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# EDITORIAL

## Women in Science

The notion that women should stay home and mind the children while men are the breadwinners is an idea whose time has gone—a passing helped on its way in part by science and technology, which have liberated men as well as women from many formerly irksome tasks. Inertia, however, is as evident in societal change as in Newton's laws of motion, and even today society frequently acts as if it can afford to underutilize the abilities of half of its citizens. Although many formal barriers to women's participation in science have fallen, cultural attitudes and antagonisms remain. To add understanding to these matters, this special issue of *Science*, the third installment in our examination of the progress of women in science, focuses on the international perspective and looks at the way that women in different societies face different problems and have adopted different solutions. The data are anecdotal but provide a preliminary glimpse into the situations confronting women scientists in both developed and developing countries, as John Benditt, our Features Editor who orchestrated these reports, comments on page 1467.

Many things can be done, and are being done with varying degrees of success, to ease the difficulties faced by women as they juggle a career in science with the wish to raise children. Despite changes in attitudes, society still places on women the major role in home building, and that, combined with biology, often means that the greatest domestic stress on women occurs in conjunction with the greatest scientific stress—child-bearing years coincide with the assistant professor years. Many women have accomplished the Herculean task of bringing up children and building reputations as very successful scientists, but the obstacle course they face is unfair to them and disadvantageous to society. It is unlikely that these gender roles will change in the near future and, therefore, it is incumbent on men to help level the playing field. Helpful husbands, day-care arrangements, and appropriate scientific encouragement should be part of the apparatus that scientific departments and donor agencies can provide. Grants could provide for an extra technician during the child-bearing years, department funds might make an appropriate contribution to child care, and organizers of symposia could show greater understanding of the woman scientist who makes a brilliant discovery but then is hampered in her efforts to follow it up with the flood of papers expected from a big laboratory. Special arrangements of this type are really intended for the benefit of children and are meant to level the playing field regardless of gender. If men prefer to be the homemakers, then of course the same privileges should extend to them.

Such efforts could be augmented by overseeing the educational system to be sure girls are given the same access as their male counterparts to computers and microscopes and other essential tools of science. Cultural attitudes must change, too. Already it is expected that men will contribute more to homemaking responsibilities; symmetry suggests that women will be expected to participate more in breadwinner chores. This issue of *Science* illustrates the different roles in different societies and suggests that no single pattern is the "right" one or the only feasible one. There is little doubt that expectations presented to children by their elders amount to molding forces which may direct boys and girls into patterns that may or may not be the best uses of their abilities.

Whether ideas from one cultural background can be transported to another is not so easy to test. The extended family of the Italian culture may not be compatible with the mobile culture of the United States, with family members moving often and living far apart. Also, the Swedish experience is an important indicator that patience may be essential. The seeds of change planted years ago by a different political party in a different era may only now be producing the desired results. Patience is never a good idea when conditions demand urgent change, but it can sometimes be needed to assess whether outcomes are really being affected.

The good news is that women are not only succeeding in scientific careers but are finding more opportunities to do so as time goes on. There is a long way to go and therefore no reason for complacency, but admiration for creativity and determination is a good beginning on the road to justice.

Daniel E. Koshland Jr.