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Analytic Paper on "Women's Work" in Science, by Margaret W. Rossiter (1996),

Introduction:

Over the years, women have made considerable progress in academia, first as students and later as faculty and other professionals. In getting this far however, women (like all other minority populations), have encountered several experiences (opportunities and obstacles) as they confronted the socio-economic and psychological forces that were pitched against them by society as a whole. With the passage of time, most of these forces have largely been overcome, enabling most qualified women to make inroads into several disciplines traditionally classified as men's jobs. However, it is obvious that most women in academia today are still faced with numerous obstacles - hence the assertion that they "encounter doors inside that remain shut to them, or that open with great difficulty."

I am in total agreement with the position that this is the image of women in academia, an image which portrays the various experiences that women have had to encounter in several disciplines within academia over the years, especially in the sciences. In her article - "Women's Work" in Science, Margaret W. Rossiter (1996), uses numerous examples (beginning from the 1880s), to recount the experiences women encountered as they tried to pursue their intellectual and professional careers in the sciences.

In this paper, I seek to confirm this position by determining how well this image portrays the experiences of women in sciences, in the late1880s and early 1900s, using Rossiter's article as the main (and only) point of reference. I will thus take a brief look at Rossiter's account of the opportunities offered women in the sciences and the subsequent obstacles such women faced within academia after they took up such scientific careers. I will also use the evidence presented by Rossiter to determine whether this image accurately describes the situation or needs to be revised in a way that really takes into account the experiences encountered by women in academia.

The Experiences of Women in the Sciences

Rossiter points out that, contrary to the earlier years when women had to "sit idly at home," by the late 1880s, women who got college degrees in the sciences, advocated for, and got opportunities to pursue careers in "women's work" in science. The term "women's work" was used to describe not only the unrecognized, sex-stereotyped "womanly" jobs in the social services (that women were presumed to have the "unique talent" for), but most other dead-end subordinate positions (low-paying and tedious work) which were frequently abandoned by men. At the time however, "women's work," especially in the sciences, was seen as a source of remunerative labor for women, personal fulfillment and a "progressive step" towards the women's intellectual and professional development.

The prevailing socio-economic factors at the time, coupled with other unfolding events such as the establishment of the co-education land-grant agricultural colleges throughout the country, immigration to the eastern cities and the opening up of college observatories, museums and botanical gardens, all contributed to the emergence and spread of "women's work" in the sciences. Most of the "women's work" in these institutions involved either teaching and supervision of other women, or the "tedious and laborious work" of copying, computing, cataloguing and classifying large amounts of specimens and data. Rossiter however points out that, women with college degrees "felt equal to the task" and therefore "might have been very glad to work at projects that suited their skills." Moreover, influential women such as Williamina Fleming, Marion Talbot and others, encouraged their counterparts to take up these jobs.

Unfortunately, rather than being a step into mainstream scientific employment that women had hoped for, "women's work" became entrenched in academia and was permanently "hardening the sexual segregation" and thus keeping more women in marginal and subordinate positions. Rossiter illustrates this by providing examples of brilliant women such as W. Fleming in astronomy, Katharine Bush in zoology, Anna Comstock in entomology, and several others who reportedly made very significant contributions to knowledge in their various fields, yet almost all of them held temporary, marginal or subordinate positions until their retirement. The maximum position any woman could hope to attain was that of "directing the work of other women," or in the case of the land-grant colleges, "dean of women." Needless to say, these positions were downgraded and the occupants paid comparatively low salaries.

Thus most women, after successfully entering academia as early as the 1880s, became literally "trapped" in marginal and downgraded positions with no opportunities for further advancement in their careers. While conceding the fact that most of these women might have been content with their subordinate positions, the rise of the women's rights movement in the 1910s (whose ultimate goal was full equality), awakened women to the realization that "women's work," was no longer the "progressive step" that they originally thought it would be. Regrettably, it appeared to be a late awakening as most of the "inner doors" of academia "might already have been shut or could only open with great difficulty," hence the stagnation or premature termination of most women's professional careers.

From the foregoing paragraphs, it is obvious that towards the end of the nineteenth century, women were indeed able to get college degrees and get into the "front door" of academia. However, the strategy they opted (or were compelled) to use to get in, helped create the bureaucratic system that has persisted in academia to the present day. A system whereby some people (mostly women), will either be confined to segregated low-status careers or "will have to be hired hands for projects directed by others." As most of the psychological, social and economic factors that contributed to the entrenchment of "women's work" in academia are still as prevalent today (albeit in lower magnitudes) as they were in nineteenth century, so is this image of women in academia.

Thus the image that women and other ethnic minorities have been able to get into academia, but have very few opportunities for career advancement, vividly, and to a great extent, portrays the experiences of women in science as outlined by Rossiter.

A modified Image

Whilst I am in total agreement with the position that the image of women in academia as stated above greatly portrays their experiences, I am of the opinion that, judging from the experiences of women in the sciences as recounted by Rossiter, the image needs to be slightly modified. My modification is that; "whilst women have made considerable progress in academia at large by getting through the front door, they encounter doors inside, **some of which remain open, whilst others open with great difficulty.**"

I say this because, from Rossiter's account, women who took to the "territorial womanly" subjects such as home economics, nursing and hygiene, had opportunities of pursuing their

professional (though little recognized) careers to the full, whilst their counterparts who ventured into the men's territory remained marginalized. Thus, as early as 1896, Eliza Mosher was a professor of hygiene and dean of women at the University of Michigan, whilst Marion Talbot became professor of household science and also dean of women at the University of Chicago in the late 1900s. On the contrary, after lots of hard work and several publications in zoology, Mary Rathbun's maximum position was assistant curator at the national museum, whilst Katharine Bush (the first woman to earn a doctorate in zoology), was an assistant at the Yale Natural History museum for her entire working life (as inferred from Rossiter).

This phenomenon has persisted to the present day, and a casual glance at faculty of one American University confirmed this. Whilst there are two women out of a total of thirteen full professors at the College of Engineering, the School of Nursing could boast of seven women out of a total of eight full professors.

Conclusion

I have used the experiences of women who sought academic careers in science in the late nineteenth century and early twentieth century as presented by Rossiter, to support my position that, within academia, the image of women (as well as that of other ethnic minorities) is that they are able to get in, but have difficulties pursuing their careers to the full. In the course of the analysis however, I have had course to believe that, to fully account for the experiences of these women, the image needs a slight modification. The modified image being that, women (and by implication, other ethnic minorities), even though still encounter obstacles in the course of pursuing their academic careers, such obstacles are much less when they pursue careers in subjects that society traditionally classified as belonging to them.

Reference

Rossiter Margaret W. 1996. "Women's Work" in Science. In, *Faculty and Faculty Issues in Colleges and Universities*. 2nd edition, ASHE Reader Series, eds. Finnigan Dorothy, David Webster, Zelda Gamson. Needham Heights, MA: Simon and Schuster Custom Publishing. pp. 36-49.