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BALANCING ACT

Do Babies Matter in Science?

A true measure of gender equity in academe would look at both the career and family outcomes of female Ph.D.'s

By [MARY ANN MASON](#)

Federal investigators of Title IX, the law that forbids sexual discrimination in education, have only recently discovered that there may be a problem for women in science.

Investigators for the National Science Foundation, the National Aeronautics and Space Administration, and the Department of Energy have been inspecting several campuses for potential Title IX violations in mathematics, science, and engineering departments ([The Chronicle](#), January 20, 2006). *The New York Times* revisited the issue this summer and found that, "So far, these Title IX compliance reviews haven't had much visible impact on campuses beyond inspiring a few complaints from faculty members."

Evidence of the problems women face pursuing careers in academic science shouldn't be hard to find.

Look around the campus of any large research university. In most humanities and social-science disciplines, departments are blooming with female graduate students where there would have been few 30 years ago. But in math, engineering, and the physical sciences, the numbers remain embarrassingly low. In 2006, women received 28 percent of the doctorates awarded in the physical sciences, including computer science and math, and only 20 percent of those awarded in engineering. But that is great progress compared with 20 years ago when the numbers were often too small to register statistically.

The great loss is the absence of women on the faculty in those fields, because those are the women who have walked the whole walk.

Only 10 percent of faculty members in physics are women, the American Institute of Physics found in 2005, in a study that prompted the Title IX investigation. Less than half of the women who earn Ph.D.'s in these challenging fields continue through to positions in academic research.

So far, as the *Times* article reported this summer, scientists seem to be telling Title IX investigators that the problem in academe is not so much [discrimination as a lack of interest](#).

While proponents of women in science say there is evidence of discrimination in certain fields, the article said, "The quality of that evidence is disputed. Critics say there is far better research showing that on average, women's interest in some fields isn't the same as men's."

Some researchers quoted in the article found that "information technology workers (more often men) especially enjoyed manipulating objects and machines, whereas workers (more often women) in other occupations preferred dealing with people." Susan Pinker, in her book, *The Sexual Paradox*, argues that "the campaign for gender parity infantilizes women by assuming that they don't know what they want." She said her interviews with women who had abandoned successful careers in science and engineering convinced her that they chose other careers because they lost interest in science.

I would invite Title IX investigators to talk directly to graduate students and postdocs in the sciences, mathematics, and engineering to find out what discrimination looks like.

You will find women like Jennifer Mitchell, a Ph.D. in neuroscience and a postdoc at the University of California at Berkeley. When Eve Mason Ekman (my daughter) and I interviewed Mitchell for our 2007 book, *Mothers on the Fast Track*, Mitchell told us, "I don't think I'll ever do a tenure-track job, and people were very upfront about that when I had my child."

You'll also find women like Sherry M.J. Towers, a particle physicist and a postdoctoral fellow, who had a baby and was effectively blacklisted by her adviser ([The Chronicle](#), November 11, 2005). When she was pregnant, she said, her adviser refused to write a letter of recommendation for her unless she returned to work almost immediately. She did return, and he still refused. She received no interviews for any of the positions to which she applied.

Discrimination against job candidates who are pregnant or have children is a very real part of gender discrimination. Some scientists may believe that women who have families cannot be serious scientists because academic science demands exclusive attention to research. But they do not hold the same beliefs about male scientists with kids. In fact, research shows that male scientists are far more likely to have children than female scientists; two years after their Ph.D.'s, nearly 50 percent of men, but only 30 percent of women, had children.

Women in science and math learn that truth early on. When I was dean of the graduate division at Berkeley, my staff members and I studied thousands of graduate students and faculty members to learn more about the effects of family formation on the careers of Ph.D.'s. Our project — "Do Babies Matter?" — traced the career tracks of academic men and women through their doctoral years to retirement. We found firm evidence that the

lack of family-friendly policies turns away both men and women, but far more often the women, from careers in academic research.

That is true across all disciplines, but more notably in the physical sciences, technology, engineering, and mathematics, where the number of women is small to begin with.

Women who do pursue careers in academic science pay a high price for playing the game. Nationally, "married with children" is the academic-success formula for men, but the opposite is true for women, for whom there is a serious "baby gap." Among scientists who achieved tenure, 72 percent of the men are married with children as opposed to only 50 percent of women. Is that gender equity?

Federal investigators, when counting heads, shouldn't just consider the number of women who have succeeded in academic research. A true measure of gender equity in academe would look at both the career and family outcomes of female Ph.D.'s. We call that two-pronged measure the "baby-gap test," because it takes into account both the gap in professional outcomes for women with children compared with men and the gap in family formation for academically successful women.

Investigators need to ask not only how many women are professors and deans relative to their male counterparts, but also how many women with children are in high places compared with men with children. Viewing the situation in that way reveals that women have much further to go to achieve gender equity than we think.

Subtle maternal discrimination is difficult to deal with, but concrete measures, such as parental leave, child care, and other support at both the student and faculty levels, would go far to reduce this unnecessary loss.

Mary Ann Mason is a professor and co-director of the Berkeley Center on Health, Economic and Family Security and author of Mothers on the Fast Track (Oxford University Press). She will write regularly on work and family issues for our Balancing Act column. She invites readers to send questions or personal concerns about those issues, and she will answer your questions in a future column. E-mail your comments to careers@chronicle.com or to mamason@law.berkeley.edu. To read previous Balancing Act columns, see http://chronicle.com/jobs/news/archives/columns/balancing_act

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