

9 Women's faculty experience

scientific networks function as if they have a large number of members outside the department. Those at the periphery are thought of as 'social capital' and other senior scientists with whom the members of the network gain access to resources not available to non-network members. As it becomes available to the network.

the match between a person's skills, talents, or motivation and opportunities appear to use and expand the organizing structure of social capital accrues and, depending on equal human capital experience and social capital (Coleman, 1988, p. 77).

to an in-depth analysis of the ways in which different abilities to succeed in science and

Despite the continuing existence of barriers to women, a generational change in the traditional 'male model' of full-time devotion to science and neglect of personal life is under way. A senior female scientist in an academic department has often been an individual, successful by conventional measures, who chose to adopt the strategy of emulating the 'male model' as the only way to survive. Treated as 'one of the boys,' she often later has second thoughts about the sacrifices that had to be made to be accepted.

A decade ago, we identified a small number of women faculty members who were limiting their time in the laboratory and attempting to integrate a private sphere with their professional life. Recently, more women as well as an increasing number of younger male faculty members have expressed interest in a less-driven work life but stringency in research funding has intensified the pressure to work more. Even though some report that their satisfaction has decreased under these conditions, the most driven scientists submit an increased number of grant proposals and become even more successful. The conflict between their behavior and the wish to change suggests that transition to a more equal balance between professional and personal life is still a long way from being realized, especially at the higher levels of academic science.

Until quite recently relatively few women were willing to openly articulate the vicissitudes of their professional and personal experience in science. Aware of the responsibility their status carries as role model and trail blazer for younger generations, they have not wanted to inadvertently discourage the aspirations of their potential successors in a scientific career. Moreover, needing to safeguard the validity of their own personal achievement, based on impersonal

criteria of merit, they have not wanted to 'rock the boat' by suggesting that scientific achievement is affected, either positively or negatively, by personal or social factors. The growing willingness, during the past decade, to discuss less than optimal experiences and concomitant ambivalence is an important indicator of change among female scientists who face a series of ambivalent situations in most science and engineering departments.

Wanting to encourage younger women to pursue scientific careers, successful women scientists are in a bind. If they focus upon gender barriers and funding difficulties, young women might become discouraged and respond very rationally that it is not worth the effort to pursue such a difficult career. To examine these issues, we conducted more than 400 in-depth, in-person, interviews (followed in some cases by re-interviews over the Internet), in several waves, with female faculty in twenty-one departments in five disciplines (chemistry, biology, computer science, physics, and electrical engineering) in both public and private research universities located in all major regions of the U.S.

On the surface, women who have attained faculty appointments at prestigious research universities appear to have crossed a significant threshold of status and achievement to a place where gender 'no longer matters' (Sonnert and Holton, 1996). These women scientists have become icons to a scientific community that proclaims the ideal of universalism (Merton, 1942), and to a society in flux around issues of gender. For most women scientists who achieve faculty status, full professional self-definition in the face of subtle and overt exclusion remains problematic.

In many departments it is dangerous to identify oneself with women's issues or other women. Even when there were two women faculty members in a department, they would typically stay apart from each other and not form a friendship until after tenure. Often lacking anyone to talk to, younger women discussed the conflicts between work and personal life in confidential interviews for this study that often took on the emotional intensity of a therapy session. In this

chapter we discuss the experience of women faculty, in both negative and positive settings, to explain the troubled, and troubling, experience of women in academic science.

THE CASCADE EFFECT

Impediments to women in science appear at all stages and phases of the scientific career line and can be viewed as a 'cascade effect.' Like a series of interconnected circuits, the first member of the chain supplies power to the second, the third and so on. A cascade of affirming experiences serves to amplify a string of positive effects, until there is a short-circuit and the process is reversed. Women who have avoided negative experiences at an earlier stage often encounter them later. The majority of girls and women do not experience such uninterrupted multiple positive experiences as they ascend the educational ladder. Instead, at some point in time what had the potential for a cumulative positive cascade of experience becomes short-circuited by negative experiences.

Successful women in science view themselves as having had prolonged relatively positive experiences and attribute their status and achievement to supportive mentors along the way. However, the value of these early experiences becomes at risk when negative experiences begin to accumulate on a faculty level. Many are understandably unsure, especially before the tenure decision, how much risk they can afford to take in acting as mentors and advocates for their women students. Even after a permanent position has been achieved, the complex and, at times, contradictory experience of the successful woman scientist carries with it an aura of taboo. The path to faculty status begins with the job search, but social capital and gender strongly affect the outcome.

THE JOB SEARCH

We have identified several patterns of impediment at the point of the job search: a dominant one of deferring to a male partner, a less usual one of ignoring personal considerations. Departments also typically

receive job applicants differentially by gender, taking into account women's personal obligations in deciding to hire while ignoring them for men. The assumption, of course, is that women will be strongly affected by their ties; men less so. A certain persona, strict adherence to a rigid academic career path and total time commitment are among the unstated requirements for many jobs.

