MYTHS ABOUT THE ROLE OF MARITAL STATUS IN CAREER ADVANCEMENT

Over the years there have been numerous articles, including many in the AWM Newsletter, which discuss dual-career couples, child-care, and other problems associated with combining a career with a traditional married family-oriented life-style. These very real problems are easily articulated, but they are not unique to mathematics or science. On the contrary, many positions in the sciences offer greater flexibility than other demanding careers such as law and medicine. Individuals, institutions, government and society can, and should, play a part in enabling women (and men) to combine the career and life-style of their choice. Unfortunately, much of the discussion of this subject leaves the impression that single people have no problems.

Indeed, Susan Landau recently stated that "[i]n limiting [her] discussion to university responses ... [she] does not mean to diminish the difficulties faced by other types of dual-career couples." Her article does, however, appear to diminish the difficulties faced by single women. Near the end, she characterizes "single wage earners" as having the "perfect flexibility to change jobs several times ..." and concludes with "[t]he message we should be getting across ... is that being a scientist does not mean forsaking a life."

Let me assure you that single and/or childless women do have lives! Moreover, our personal lives can affect, and be affected by, our career choices and job locations. Anecdotes, such as those Landau cites, in which department chairs use dual career status as an excuse for not hiring or recruiting women are commonplace. And while she may be correct that this is rarely done in "bad faith," neither are single women being swamped by offers from these same universities. On the contrary, the limited statistics available actually suggest that single women have even more difficulty with some aspects of career advancement!

For example, one study looked at the percentage of 1970–74 Ph.D.'s who were tenured by 1979. The results were 66% for married men with children, 53% for single men, 51% for married men without children, 51% for married women with children, 41% for married women without children, and only 37% for single women without children. (For single parents, the rates were 80% for men vs. 33% for women, but these are probably very small samples.) There are many notorious cases of prominent women (Mary Ellen Rudin, Julia Robinson, Maria Goeppert Mayer) who were denied "regular" positions for many years because of nepotism rules. Nevertheless, these women did have "irregular" (often unpaid) positions which gave them the opportunity to do the research for which they are now known. By contrast, Emmy Noether, although widely acknowledged as a world-class mathematician, could only obtain a temporary position at Bryn Mawr when she left Germany.6 Before about 1970, single women rarely got the jobs at the top research institutions from which married women were barred by nepotism; instead, they were (and often still are) relegated to four-year (especially women's) colleges where they were expected to play the role of dedicated teacher with little regard for the limited research opportunities such positions provided. But lest this degenerate into an argument about "who was worse off," let me emphasize that my point is that sex discrimination was, and remains, pervasive regardless of life style. The issue is equity, not marital or family status.

Most scientists now reject the myth that people can be linearly ordered by merit. Even those who claim that departments hire primarily on the basis of merit will admit that other factors, such as subspeciality or teaching ability, often play a role. So I agree that there may be situations in which recruiting a couple may be appropriate. However, I do think we must use caution in advocating hiring practices which might appear to introduce extraneous factors or de-emphasize merit. Consider the following hypothetical example. Suppose that a department has two positions and there is a consensus that the relative scientific merits of the three top candidates are A > C > B. However, A and B are married to each other, while C is single (or, at least, C's job situation is decoupled from marital status). Which two should be hired? Does it matter if the sexes of (A, B, C) are (M, F, M), (F, M, M), (M, F, F), or (F, M, F)? Or even one of the other four possibilities?

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One myth that is a half-truth is that many single women are reluctant to take positions in isolated small towns (in which so many colleges and universities are located). Based upon my own experience and acquaintances, I believe this perception is correct, but that it is not related to the availability of, or lack of, single men. People who really want to get married seem to find each other, even in the most unlikely places (irrespective of adolescent dating traumas or popularity). Those of us who have reached the age of 40 without marrying are not only unlikely to do so; many of us find the prospect of marriage more terrifying than being on a hijacked plane (to invert a widely-publicized statistical assertion).

While there are exceptions and individual variations, many single women do find themselves so excluded from the couple-oriented social life in small towns that it is difficult to “have a life” in the absence of the alternatives offered by an urban center. The following true stories are depressingly typical. At the start of her second year, one woman found herself among a group being told by the department chair that the family of one of their new hires would not be able to join him until the second semester. The chair then urged the other faculty to “invite him to dinner often since he would be here all alone.” This woman pointed out that she had been “all alone” for over a year without being invited to dinner. A few weeks later, the chair invited her and the other single woman in his department to dinner, thus fulfilling the department’s social obligation for the year. Another woman told me that she spent one year in a college town while in a “commuting relationship.” She and her partner were frequently invited to dinner on the alternate weekends when he visited, but not in the much longer time periods when she was there alone. Departments in small towns may well have difficulty recruiting single women, but the things they might do to retain them should be obvious.

My purpose in writing this is not to criticize, or even respond to, Landau’s thoughtful article. Rather, it prompted me to put on paper (via my computer disk) some things which I have long felt needed to be said. A few years ago, during a VPW meeting at NSF we broke into groups to discuss “combining a career and family.” Because those in my group had spent a good part of their career without partners, most of our discussion focused on the problems of single women, including some of the anecdotes recounted above. However, at the end, the coordinator insisted that we return to the assigned theme of career and family, and only this aspect was reported on. Another group included an openly lesbian woman, who made a separate statement about her dual-career experiences without any indication of support from the group spokesperson.

