

SEXES

For Female Scientists, There's No Good Time to Have Children

That's why so many drop out of the field. Here's how to make the system more fair for women in academia.

By Nicholas H. Wolfinger



Better policies could ensure that there are more Jane Goodalls in the future. (Rick Rycroft / AP Images)

JULY 29, 2013

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American women are leaving academic science, including the social sciences, in alarming numbers. Many will turn away from science while still in graduate school. Although women obtain more than half of the baccalaureate degrees in the sciences, they receive only 46 percent of the doctorates. Others will drop out of the science pipeline after receiving their Ph.D.s, or when they come up for tenure. Less than one third of Ph.D.-level scientists employed in tenure-track positions at four-year colleges and universities are women; less than one quarter of full professors are women. These inequities are particularly striking in an era when women have made great strides in American society more generally. Were the gender gap closed, were women to take their rightful place alongside male scholars, the world would see a renaissance in biological, physical, and behavioral science.

The academic career system developed in an era when most faculty members were men with stay-at-home wives. In an era of dual-career families, the old model does not meet the needs of women who want to both start a family and have a fast-track career in the sciences (or the humanities, for that matter). Although balancing these priorities is a challenge for many Americans of both sexes, female academics are at a unique disadvantage. In our new book, *Do Babies Matter: Gender & Family in the Ivory Tower*, Mary Ann Mason, Marc Goulden, and I draw on over a decade of research to show why family formation--marriage and children--represent the biggest stumbling block women face en route to a career in academic science.

In graduate school, if not before, women begin to learn that science and families don't go well together. They can't help but notice that most of their advisors and mentors are men. Moreover, less than one half of tenured female faculty all disciplines are married with children. Consequently, aspiring female scholars don't have a lot of role models, especially those who've managed to combine marriage and children with a successful career in academic science. Due in part to the paucity of role models, about 30 percent of the women--and 20 percent of the men--we surveyed at the massive ten-campus University of California system turn away from their goal of becoming a professor at a major research university. "I could not have come to graduate school more motivated to be a research-oriented professor," one woman told us. "Now I feel that can only be a career possibility if I am willing to sacrifice having children."

The most significant winnowing out of women occurs right after fledgling scientists finish graduate school. It has long been known that women are less likely than men to snag tenure-track positions. National data from the authoritative Survey of Doctorate Recipients shed light on this disparity. The married mothers of young children--that is, children too young to attend school--are 35 percent less likely to get tenure-track jobs compared with married fathers of young children. The same women are 33 percent less likely to get jobs compared with unmarried women who aren't the parents of young children. However, unmarried childless women are four percent more likely to get tenure-track jobs than are unmarried childless men. At this professional turning point, family formation probably explains why female scientists don't get tenure-track jobs.

Why do marriage and motherhood have such profound consequences for women's job market prospects? Married female scientists are almost always in dual-career marriages, while only around half of male faculty have wives who work full-time. One spouse must defer, and that spouse is likely to be wife (unfortunately we have no data

on same-sex unions, or nonmarital live-in relationships). And unlike in most other professions, taking an academic job typically requires relocation to another state. The baby penalty is even easier to understand. Many women are loath to face the demanding "publish or perish" assistant professor years while caring for young children; cognizant of this challenge, some academic search committees are reluctant to hire women perceived to be on the mommy track rather than the tenure track. These problems persist because the rigid academic career structure really doesn't offer women any good time to have children.

Over the past decade these issues have come to the attention of universities in the United States and abroad. Many sensible policies have been introduced in an attempt to make academia more family friendly. Two of the most common are tenure-clock stoppage and parental leave. Although these interventions are important, they are not enough on their own. They raise numerous complications, but in the interest of brevity I'll name only two. First, these policies need to be entitlements, rather than special accommodations that have to be requested and approved. Second, they need to be available to and used by men and women alike. Our review of the 59 top research universities in the United States showed that as recently as 2008, female academics were over three times as likely as their male colleagues to be entitled to at least six weeks of unrestricted parental leave. Traditionally many faculty members, especially women, have not availed themselves of these family-friendly programs because they perceived a stigma in doing so. This is why both men and women must take parental leave and tenure-clock extensions (such is the lesson from Sweden, where use of parental leave expanded when men were urged to make use of it).

These increasingly common practices are good medicine, but they're not enough. A new mother might get a semester or two off after childbirth, but then what? A bolder policy would be a reversible part-time option for tenure-track faculty. The most recent data we located showed that over half of American corporations let parents go part-time, but less than ten percent of colleges and universities do so. We acknowledge that part-time tenure-track positions present difficulties to faculty and universities alike: How are part-timers evaluated for tenure? How do faculty survive on partial salaries? How, indeed, can faculty ever really work part-time when the amount of time that

can be devoted to research is effectively limitless? But these difficulties aren't insurmountable, as a new part-time option at the University of California demonstrates. This option preserves existing tenure standards but extends the probationary period. The key to the policy is the right to return to full-time employment down the road. Is this policy helpful? As it only became available in late 2007, the jury is still out.

Last, let's turn to future scholars: today's graduate students. Many, especially women, will quit science before they ever earn their Ph.Ds. Often this happens after women become mothers. The obvious answer is that graduate students need the same suite of family-friendly programs now enjoyed by a growing number of American faculty members. Yet graduate students are far less likely to have access to these programs, including such all-important accommodations like maternity leave or dependent health insurance. According to our 2008 review of top American research universities, only 13 percent of female graduate students had access to at least six weeks of unrestricted leave (the corresponding figure for faculty is 58 percent). This must change.

The absence of female scientists in the professoriate is a threat to American productivity. *Do Babies Matter* shows that one of its root causes is the inherent conflict between academic science and family formation. Flexible career policies have been implemented in U.S. universities to level the playing field, there's much more to be done to keep women in science.
