientific careers for women must be overcome. Early influences discourage women from acquiring the appropriate academic foundations, and women once trained must have equal opportunities and rewards to pursue their careers. Four suggestions for national action are offered:

1) Initiate programs no later than in junior high school to attract girls to scientific and engineering careers while their mathematical performance is still fully competitive with boys.

2) Modify criteria for fellowships and other scientific awards so that they do not put women with career delays or interruptions at an unfair disadvantage (such as those stipulating limits of age or years since highest degree).

3) When collecting the needed reports and data on women in science and engineering, keep the paperwork and administrative details to a minimum.

4) Provide incentives (such as the equal opportunity awards suggested by Senator Kennedy) for people most responsible for fostering the careers of women scientists and engineers.

Senator Kennedy has introduced a bill (S.568) called the Women in Science and Technology Equal Opportunity Act. This bill, providing a welcome indication of congressional awareness of the issue, would require implementation by the National Science Foundation (NSF). Through programs initiated by the NSF, science and mathematics courses in elementary and secondary schools would be strengthened, with emphasis being placed on gaining the interest of female students; and supplementary training for teachers and workshops for parents would be provided. Higher education programs would prepare women for careers in science, and a continuing education program would assist women scientists in the work force and in periods of interrupted careers.

Under Title 3, the bill would provide for a variety of public information programs, including a clearinghouse for information on women in science and programs for museums, communities, and media aimed at promoting public awareness of scientific careers for women. It would also establish prizes for constructive activity toward advancement of women in science.

The last title, "Equal Employment Opportunity," contains nondiscrimination clauses that would have considerable impact on federally supported laboratories. Among the penalties for noncompliance is one sure to be controversial: an arbitrary reduction in permitted overhead reimbursement on federal projects for institutions having the lowest percentages of women participating in scientific activity.

The NSF recently announced funding for 28 Science Career Workshops aimed at increasing the participation of women in science. These workshops should help to define problems and alternative solutions going beyond those in S.568. But hearings should be held on this proposal to bring closer the day when a consensus is reached on how this country will ensure the full participation of its talented women in scientific and engineering careers.

—LEWIS M. BRANSCOMB, *President, American Physical Society, 335 East 45 Street, New York 10017*