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Women Without Tenure, Part 1

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The simple truth is that it is easier for men to have it all--a successful faculty career and a family--than for women.

This is the first in a series of three articles where I explore the academy as a place for women to work, in particular young female scholars in the sciences. Most women experience the academic culture differently from men and, as a consequence, they make different choices about faculty careers. This article highlights the extent of the problem. The second will explore

the nature of the problem and examine why we should care about it. The third will offer recommendations for working toward a solution.

Women in the Academy: Largely Without Tenure

National data show that women currently represent 41% (36% of fulltime and 45% of part-time) of the nearly 1 million faculty in the U.S., double the number from 1972. However, women represent only 25% of the fulltime faculty at research universities, a percentage that has barely budged from the 1972 figure of 18%. In 4-year colleges and universities, women SET (science, engineering, and technology) faculty hold fewer high-ranking posts than men, are less likely to be full professors, and are more likely to be assistant professors.

In 1999, among all fulltime faculty with rank, 50% of men and 23% of women were full professors. Of all full professors, 76% are male. The progress for women at the full-professor rank (from 1 in 11 in 1972 to 1 in 4 in 1999) has been principally at 2-year colleges: 42% of professors at 2-year colleges are women. The numbers at 4-year and doctoral institutions aren't as good: Women constitute only 23% of faculty at baccalaureate institutions, 24% at comprehensive colleges, and 17% at doctoral institutions. Women are also less likely than men to have tenure: 29% of women SET fulltime faculty at 4-year colleges and universities were tenured; for men, the figure is 58%.

Salary differentials are also persistent. In 2000, women, on average, earned \$10,300 and \$12,895 less than men in public and private institutions, respectively. Men at research universities earned, on average, 10% more than women.

Research productivity, as measured by the number of publications, has often been used to

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justify women's lower rank, salary, and tenure rates. But these data are problematic. "The distribution for both is strongly, positively skewed: low, even null performance is most frequent, and high, or even moderate, performance is rare" (Fox, 1996). In other words, the averages reflect the performance of a few stellar achievers, and do not accurately describe the performance of the majority of faculty.

At least one study has demonstrated gender bias in the review process. In Sweden women are awarded 44% of biomedical Ph.D.s, yet account for a mere 25% of the postdocs and only 7% of professorial positions. A major study of the peer-review system of the Swedish Medical Research Council showed that a woman had to be 2.5 times more productive than a man to be considered equally competent (Wenneras and Wold, 1997).

Furthermore, according to one report (Land of Plenty, 2000), while women publish less than men, their publications tend to be more noteworthy, garnering, on average, more citations than the publications male faculty.

Recent studies at the Massachusetts Institute of Technology have exposed gender bias against senior women science faculty, who experience marginalization and isolation and have faced inequities in lab space, resources, awards, salaries, and opportunities to move into administrative posts. Similar problems were revealed recently at the University of Arizona's College of Medicine: Women faculty at the medical school are paid less and feel less rewarded for their work. The Arizona women faculty are also significantly more likely than their male colleagues to share their research space, are less often promoted to higher ranks and leadership positions, are less likely to be involved in decisions over promotion or non-grant-supported space, have less influence in their departments, and are underrepresented in the full-professor ranks.

"Academic institutions, especially the SET departments, continue to be a male milieu in which men share traditions and women are more likely to be outsiders," says the Land of Plenty report. "Women scientists in a national survey report significantly fewer interactions with faculty, fewer resources, and heavier teaching loads than their male colleagues. Women are also less likely to form a mentoring relationship with a more senior faculty member."

These trends exacerbate an existing problem: the reflecting pool. "You have a bunch of faculty who see themselves and that's who they hire," said Harvard's Cynthia Friend. "It is easier for someone who is exactly the same as everybody else on the faculty" to get hired, tenured, and promoted.

As women continue to struggle to join the ranks of tenured scientists, the number of untenured women continues to grow. Between 1976 and 1993, the number of non-tenure-track fulltime female faculty increased by 142%. For men, the figure was 54%.

Several studies have found that this concentration of women in non-tenure-track (and part-time) positions is due, in part, to the conflict between career and family demands: Women are choosing non-tenure-track positions because they offer more flexibility. Young women scientists routinely encounter individuals who view marriage, for women, and motherhood (but not fatherhood) as incompatible with a scientific career. As a result, many women forego marriage and family. For women, "having both a family and an academic career is no simple matter. The tenure system in the United States was set up for male faculty, whose wives provided all the homemaking so that their husbands could devote their energies solely to academic career advancement" (Bronstein, Rothblum, and Solomon, 1993).

Marriage and family considerations affect men and women differently at different stages in an academic career. Some highlights from this research (Sonnert and Holton, 1995) follow:

- **During graduate school**
 - Children prolong the time between bachelor's and doctorate for men by 0.9 years and for women by 3.1 years.

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- For men and women alike, those married during graduate school are more productive than those who were not, whereas graduate students with children had a lower career productivity than those without.
- **During postdoctoral fellowships**
 - Being married during a postdoctoral fellowship had a positive effect on career publication productivity for men and women; however, the same may not be said of having children.
 - Women's family responsibilities radiated into some of their postdoctoral characteristics, whereas men's family status hardly affected those characteristics.
 - Among women, 6% of the unmarried postdoctoral fellows but 16.5% of the married fellows could not devote their full attention to their research. For men, marital status did not make any difference.
 - Of female fellows without children, 8.4% could not devote their full energy to their research. By contrast, a proportion almost three times as large (23.2%) of the females with children gave this response. For men, being a parent did not make any difference.
 - The presence of children appeared to assign priority to the husband's career over the wife's career, and the pursuit of the wife's professional opportunities may have lost importance relative to child-raising responsibilities. Hence, the presence of children crystallized the traditional division of labor between the sexes.
- **Faculty**
 - Interactions between family and an academic science career do exist but they are too complex and idiosyncratic to be captured by global variables such as marital and parental status.
 - A sizable minority of both men (27.3%) and women (34.6%) said that the decision not to marry was influenced by career demands.
 - Career considerations were more prevalent for married women (77.8%) than for married men (46.2%) in their decision not to have children.
 - A larger proportion of women (21.3%) than men (2.8%) mentioned family demands as a career obstacle.

