

the details—numerous female names, bits and pieces of personal stories, names of colleges that welcomed women into their science departments, long lists of women presidents of scientific societies, lost battles but also increasing percentages of women in academia. But instead of getting lost by all the individual trees, the reader is guided to experience the allure of the woods. In this captivating book, Rossiter skillfully weaves the personal into a tapestry of the social and political. The imposing challenge she sets for herself is to tell the story of women scientists in America from 1972, what she calls a point of ‘deluge’ of women into the sciences, to the recent past. Rossiter not only describes but also clearly documents through meticulous archival research the ‘institutional transformation’ that women in science have undergone since the 1970s. The story draws us to a particular paradoxical reality and leaves us with a sweet-sour feeling: ‘the continuing stream of data-rich articles on the unanswerable question “Why so few?” were now supplemented by riveting human dramas of marginalization and skepticism in high places’ (p. 285). Despite the genuine progress and the promising institutional reforms that took place in the 1980s and 1990s, the science world continues to be an unfriendly place for women. As Rossiter argues, the question has shifted from ‘Why so few?’ women in the sciences to ‘Why so lonely?’ or ‘Why so isolated?’ for those senior women of science, ‘survivors at the end of that extraordinary long “pipeline”’ of the present (p. 269).

The book begins in 1972 with two historic legislations, the Equal Employment Opportunity Act and the Education Amendments Act, prohibiting gender discrimination in two major social spaces the workplace and education. The years that followed witnessed slow but steady institutional changes that came about through a collective effort of persistent and determined women who formed networks and learned how to lobby. These women led numerous legal battles and put their fingers on many levers of influence. Obviously, passing legislation and enforcing it were two different things. By the end of the 1970s, Rossiter argues, women scientists succeeded to organize themselves into

Margaret W. Rossiter, *Women Scientists in America: Forging a New World since 1972*, Vol. 3 (Baltimore: The John Hopkins University Press 2012), 448 pp.

Reading ‘Women Scientists in America: Forging a New World since 1972’, Margaret Rossiter’s third volume, is like taking a walk in an enchanted forest. You become mesmerized by

a 'political constituency' (p. 20). They managed to take universities to court for discriminatory hiring. They discovered the power of publicity and brought modest but essential changes to academia. Take for example Shyamala Rajender's landmark class action lawsuit against the University of Minnesota on the grounds of sexual and racial discrimination, which Rossiter places center stage. Despite a series of 1-year positions, the Department of Chemistry refused to review Rajender for a tenure track position, a fact that triggered her legal action against the university in 1973 (p. 33, 34). Although the case ruled in her favor, promotion reforms and tenure, in general, came as a reward to only a few women scientists.

At the same time female students flooded the universities enrolling both as undergraduates and graduates in science fields, previously closed to them. By doing so they created new opportunities for themselves but also greatly transformed rigid and stereotypical institutional structures. Federal contractors, for example, came under pressure to increase female enrollments. At the same time the dense network—already in place—of female deans, women's caucuses and associations, as well as senior women scientists who played a crucial role in national science organizations, supported women students and graduates and pressed universities and funding agencies for change. However, differences among disciplines continued to occur, reflecting known different scientific cultures. In addition, the increase in the amount of soft money available to women graduates and the use of postdoctoral fellowships were ways to hire highly qualified female personnel with minimal benefits. Rossiter shows us that they gave women the chance to pioneer 'in realms where very few had gone before'. However, she continues, after 'all that education ... (that) led to five years or so on someone else's big-science project ... now what' (p. 141). It is the employment of women in this kind of situation that she turns to in the second half of her book.

Even though universities were slow to abolish gender discrimination in classrooms and laboratories and in changing their hiring politics, the

industrial sector responded, or rather, was forced to respond, more positively to the new demands for an equal opportunity workplace. The landmark lawsuit for sexual and racial discrimination against the American Telephone and Telegraph Company in 1973 worked as a counterexample for corporate America. Starting in the 1970s and through the 1990s, technical industries offered great opportunities to young women scientists who, disheartened with academia, placed their hopes for a career in science in the private sector. But beyond the initial hiring, women continued to face the known unfriendly environment and stereotypical, discriminatory attitudes in the work place. In the federal sector, employment of women scientists and engineers also changed significantly. So much so, that by 2000, Rossiter argues, 'the federal government was in some ways closer to being the "showcase" employer for women scientists (p. 191). Yet, the 'glass ceiling' effect continued to function even in government offices where women tended to be in the lower posts.

As the book ends, we get the feeling that the world is still not pink for women scientists and engineers working in the USA. In most of the top research universities, as Rossiter reminds us, not much has changed since the 1970s. Published in 1999 an MIT report showed, to the surprise of many, that although a few women reached top university positions many women felt powerless and miserable. In addition, the remarks of Lawrence Summers, President of Harvard University who in 2005 questioned women's abilities to succeed in the sciences showed that academia still had a long way to go to abolish gender discrimination in the work place. Nonetheless, both events triggered a number of correctional actions bringing us to an, 'era of institutional contrition and voluntary change' in Rossiter's terms (p. 269).

As Virginia Woolf once wrote, one of the pleasures of reading contemporary novels (and I would add history books) is that they force you to exercise your judgment. Why read Rossiter's book? Why do we need a third volume about women scientists in America?¹ Don't we know that female academics, since the 1970s, have

gained enormous recognition, through generous funding and institutional support? Working in academia for some years now I have found it difficult to persuade colleagues that women still face gender discriminatory policies, albeit subtle and much different from those in play 40 years ago. With her extensive research and the third volume to her histories of women in science, Rossiter gives us the chance to argue and prove, at least for the USA, that the battle is not over. However, by bringing the story up to the end of the 20th century she does give us the assurance that women's collective actions can change the world.

NOTE

1. Allow me to suggest at this point that the USA does not coincide necessarily with the entire American continent.

Maria Rentetzi

Institute for Philosophy, University of Vienna
National Technical University of Athens