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**Pipeline to Pathways: New Directions for Improving the Status of Women on Campus**

By Judith S. White

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For the past thirty years, much of the effort to improve the status of women in higher education has focused on the so-called "pipeline" theory, which held that a large number of women undergraduates and graduate students would, over time, yield larger numbers of women at the highest academic ranks. In other words, getting more women into college, encouraging them to pursue graduate and professional education, and recruiting them into the academy was supposed to create a growing "pool" from which search committees would select ever larger numbers of women assistant professors. These women, in turn, would earn tenured positions and, eventually, be promoted to the rank of full professor. The end result would be many women flowing out of the "pipeline" to swell the most senior ranks of the faculty and administrative leadership positions.

But that has not happened. Although women of color remain underrepresented, women students in the aggregate now constitute nearly half of the graduate and professional student populations at American doctoral institutions--and have for most of the last decade. At those same institutions, however, the number of women holding full professorships has come nowhere near matching this achievement. While in 1998 women made up 42 percent of new all PhD recipients, the portion of women faculty in the senior tenured positions at doctoral research institutions had reached only 13.8 percent--up from 6.1 percent in 1974. At master's and bachelor's degree-granting institutions over those same years, the starting points were higher and the percentage gains a bit lower--from 12.9 percent to 21.3 percent and from 14.1 percent to 21.8 percent, respectively (Benjamin 2003). A new set of reports on the status of women at research universities confirms that their numbers for women full professors have not increased in the past five years.<sup>1</sup> Indeed these studies reveal that even those women who become full professors are much less likely to hold endowed chairs than are their male colleagues. Something about this pipeline is not working.

Why have we not seen a faster increase in the number of women entering academic careers and moving up to the top rank of the faculty? The apparent failure of the thirty-year-old pipeline, and the current attempts to explain it, have implications for how we seek gender equity on our campuses in the coming decades. Our successes in the future will depend on how far we are willing to go in questioning the assumptions behind our current system for supporting and recognizing women faculty. Real progress in creating gender equity in the future will require acknowledging the gendered state of our current workplace.

**Analyzing the failed pipeline**

A number of recent reports from various campuses and from national organizations indicate that, increasingly, new research is focused on analyzing the failure of the pipeline. One early amendment to the pipeline theory, offered as the counterevidence mounted over the last decade, suggested that the pipeline is "leaking" all along the way, that attrition is a more powerful phenomenon than we had counted on. Nan Keohane, president emerita of Duke University and chair of the Steering Committee for the Women's Initiative at Duke, rejects this notion. In her introduction to the committee's report (2003, 6), Keohane suggests that "the appropriate metaphor is of a pipeline that is obstructed at specific points." The record at Duke reflects "stubbornly durable blockage" at the assistant professor entrance level, and at the time of movement to full professor and senior administrative leadership. Recent reports from other research universities identify different points of blockage, including disparities in rates of women getting tenure as compared to men candidates.

Over the past five years, many new studies of gender equity and the status of women have begun to approach the problem of blocked movement by focusing on issues of family formation and gender discrimination. Of course, neither of these issues is really new. But the specificity of the research results and the willingness of institutional leaders to grasp the structural problems, rather than merely the personal decisions, involved in women's "failure" to rise in faculty ranks have created an important opportunity to rethink the societal context of academic careers. These reports have made clear the extent to which gender still shapes our current workplace.

### **Family formation**

The research of Mary Ann Mason, dean of the graduate division at the University of California, Berkeley, was inspired by her observation of a gathering of graduate and professional students at opening ceremonies. She saw before her 2,500 students, more than half of whom were women. She was clearly pleased. Yet she knew the numbers would not be as substantial as these women moved through their PhD programs and into postdoctoral positions and assistant professorships. Believing she knew at least part of the problem, Mason and her colleague Marc Goulden, research analyst for the graduate division, began their research (2002) with the provocative question, do babies matter? The answer was clearly yes, babies matter; and the timing of babies matters even more. The issue is not only childbirth, of course, but also the continuing childrearing responsibilities that take so much of women's time away from academic work. Evidence that the weight of family formation pressures falls disproportionately on women shows up early; among postdoctoral candidates at Berkeley, for example, most women with children have considered leaving their academic careers. For those who stay, the news is not good. The most discouraging of Mason and Goulden's findings is that women with a child in the household within five years of the PhD are far less likely to achieve a tenured faculty position than are men with a child within that same timeframe.