Women who survive the strain of lack of support for child-bearing and child-rearing in academia and complete their degrees at the highest levels of achievement may nevertheless find that their career will not survive the next hurdle of the academic career path. When a married woman is about to attain the Ph.D., the 'two body' problem comes into play, typically deflecting women's careers from their highest potential. Two shifts in work site are typically needed: from Ph.D. program to post-doctoral position in a different university and from post-doc to yet another work site. The highest climbers on the academic ladder of success are able to accept the most promising and prestigious post-doctoral and faculty positions without regard to any other consideration. The rule of intellectual exogamy has disastrous career consequences for women who are unable or unwilling to make individualistic decisions on where to work. As one observer put it: 'The academic market is a national one. Those who do not accommodate their choice of geographical location and willingness to move to their careers may lose out' (Rosenfeld, 1984: 99).

Marriage and children are generally viewed by male faculty members as impediments to a scientific career for women. Even those most supportive of women take this view to some extent, as the following quote shows: 'I've had some disappointments with very good women who settled for jobs that are less than an equivalent man would do. You have some extremely good people you think are going to go out and make a mark and then somehow or other they marry somebody and spend their time in a bad career. For a man to decide not to take his career seriously is like admitting he takes drugs. For a woman to say she puts her family ahead of her career is considered a virtue; the pressures are all in that direction. The women are told, "Isn't this

y gender, taking into account
ng to hire while ignoring them
s that women will be strongly
ain persona, strict adherence to
ne commitment are among the

ck of support for child-bearing
lete their degrees at the highest
s find that their career will not
ic career path. When a married
'two body' problem comes into
ers from their highest potential.
eeded: from Ph.D. program to
versity and from post-doc to yet
ers on the academic ladder of
romising and prestigious post-
thout regard to any other
exogamy has disastrous career
nable or unwilling to make
ork. As one observer put it: "The
lose who do not accommodate
id willingness to move to their
(99).

lly viewed by male faculty
c career for women. Even those
view to some extent, as the
isappointments with very good
: than an equivalent man would
le you think are going to go out
other they marry somebody and
man to decide not to take his
kes drugs. For a woman to say
eer is considered a virtue, the
ie women are told, "Isn't this

wonderful. You are giving up your career to sacrifice for your husband."
The pressures come from society, relatives, to some extent the men
involved, the parents of the husband.'

On the other hand, a few women take a different tack. They are
willing to break off personal relationships that interfere with accepting
the best possible job. A male professor portrayed the situation of a
woman, involved with a man, who, he said, ' . . . could have gone either
way. I asked her, "To what extent is his career going to interact with
what you do?" She said, "Not at all. I want to find the best job I can and
if it works out for him O.K. and if it doesn't well then that's the end of
the relationship." So she had decided that career is what really
mattered. She's at [prestigious Eastern university] and he's still out in
California so that's the end of him. She took what I would say is a
typically man's approach to things, that the career is the primary
decision but they don't all do that.'

Women who enter the academic job search often find that they have
made a career detour that is held against them despite evidence of solid
achievement. A male faculty member expressed amazement that a
respected research institute had hired a female Ph.D. who had
temporarily left the academic track to become an astronaut. An
academic career gap for more prosaic reasons of child-birth and child-
rearing is officially expected to be ignored but is inevitably taken into
account to a woman's detriment. Affirmative action procedures have
too often been turned into an elaborate ritual of seeking out female
candidates for interviews and then determining that they cannot be
hired when compared with men who have followed the straight and
narrow path to academic success. If 'best' is defined in terms of an
aggressive persona, with numbers of publications the primary criteria
of achievement, then women will typically be defined as inferior.

GEOGRAPHICAL MOBILITY BARRIERS

The limited geographical mobility of many women restricts their
choice of both graduate school and job. A highly successful female
scientist interviewed in another study explained the impact of location

on her career, given existing norms of hiring. A research associate, her advance in rank was limited, as was her exposure to students and the experience of raising her own funds. She felt that these consequences of having to accept a position of lesser status had delayed her professional maturation. 'I was married – I'm still married – and I didn't have the flexibility of moving around. That's one of the best ways to achieve a permanent position and to increase one's standing; to have the lever or the threat of saying, well, I'm going to leave. And to mean it. You can't do it as an empty threat. You have to be ready to leave, and people are. I was never in that position, so I could never use that threat' (Dupree, 1991: 117).

A typical scenario that has been identified is marrying a man in the same field who completes his graduate work before his wife. He finds the best job he can without geographical constraints. When the woman finishes, she finds what job she can in a circumscribed region (Max, 1982). Women who are already married often select their graduate school based on what is available in a region and choose a job with similar considerations in mind. Second-rank research universities attract many higher quality candidates than they might otherwise, because of women's geographical restrictions. Of those of our graduate student informants who aspired to academia, most were interested in jobs in small teaching colleges rather than research universities because, as one woman summed it up, 'Science isn't everything.'