While there are opportunities and disadvantages to marriage and family for men and women, it appears that the "disadvantages for women's career are straightforward and intuitively plausible--restricted mobility for dual career couples, or the large amounts of time and effort required by child rearing. The advantages, by contrast, seem to be more indirect and subtle; it is hard to gauge the impact of the social and emotional support that a spouse provides" (Sonnert and Holton, 1995, p. 160). This research also points out that *unmarried* female scientists face an entirely different set of problems--they are often viewed as "available" and thus have to deal with unwanted advances, feel pressure to date colleagues (where single males report no such comparable pressure), or are "viewed as wives or mothers-to-be and thus unable to escape any potential prejudice against married women scientists" (p. 159).

Seventy percent of tenured and tenure-track faculty at one university believed that taking leave after the birth of a child would be detrimental to their careers (Perna, 2001). The Land of Plenty report states that, while most faculty work an average of 55 hours per week, women faculty report working over 80 hours, with 30 to 35 hours focused on housework and children, because it is typically the case that the majority of such tasks fall on the woman in the family. "Family demands such as child care, household responsibilities, and elder care, which are much more the responsibility of women than of men, combine to force women into making difficult choices between family and career" (p. 55).

Not surprisingly, therefore, women faculty report feeling more stressed by family responsibilities than men faculty--approximately two-thirds of women but only one-third of

men faculty reported feeling overwhelmed attempting to meet child care and employment demands. Importantly, the demands of family may also reduce geographic mobility; women are more likely than men to stay in the same area where they attended graduate school. And being less mobile may prove detrimental, since faculty who are more mobile command higher salaries, are more likely to be in tenure-track positions, and hold higher academic rank than other faculty.

A Recent Study of Job Choice

To learn more about job choice among recent doctorates from the top programs who planned on academic employment, The Project on Faculty Appointments conducted a national Web-based survey that allowed respondents to choose between 16 sets of two hypothetical academic job offers. In each scenario, subjects were to select Job Offer A, Job Offer B, or neither offer (which meant that they would prefer remaining on the job market to accepting either offer). The survey revealed some interesting things about the views of recent Ph.D.s in biology, chemistry, computer science, geology, mathematics, and physics. Almost one-third (and in some cases more than one-third) of respondents would choose a 3-year, non-tenure-track contract offer over a tenure-track offer that was otherwise alike in every other way. The variables in the model included, in addition to tenure and non-tenure-track positions and length of contract, the department's quality/ranking, the geographic location, the institution's prestige, salary, and the perceived chances of receiving tenure or contract renewal.

In the same survey, doctoral candidates in the sciences were more likely than those in the professions, social sciences and humanities to select a non-tenure-track offer over the tenure-track one. This trend is, in part, a function of the existence of (and in biology the predominance of) non-tenure-track postdoctoral appointments. It would appear that many future scientists are more interested in the work they will be doing and where they will do it than whether or not the position might bring tenure.

Female graduate students are more likely than their male colleagues to select a non-tenure-track offer, under a wide variety of conditions. While there are many possible combinations, some illustrative personal-characteristic combinations and probabilities of job acceptance are shown below. The probabilities in the table are approximately equal for white males and males of color; that is, there is no statistically significant difference by race for men. For women, however, students of color are slightly more likely than whites to prefer the tenure-track to the non-tenure-track--typically, by a margin of 2% to 3%.

	Probability Accept Tenure- Track Offer	Probability Accept Non-Tenure- Track Offer		
	(Reported in %)	(Reported in %)	Female	Male
Single, willing to relocate, no children	65	71	29	23
Single, willing to relocate, have children	64	70	34	26
Single, not willing to relocate, no children	59	66	35	27
Married/with partner, spouse/partner not employed, willing to relocate, no children	67	74	27	22
Married/with partner, spouse/partner employed, spouse/partner not an academic, not willing to relocate, no children	58	65	36	30

Married/with partner, spouse/partner employed, spouse/partner is an academic, not willing to relocate, no children	56	63	37	31
Married/with partner, spouse/partner employed, spouse/partner is an academic, not willing to relocate, have children	55	62	40	33

While the tenure-track position is the more frequent choice, in all cases females are more likely than males to accept the non-tenure-track job offer, all else equal. There is a 40% probability that a married/partnered woman whose spouse/partner is employed as an academic, who is not willing to relocate, and has children will accept a 3-year, non-tenure-track appointment that is otherwise identical to a tenure-track offer. But in doing so, she is effectively giving up the status, prestige, legitimacy, and voice in governance associated with tenure. In addition, she may have less job security and academic freedom than she might have had if she were to be awarded tenure.

The studies presented here show that women confront greater obstacles than men in academic careers--for reasons of biology, sociology, economics, historical gender roles, and academic culture. Decisions about career, marriage, and family are more complex for women than men, especially for women who want children. The simple truth is that it is easier for men to have it all--a successful faculty career and a family--than for women. Should we be troubled that women are less likely to achieve tenure than men? Do women choose non-tenure-track jobs more often because they believe that the playing field is more level on the non-tenure-track? Do women feel that they will ultimately fare better in such positions? Do they believe they will be better able to balance their professional and personal goals? Is it a Hobson's Choice? What is happening here and what is at stake? The future articles in this series will explore these questions and more.

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