Other related issues must be explored further to determine the full range of obstacles facing women of different groups. None of the data on women from these family formation studies are disaggregated by race and ethnicity, for instance, to see whether different cultural groups handle these issues differently. While it is true that most tenured women faculty members are not married, the impact of family formation issues may differ according to race or ethnicity. It is not clear how much homophobia makes "single" life preferable for lesbian academics, or whether some "single" women have lesbian partners. Women academics from working-class and poor families may face additional family pressures as they stay more closely involved with parents or siblings experiencing economic instability.

But even this extended range of family-formation issues cannot fully account for all the blockage of the pipeline. While women having children later in their careers achieve tenure at the same rate as women without children, Mason and Goulden found that neither group achieves tenure at the same rate as men. Something else is at work in this supposedly gender-neutral pipeline.

### Gender discrimination

In the late 1990s, senior women in the School of Science at the Massachusetts Institute of Technology (MIT), mostly white women without children, concluded that their careers had been marked by a series of disadvantages and exclusions that constitute gender discrimination. Their perceptive and powerful analysis went beyond the usual census counts and salary equity studies and compared the availability of academic resources. They found that in some departments women were clearly receiving an inequitable share of space, lower amounts of nine-month salary paid from individual research grants, and fewer teaching assignments and awards and distinctions. In addition, women often were not included on important committees and assignments within the department. This connected strongly with reports that senior women faculty felt marginalized and overlooked, even as their research production matched that of their male colleagues.

The publication of this groundbreaking report on the status of women in the MIT School of Science (Committee on Women Faculty 1999) has changed the conversation about the status of women in the academy in some very important ways. It is now possible to have discussions about work conditions and gender bias in less accusatory and more analytical terms. Rather than asking individual women to prove claims of mistreatment, the focus has shifted to institutional responsibility for working conditions. Moreover, the report provides a methodology other institutions can use to study resource allocation as a measure of disparate treatment. For example, the National Science Foundation's new ADVANCE program requires such analysis as part of its focus on institutional rather than personal conditions for women's success in science (Rosser 2003).

The report from the School of Science received strong backing from the leadership at MIT. Moved by what he learned from it and by his sense of institutional responsibility for previous inaction, President Charles Vest not only made changes at MIT, but also convened other presidents of prestigious universities to discuss their collective response to the situation of women in science. These presidents agreed that their universities must be alert to existing patterns of disparity against women as well as to the ways these patterns interact with biases based on race, sexual orientation, class, and other factors. They have committed themselves and their institutions to countering these patterns before they affect another generation of women scholars.

### Missing generations of women faculty

At this point, it seems fair to ask what, in fact, has happened to the last several generations of women graduate students and young women faculty. They did not all go home to be full-time mothers. Indeed, most of these women graduate students finished their programs, received their PhDs, and are trying to make a life in the academy. Many are now holding tenure-track positions in four-year colleges and regional master's universities. Even more have made their careers in community colleges, where the number of women holding full professor positions is much higher than it is in research universities. But the truth is that many of the women PhDs are also teaching at research universities. They have joined the ranks of the non-tenure track, often non-regular and part-time faculty who are now teaching the majority of undergraduate students in American universities and colleges.

Data from the American Association of University Professors (Benjamin 2003) reveal a disturbing subplot in the story of the pipeline to full professorship. While we have been watching the increase in the number of women graduate students and awaiting their arrival in the higher ranks of the tenured faculty, we have lost sight of another set of figures. Women did not *start* entering the academy or the faculty ranks thirty years ago. Women already were teaching in significant numbers; they were just concentrated in lower ranks--instructor, lecturer, or "non-rank"--and in less prestigious and lower paying institutions. The news is that women hold an even higher percentage of those non-tenure-track positions today than they did in 1974--up from 34 percent to 45 percent. Indeed, women now hold

a smaller percentage of tenured positions than they did thirty years ago--down from 24 percent to 20 percent. If we take seriously the analysis of the pipeline and the extent to which institutions bear responsibility for academic working conditions, we have to ask about the status of these women and our profession.

### **Women's work**

Research approaches that focus separately on issues related to either family formation or gender discrimination have yielded important insight into blockages in the pipeline. However, it is crucial to understand how closely related these issues are. The strongest link between women's traditional roles in family formation and evidence of continuing gender discrimination in the workplace is the notion that some work belongs to women and other work does not. Unfortunately, these gendered perceptions persist on most campuses today. While laws about sex discrimination have changed, customs still leave a strong pattern of women's employment in enclaves that are clearly "women's work."

