

Springtime for Women in Science

Three Landmark Reports Show Progress in Overcoming Gender Bias

By Laura L. Mays Hoopes

In February, 2011 in his State of the Union Address, President Barack Obama noted that we should be concerned about American performance in sciences. Student participation in Science Fairs has been declining for years, while science graduate programs fill with students from abroad. Many foreign students go home with Ph.D.s in hand to practice their state-of-the-art science for the benefit of their own countries. If we could successfully recruit and retain the women in the U.S. who show an interest in science, our competitiveness would be greatly enhanced.

Three landmark studies have provided insights on the issue of recruiting more women into science since last spring. In March 2010, the American Association of University Women (AAUW) released an extensive study called *Why So Few? Women in Science, Technology, Engineering, and Mathematics*. In March 2011, the White House Council on Women and Girls issued a report on the economic status of American women, including how they are doing in science. Also in March 2011, MIT released a new study of how women professors are faring there. Based on these reports, we have a snapshot of where women in science are, how they feel about science and what still needs to be done now.

The AAUW report, *Why So Few?*, focuses on the nature-nurture debate as it plays out for women in STEM fields (Science, Technology, Engineering and Mathematics). Social and environmental factors are highly important to the success of these women. For girls, the idea that intelligence can be developed rather than being fixed proves encouraging. Second, the report notes effective university and college strategies such as active recruitment of women as majors and illustrating broad applications of science in introductory courses. Finally, the AAUW report shows that unconscious bias still limits women's success. To test your own implicit bias, take a test on gender and science bias available at

<https://implicit.harvard.edu>. Since the site with this test was established in 1998, more than 70 percent of test-takers associated "male" with "science" and "female" with "arts."

The Presidential Commission on the Status of Women was formed under President John F. Kennedy and produced its first report 49 years ago. In 2011, in support of the White House Council on Women and Girls, the Office of Management and Budget and the Economics and Statistics Administration within the Department of Commerce worked together to create its second report, entitled "Women in America: Indicators of Social and Economic Well-Being." They reported that 57 percent of undergraduate degrees go to women today, and we've narrowed the wage gap between men and women by 18 percent since 1979. Also, women are now 51 percent of the workers in management and professional positions. Sadly, women's success in sciences is not as impressive as the overall picture. Only 7 percent of female professionals vs. 38 percent of male professionals work in computer science or engineering.

As shown in the new MIT report and in Amgen Professor Nancy Hopkins' reflections on it, MIT accomplished the five major actions women professors requested in 1999: They recruited women to departmental and higher administrative positions, made it possible to have children before tenure, charged women administrators to monitor and address salary discrepancies, increased recruiting and retention of women faculty while maintaining MIT's high standards, and put women on committees to prevent their marginalization. MIT has also addressed the issue of child care better than a lot of academic institutions. However, ironically, young MIT women faculty say they are treated as if they could not have made it apart from being women. So attitudes still need to be addressed.

The bottom line from all three reports is that, although women have come a long way as incipient or actual scientists, more work remains to be done

for them to feel like full-fledged citizens of the scientific community. ■

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