

We must question why, and for whose benefit and cost, things are as they are

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Although women's under-representation in science may seem like a newly-discovered issue -- as [Nancy Lane](#) mentions in her introduction to this debate -- it should be remembered that the problematic relationship between women, men and science has a much longer history. It pre-dates the late 1900s, and involves much more than the conceptualization of discrimination as both an inadvertent and individual practice. Science is a way of knowing, a body of knowledge, an occupation, a system of societal components interacting with economic and political consequences and our understandings of the gendered "doing of science" will be affected by the level, time period and society chosen for analysis.

One way of illustrating the complexity of this relationship is to consider the development, from the 1960s to the present, of feminist critiques of science. One major approach in feminist scholarship, no doubt influenced by the disciplinary composition of women's studies as it became established in the academy, has been the recovery of histories of women who had done science, and the identification of barriers that such women had encountered and overcome. From such studies, for instance, has come strong evidence that women's participation in science was encouraged in Europe and North America in the 1700s, when such pursuits were more character-forming and less remunerative. However, by the 1800s, as the professionalization of science took hold in earnest, women's activities were curtailed both directly, for example by forbidding their presence at meetings, and indirectly -- for example by requiring that researchers have a university degree at a time when women could not do so. Illustrative of this sort of gender gap is the time discrepancy between the coining of the term, "scientist", in the early 1830s, and the granting of the first Bachelor of Science degree in the British Empire to a woman, in the late 1870s.

A second approach has come from sociology and philosophy, questioning the nature of science -- the ways in which scientific knowledge is actually produced and the differences that exist between the ideal and the actual. Perhaps the development from this approach most pertinent to this debate is the number of studies which have evaluated the relative success of different strategies which marginalized groups have adopted in seeking more equitable participation in science. For example, arguments for women's inclusion in scientific careers have fallen largely into two groups, justified by reasons of similarity (that men and women are alike in the attributes required to do science, and therefore...) and difference (that men and women differ, but that women's attributes would improve the doing of science, and therefore...). Unfortunately, for those interested in preserving the status quo, similarity arguments have been countered by the offering of very minor adjustments to existing institutional structures and practices, and difference arguments by the sidelining of women's science. Illustrative of these interactions might be the growing backlash against affirmative action, and the relatively marginal position of home economics in the sciences.

The third and probably most important approach which I think might contribute to this debate comes from the increasing attention within women's studies to issues of diversity and inclusivity. So, for instance, we find more scholarship concerning women's participation both historically and currently in a science more accurately described as originating in many different cultures. In addition, there is a more critical consideration of what it means to be "in science" -- not only as a career, but as an experimental object, not only as a successful graduate of high school science but as a rejector of that way of

knowing, and so on. Illustrative of this approach might be the sorts of questions arising concerning women's active and equitable part in the development of sustainable community. That is, it is not just a question of "why are there so few women in science?", but "why are we doing the science that we are?".

My concern with this debate about "why are there so few women in science?" is that we keep it grounded in the awareness that we may now be coming up against those institutional and systemic patterns of discrimination which will require all of us -- men and women -- to question why and for whose benefit and cost things are as they are.

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