Mary Ann Mason and Marc Goulden (2002) use body metaphors to illustrate the job segregation patterns still in place. In their parallel male and female models, the head represents tenure-track or ladder-rank faculty positions, the neck represents the non-regular rank faculty, the shoulders the management, and the torso the staff. After looking at the numbers of those employed at the University of California, Berkeley, they conclude that the male employment model has a large head, barely any neck, wide shoulders, and very slim torso. The model for women has a small head, large neck, sloping shoulders, and a "hip problem." The numbers from most campuses would look the same. In addition to clerical and mid-level administrative roles, we clearly have to add teaching as women's work. According to most recent studies, women's work decidedly does not include being a research professor or holding an endowed chair.

### **New pathways**

We face serious challenges in trying to change the neck and hip problem of women in higher education. But we should take advantage of the fact that, at least potentially, the current situation for making changes in the status of women is very different from that of thirty years ago. We have thirty years' worth of data and thousands of stories about women's experience in the academy. Research models are now using that information to make visible gendered patterns that had been difficult to grasp before. Richer data will emerge from studies of women staff and non-regular-rank women faculty, a more diverse pool of women that includes a higher proportion of women of color and other groups not well represented in our current tenure-track faculties. We also have influential public leadership taking responsibility for our institutional roles and calling for change. These encouraging developments make it more likely that we can change the gendered culture of academic work.

With funding from the Alfred P. Sloan Foundation, the American Council on Education recently launched Creating Options: Models for Flexible Faculty Career Pathways, a particularly promising and timely project designed to examine whether today's academy requires new versions of the academic career track. The project's activities will raise awareness of the limiting effects of the current system, particularly the disparate impact strict tenure review timeframes have on women and people of color. Project leaders plan to initiate dialogue on alternative models that might provide opportunities for academic excellence combined with fuller personal and family lives. New career timing options could be made available not only to women and men with young children but also to those facing the illness of a spouse or parent, or those at advanced stages of their careers wanting more flexibility in their pathways to retirement.

But conversations about new pathways to academic success and recognition will have to acknowledge the extent to which our current way of reviewing faculty

reflects a history of male career patterns. In our culture, anything less than the single-minded and straight-path pursuit of a goal is seen as less "serious" and less worthy of recognition as "excellent." This phenomenon is the most likely explanation of what Robert Drago and Carol Colbeck (2003) call "bias avoidance" among academic parents. Research shows that, in general, our current efforts to assist faculty with children are not working as intended because many women and men are foregoing "tenure clock extensions." They report fear either that they will be held accountable for more scholarship since they have had "more time" or that they will be considered less serious about their work because they have taken "time off." If we can find ways to rethink the single course and create multiple routes to academic success and recognition--if we can abandon the pipeline for new pathways--then we will have a chance to create a new academic working culture.

### **The status of all women on campus**

While the tenure-track process makes many things about faculty career patterns unique, there are many elements of the gendered workplace that are shared across our academic culture. A key one is the notion of a strict path to success, one that accommodates only those single-mindedly dedicated to specific career goals. Whether in the research lab or the finance office, women and men who find that their lives place multiple demands on their time and attention will face difficulties in professional evaluations. At this point, we can safely conclude that many of the issues causing pipeline blockages for tenure-track women faculty and, by extension, decreasing the number of senior women eligible for academic leadership also are affecting the status of the three largest groups of women in the academy--women students, women staff, and women non-regular faculty. In our current academic culture, these groups generally would not expect to find remedies in the same ways as the tenure-track faculty. But are the remedies we are proposing for the tenure-track faculty going to work if they are not tied to broader questions of gender equity? We will not want to wait until we can change the structure of clerical work before we address the many excellent recommendations about improving conditions of women faculty. But we do have to be aware that addressing gender bias in one area of the academy is going to be very hard if we leave the historical products of that bias in place in other parts of the system.

All women and men on our campuses need freedom from bias and support for their personal lives, regardless of family-formation patterns. We in higher education have committed ourselves to ending discrimination; many campuses have recognized that making our workplaces more "family-friendly" is part of that. In living up to that commitment, we need to recognize that our current structures for organizing and evaluating work do not come free of gendered expectations. These structures must be analyzed and challenged if we are to encourage the excellent work we need from everyone. We all need new pathways.

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### **NOTE**

1. Several reports on the status of women at research universities are available online from the National Academies Web site, [www7.nationalacademies.org/cwse/gender\\_faculty\\_links.html](http://www7.nationalacademies.org/cwse/gender_faculty_links.html)

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**Judith S. White** is the assistant vice president of campus services at Duke University and a senior fellow in AAC&U's Office of Diversity, Equity, and Global Initiatives.

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