

GENDER ISSUES

Universities Urged to Improve Hiring and Advancement of Women

U.S. universities foster "a culture that fundamentally discriminates against women," says a new report by the National Academies on the status of women in academic science and engineering. Their underrepresentation is "deeply troubling and embarrassing," according to the report, which suggests that institutions create a body to collect data, set standards, and ultimately monitor compliance to increase the number of women in technical fields.

Beyond Bias and Barriers:

Fulfilling the Potential of Women in Academic Science and Engineering

cites research demonstrating that women are paid less, promoted more slowly, bypassed for honors, and subjected to implicit gender bias from both their male and female colleagues. The 18-member panel—chaired by Donna Shalala, president of the University of Miami in Coral Gables, Florida, and made up primarily of female university presidents, provosts, and senior professors—also finds no scientific basis to the argument that inherent differences between the genders are at the root of the problem. "This report confronts the myths; it is a data and information-driven study," says Donna Dean, a biochemist and former National Institutes of Health official who is senior science adviser with the Washington lobbying firm Lewis-Burke Associates. But others, such as chemist and activist Debra Rolison of the Naval Research Laboratory in Washington, D.C., expressed disappointment that the panel didn't come out more strongly for aggressive use of existing federal laws.

The 18 September report is the latest in a series of private and government studies examining the status of women in senior science and engineering positions across the country. One of its few concrete proposals is an "interinstitution monitoring organization" to set norms for

expanding the role of women in the sciences and engineering. The organization, the panel suggests, would be similar to the National Collegiate Athletic Association, which serves as an intermediary between universities and federal agencies. The American Council on Education has agreed to convene several national education organizations to "define the scope and structure of data collection," says ACE Vice President Claire Van Ummersen. "This would

any education program or activity receiving federal funding from denying equal benefits to women. "That's the missing piece," she says. Shalala acknowledged at a press conference that the federal government has spent more time and energy ensuring equity on collegiate playing fields than in the laboratory. "There are laws on the books which are not being enforced," she added. Shalala later told *Science* that the report's focus is "not any individual law, but *all* enforcement. ... Institutional leaders and professional societies have to make systemic changes to provide opportunities."

The fundamental problem, the panel notes, is not attracting women into science but retaining them once they are trained. "The pipeline is in better shape than I thought," says Ana Mari Cauci, a panel member and a psychologist at the University of Washington, Seattle. At MIT, for example, more than half of science undergraduates are female, and more than one-third of engineering students are women. "It is not lack of talent but unintentional biases and our outmoded institutional structures that are hindering the access and advancement of women," the report states. For example, the report says the culture still favors academics with a stay-at-home spouse—typically a wife. Fewer than half the spouses of male faculty members in the sciences are employed full-time, whereas 90% of the husbands of women faculty members work outside the home.

The gap widens with seniority, the report notes. At leading research universities, fewer than 15% of full professors in the life sciences are women, and in the physical sciences, that figure remains in the single digits. "Women from minority racial and ethnic backgrounds are virtually absent from the nation's leading science and engineering departments," the study adds.

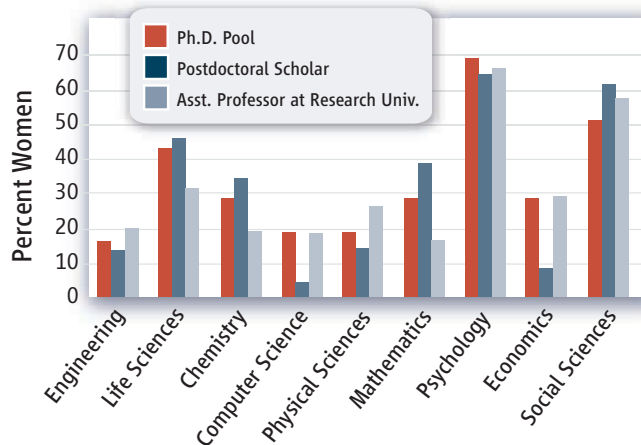
The panel dedicated the report to Denice Denton, a panel member and chancellor of the University of California, Santa Cruz, who committed suicide in June (*Science*, 30 June, p. 1857).

—ANDREW LAWLER

Belief: "Academe is a meritocracy."

Evidence: "Although scientists like to believe that they 'choose the best' based on objective criteria, decisions are influenced by factors—including biases about race, sex, geographic location of a university, and age—that have nothing to do with the quality of the person or work being evaluated."

—From *Beyond Bias and Barriers*



Draining the pool. Women scientists are underrepresented at the entry level within certain disciplines in academia.

be a way for the profession to police itself," says Nancy Hopkins, a biologist at the Massachusetts Institute of Technology (MIT) in Cambridge, who chaired a study in 1999 focusing on the problem at her university.

But Rolison criticized the panel for not demanding greater accountability. That includes strict enforcement of a 1972 law, popularly known as Title IX, that prohibits