WOMEN IN SCIENCE

Can Equality in Sports Be Repeated in the Lab?

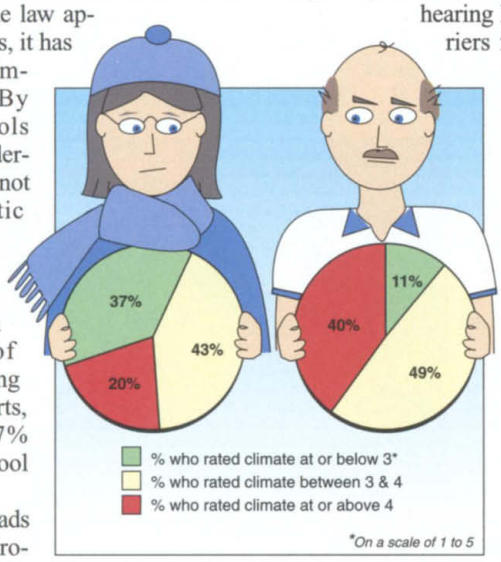
A 30-year-old federal education law caused participation in sports by women to skyrocket. Can it do the same thing for science?

Physical chemist Debra Rolison has spent the past 2 years promoting a controversial idea for improving the status of women scientists in academia. But last week, when the U.S. Senate staged its first-ever hearing on the topic, Rolison was 1800 kilometers away, watching her niece play high school volleyball and basketball. Ironically, the reason Rolison couldn't attend was related to the theme of the hearing—whether a 30-year-old federal law that has increased opportunities for women athletes in schools and colleges could do the same thing for women scientists.

Title IX of the Educational Amendments of 1972 prohibits sex discrimination by any educational institution that receives federal funds. Although the law applies to all activities, it has had its greatest impact in sports. By threatening schools with the loss of federal funds if they do not offer equal athletic opportunities to both sexes, Title IX has generated explosive growth in the number of women participating in competitive sports, including an 847% rise at the high school level.

Rolison, who heads the advanced electrochemical materials program at the Naval Research Laboratory in Washington, D.C., would like to see the law help women pursue their intellectual dreams, too. So would Senator Ron Wyden (D–OR), chair of the science panel of the Senate Committee on Commerce, Science, and Transportation. "If Title IX can do that on the playing field, it should certainly do so in the classroom," he declared last week at a hearing on the topic. But Wyden also knows that he's playing with fire. Title IX has sparked a political backlash among segments of the athletic community, who say that it's forced many financially strapped schools to eliminate boys' teams in a misguided effort to achieve gender parity. Title IX is currently being reviewed by a blue-ribbon panel appointed by Department of Education Secretary Rodney Paige; its report is due in January. Even supporters of the law are troubled by the specter of the federal government withholding research funding from universities that aren't doing enough to attract, retain, and promote women in science and engineering.

"Title IX is a very big hammer," Rolison admits. But for the past 2 years she has argued before numerous academic gatherings that this tool is needed to spur university administrators into action. Wyden was intrigued by the idea when it came up at a July hearing he chaired on the barriers facing women in science. So last week he gathered together five activists, including Birch Bayh, the retired senator from Indiana who co-authored the original law, as well as an official from the Department of Education, which enforces the law.



Chilly climate. A University of Michigan survey finds that women scientists are less happy than men with their work environment.

Predictably, the activists agreed with Wyden that gender inequity within science faculties is a serious problem. The latest evidence arrived last month in a campus survey by the University of Michigan, Ann Arbor, which found a chillier environment for women faculty members on measures such as sexual stereotyping and harassment as well as in contract negotiations, mentoring, and leadership opportunities (see graphic). These distinctions exist not just between men and women but even between women in the hard sciences and those in the social sciences, says Abigail Stewart, a psychologist who led the study. "People have wondered if women are just more likely to complain," she says. "But that's not true. The climate for women [natural] scientists is worse than for those in the social sciences."

Only the Education Department official disputed Wyden's bleak assessment of the current situation. "I am here to deliver good news," announced C. Todd Jones, deputy assistant director of the department's Office for Civil Rights. Jones confessed that he was not yet in school when Title IX was passed. But he argued that the gains made by women in science over the past 30 years are due in part to Title IX, citing girls' recent dominance in winning prestigious high school science prizes and a 30-year rise in the proportion of undergraduate degrees earned by women in several technical fields.

But despite the near unanimity that more must be done, many academics aren't sure that Title IX is the right vehicle. Nobody at the hearing supported any type of quotas, and few share Rolison's view that universities can be "bullied" into doing better. "It was a necessary tool in athletics," says Stewart. "But it will be viewed by some as punitive if it's applied to academic life."

A better approach, says Geraldine Richmond, a chemical physics professor at the University of Oregon in Eugene who testified last week, might be to stiffen the backbone of federal agencies, some of which are already trying to address the problem. She applauds a new policy at the National Science Foundation to return any grant application that does not explicitly state how the proposed project addresses "broader implications" such as diversity and scientific literacy. In contrast, says Richmond, who is also chair of a scientific advisory panel to the Department of Energy, most federal research agencies "don't pay as much attention to these issues as they should."

Still, as the clock ran down on last week's hearing, one witness made it clear that she doesn't expect universities to improve without a strong push from the federal government. "Digit" Murphy, coach of the women's hockey team at Brown University in Providence, Rhode Island, told Wyden that the recent gains in women's athletics would never have occurred without the threat of fiscal punishment. "Absolutely not," she said. "The only thing that schools pay attention to is when the NCAA comes in and does an audit. Then the university officials ask, 'Are we in compliance [with Title IX]?' "

Wyden has asked the National Academy of Sciences to review how U.S. universities apply Title IX to their science and engineering faculties. But Rolison sees Murphy's response as proof that a stick works better than a carrot. "Carrots are for vegetarians," Rolison says. "And we are dealing with carnivores."

—JEFFREY MERVIS

SOURCE: UNIVERSITY OF MICHIGAN