Most of us believe that career advancement should be based upon merit, even though we also recognize that there is too much subjectivity to make pure merit anything but an idealistic goal, and that other factors can play a legitimate role. But we should also remember that much of the sex discrimination of the past (especially differential pay scales) was based upon a societal belief in the desirability of a traditional family life-style. It is a very small step to replace that by a more enlightened and accommodating attitude toward dual-career couples. Real progress will come when all of us have the opportunity to follow whatever career path we choose irrespective of sex, marital status, family obligations, race, ethnicity, etc.

Notes
4. On one occasion I even observed a hiring committee’s bias against a single man. There were two (male) candidates for one position. Scientifically, X was much, much better than Y, but Y was also good and had some strong supporters pushing his case. Both candidates had positions (or offers) at better universities elsewhere but had personal reasons for preferring the Boston area. When it was reported that Y had a girl friend in Boston, it was not only accepted but increased his support. However, X, who was single, was regarded with a suspicious “if he’s really so good why does he want to come here?” Subsequently, offensive remarks were made about X’s marital status during his interview, and Y eventually got the position!
6. Her only other offer was a similar position in England.
7. For example, among those who received their Ph.D. in mathematics in 1988–93, 15% of women vs. 10% of men took their first position in a Bachelor’s institution. In 1992, about 46% of both tenured and untenured women mathematics faculty had positions in four-year colleges, vs. only
28% of tenured and 33% of untenured men. That women are disproportionately located in four-year colleges is not an artifact of past employment practices, but a continuing phenomenon. This data was compiled from the Annual AMS-IMS-MAA Surveys as reported in the AMS Notices, e.g. 40, 1165, Table 3B (Nov. 1993) and 40, 601, Tables 2B, 3C & 3D (July/Aug. 1993). These comments should not be misconstrued as demeaning the rewarding career opportunities at four-year colleges; the point is that the opportunities for women at top research institutions are still very limited and both choices should be available to all women.

8. Some years ago a friend showed me a stack of very old Life magazines, one of which had two fascinating items. The first was a full page ad showing a porch with an empty rocking chair and the large caption "Aunt Emma doesn't stay here any more." What was being advertised? The fine print explained "She's a modern woman. She drives an automobile...." The other was a letter about the dearth of male teachers in K-12. The writer asserted that the problem arose because men couldn't possibly support a family on a teacher's salary, but whenever school boards tried to pay them more, the single women insisted on equal pay — a position he clearly regarded as placing unreasonable demands on local school budgets.

MATHEMATICS AWARENESS WEEK

"Mathematics and Medicine" was the theme for Mathematics Awareness Week this year, April 24-30. The theme was chosen to highlight the critical involvement of the mathematical and computational sciences in mathematical biology and in developing new technologies and decision making tools in medicine.

A number of areas of medicine rely heavily on mathematics: reconstructive mathematical techniques that build medical images through computerized axial tomography (CAT), magnetic resonance imaging (MRI), or positron emission tomography (PET); new drugs that are being designed through the development of mathematical algorithms that support building computational models of molecular structures; the prediction of heart attacks that is being explored through nonlinear dynamics; and blood flow and the motion of heart walls that are being assessed through fluid flow dynamics.

This year's MAW poster, produced by the Computer Graphics Laboratory, University of California, San Francisco, displays two computer-generated views of tenfold B form DNA. The DNA is examined using techniques of topology and differential geometry, as well as computer simulation.

AWM has contributed to MAW in two ways. We were a sponsor of a session organized by Denise Kirschner for the First World Congress on Computational Medicine, Public Health, and Biotechnology held at the University of Texas, Austin during that week. Also, Sally Lipsey's article "Mathematical Education in the Life of Florence Nightingale," which appeared in this Newsletter, July-August 1993, pp. 11-12, was included in the MAW information packet distributed widely by the Joint Policy Board for Mathematics. In that article, Lipsey noted that "although [Nightingale's] nursing ability was very remarkable and greatly appreciated, her long-lasting effectiveness can be ascribed more to her creative use of mathematics and statistics than to her nursing ability."

WOULD YOUR DEPARTMENT LIKE TO OPERATE A PROGRAM TO BRING MORE WOMEN INTO MATHEMATICS?

With support from the National Science Foundation (NSF), Mills College will hold a conference at the University of California at Berkeley, July 14-16, 1994, to bring together people interested in developing projects to increase the flow of women into graduate programs in the mathematical sciences. Some funds are available to help defray travel cost for eight to ten conference participants. Mills College will operate one such project for the fourth summer, in 1994. The NSF has encouraged us to find other institutions wishing to develop related projects beginning in 1995. Out of this conference will come a proposal to the NSF for funding projects at more than one institution. Interested individuals should contact Leon Henkin by sending e-mail to kathyg@mills.edu or by telephoning (510) 430-2227. Please discuss the matter with colleagues and your department chair before phoning.