Motherhood “Detrimental” to Women in Math-Intensive Sciences

by Kristina Chew | February 16, 2012 | 9:00 pm

While women make up 33 percent of the faculty at doctoral institutions today, they are significantly underrepresented in math-intensive fields such as chemistry, physics, mathematics, engineering and computer science. In 2007, women full professors in these fields numbered only 4.4 to 12.3 percent of faculty at the top 100 US universities; they comprised only 16 to 27 percent of assistant professors. In a new study in American Scientists, Cornell human development professors Wendy M. Williams and Stephen J. Ceci argue that motherhood is the reason.

Why Are Women So Underrepresented in the Math-Intensive Sciences?

Usually three other factors — ability differences, occupational and lifestyle preferences and sex discrimination — are cited as the reason for women being underrepresented in math-intensive fields. Williams and Ceci review these while arguing that they are unlikely causes.

Surveys have indicated that women tend to be more interested in careers involving living things such as medicine, biology, animal science and psychology, rather than fields such as computer science, mathematics, physics and engineering. Nonetheless, in 2005, women and men were almost equally represented among college math majors; women indeed tend to get better grades in math courses. While sex discrimination in publishing, securing grants and being hired for academic jobs was a factor historically, a 2004 – 2005 survey by the National Research Council committee found that “women applicants were actually more likely to be interviewed and offered tenure-track jobs than were their male competitors, and that there were no differences in tenure and promotion rates for women and men.”
A desire to have children and for family life is “the single most important factor in explaining women’s underrepresentation” in the math-intensive sciences, say Williams and Ceci. Noting that “women’s optimal fertility is between ages 18 and 31,” the authors write that, for a women seeking an academic career in these areas, the “most significant physical and emotional challenges of their lives” occurs at the same time as she encounters the “most significant professional challenges” in a tenure-track job.

Read more: chemistry, child rearing, children, engineering, family, maternity leave, math, mathematics, motherhood, parenting, physics, sciences, stem, Women's rights, working mother

Photo by Argonne National Laboratory
I agree with Nyack.

no. It is that these fields have yet to catch up with the 21st century when it comes to women in the workplace. When women in these fields get pregnant, they get pushed out and black-listed.

Would it be such a radical idea to have our society structured so that people could share work, duties, responsibilities, and resources? Men and women could both care for children and it would be expected that men who did not pull their weight at home would suffer for it in their career...

Exactly why birth control is so critically essential to women. Without birth control, chances are a woman will be popping out her first baby during mid-terms in college- leaving college unfinished and never actually pursuing a career at all.

What does she have? No job, no education and a baby she most likely cannot support.

Another reason Planned Parenthood is important. Yes... some people actually DO plan their parenthood. And that usually comes after education and a career.

Well, if we progressed beyond the stage of having women solely responsible for raising the next generation, having kids wouldn't be a hindrance at all. We need to promote equal involvement of both parents - which by the way is excellent for the children's mental health- as well as early education. Countries, in which the children go to pre-school starting at the age of 2 or 3, have them a lot more ready to handle academics, once they reach elementary school age.

having children is detrimental to women. Period.

It may be especially hard in university positions, but it's really very hard in any career. What professional job is really completely unaffected by taking a few months off? And if you want to have multiple kids, taking that time off multiple times within just a few years... how can you stay competitive? And what's it like to jump straight back to full time employment while nursing? That has to be draining and stressful. These are worries that I have as a married woman looking for my first professional job, and I imagine a lot of other women must wonder the same things.
Interesting, thank you.

Danuta W.