Commentary

In My Opinion

Time to Move Mountains

A year and a half ago an MIT report went public with a dark and dirty secret: the senior women in MIT's Faculty of Sciences were running into discrimination. Discrimination is a big word, and the women at first did not want to believe such things were happening. But the facts were indisputable.

Women faculty were making lower salaries than their male colleagues. In departments where academic-year salaries were partially grant funded, women faculty typically had to arrange for a higher percentage of their salary to come from grants. Women faced inequitable teaching assignments; women were nominated less often for awards and distinctions. Women faculty frequently ended up with smaller offices. Often women faculty were omitted from important departmental committees. And women faculty ran into glass ceilings within their departments.[1] It was not the case that the women faculty did not match up in quality to the men. Indeed, 40 percent of the senior women faculty are members either of the National Academy of Sciences or the American Academy of Arts and Sciences. MIT noted that "despite discrimination, most of the women achieved at an outstanding level within their professions."

MIT is an exception only in that it was willing to be public about the problem. Thirty-three years after affirmative action[2] few women are in senior positions in mathematics departments. Fewer still are in the top ten, top twenty, or Group I research departments. One can argue that the pipeline takes time. The pipeline seems to be taking an extraordinary amount of time. In 1995 I surveyed MIT mathematics Ph.D.'s who received their degrees from June 1980 to June 1984. The choice of dates gave time for a postdoc or visiting position, followed by a tenure-track position and a tenure decision; hiring decisions were made during the era of affirmative action.

I was able to track only sixty-five of the eighty then-living graduates. Of the fifty-two men in the group, thirty-nine, or three quarters, were tenured. Only seven of the thirteen women, or just over one half, were. Admittedly these are small numbers. Just three more tenured women would have evened the score. So I poked a bit harder, and that is when real discrepancies emerged. Fully 25 percent of the men were tenured at the 48 Group I institutions, while only a single woman of the thirteen had gained that status. Looking at the 177 institutions in Groups I, II, and III, I found that two women from the MIT group were tenured, while nearly half of the MIT men—twenty-five of fifty-two—were.

It was beyond the scope of my informal survey to discover why the male graduates were being tenured at research institutions while the women were not. It is possible that not all of the problem is sexism; the issue may partially be self-selection. With the difficulty that two-career couples face—sixty-nine percent of married women mathematicians are married to other scientists[3]—and the complications of children and tenure, some women may opt for less-competitive faculty situations. But if this is so, it is reminiscent of a related situation faced by Blacks at mid-century.

In 1948 the Supreme Court struck down restrictive covenants, deeds forbidding homeowners to sell their houses to members of a particular race. In order to continue such segregation, communities created divisions in other ways. Highways were built restricting access; railroad tracks divided communities. "Individuals choose to live in one neighborhood rather than another. In a strict sense that is true, but their choices are made in the face of costs that the state has imposed. It is easier to remain segregated, so people choose to do that. But it is only easier because government has moved mountains to make it that way."[4]

Academia has as its model the one-career couple, and the world of mathematics is particularly competitive. A single misstep can have very high costs. Daniel Kleitman, of the MIT mathematics department, has remarked, "The standard staircase people walk up to a tenured position is covered with grease." Choose to forego a prestigious postdoc in order to take a position near one's spouse, and you can go clattering off the staircase forever, with no helping hand to lift you back on. This is a situation women face more frequently than men.

There *are* ways around problems. When Richard Herman was dean of the College of Computer, Mathematical, and Physical Sciences at the University of Maryland, he sometimes saw "different" résumés: women who had checkered careers but who had kept on producing despite having held positions in situations where research was neither encouraged nor demanded. He took chances on these women, and they did well. Some universities have come up with imaginative solutions to the two-body problem.[5]

While mathematics has no restrictive covenants, the combination of continuing sexism and discrimination and the complications that many women mathematicians face in coordinating marriage, childbearing, and career continues to effectively keep women from research mathematics positions. Isn't it time that we start seeing real numbers of tenured senior women in mathematics departments? Isn't it time university presidents, deans, department chairs, and senior faculty start moving mountains to make that happen? Combatting the subtle sexism that belittles women's accomplishments, developing criteria for hiring and tenure decisions based on the realities people face rather than on an academic career model that is several generations old, and creating programs that provide flexibility for two-career couples can go a long way to eliminating the inequities women face and to improving the quality and climate of American mathematics today.

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—Susan Landau
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[1] *A Study on the Status of the Women Faculty in Science at MIT,* The MIT Faculty Newsletter, *Vol. XI, No. 4, March 1999.*

[2] *In Executive Order 11246 President Johnson established affirmative action as a remedy for racial discrimination. In 1967 he extended affirmative action to cover sexual discrimination.*

[3] *Ann Gibbons, Key Issue: Two-Career Science Marriage,* Science *(March 13, 1992), 1380–1381.*

[4] *Lawrence Lessig,* Code and Other Laws of Cyberspace, *Basic Books, 1999, p. 98.*

[5] *Susan Landau, Universities and the Two-Body Problem,* Computing Research Newsletter *(March 1994), p. 4.*