



Notes & Theories

Sexual discrimination against women in science may be institutional

Women in science face a career structure and culture that is weighted against them, rather than straightforward individual sexual discrimination

Alice Bell

🐦 @alicebell

Tue 8 Feb 2011 12.43 GMT

When it comes to worrying about the underrepresentation of women in science, especially at higher levels, are we stuck in the past?

A paper [published on Monday in the Proceedings of the National Academy of Sciences](#) suggests that we are. Researchers Stephen Ceci and Wendy Williams from Cornell University in the US reviewed 20 years of data on gender discrimination and the status of women in the sciences. They argue that too much attention has been focused on apparent sexual discrimination when women apply for new jobs, funding or to be published in journals.

Instead, Ceci and Williams believe that women are more likely than men to make personal choices - many of which may well be constrained - that prevent them from progressing to more senior levels (eg time off to raise children, following a spouse, caring for parents). They argue that focusing on discrimination at application stages may represent a costly red herring and that resources should be redirected towards education and policy changes that reflect the challenges faced by women interested in building a long-term career in science.

In 1997, an iconic paper on sexual discrimination in the various application stages of a scientific career was published in Nature. In '[Nepotism and sexism in peer-review](#)', Christine Wennerås and Agnes Wold from Göteborg University in Sweden set out to investigate why women were being awarded significant percentages of PhDs but a smaller chunk of postdoctoral research posts and a much smaller still proportion of senior posts. Was it simply that women were less productive, or less ambitious, or were they subject to discrimination?

In the peer review system of the Swedish Medical Research Council, applicants submit a CV, a bibliography and a research proposal which are then scored by reviewers. When Wennerås and Wold subjected these reviews to scientific scrutiny they found that female applicants received consistently lower scores.

Highly influential as this report has been, Ceri and Williams note how hard it has been to replicate these results. Indeed, when it comes to hiring, there is some evidence that in maths-intensive fields, women are interviewed and hired for academic posts slightly in excess of their representation at PhD student level.

This does not mean that female scientists are not subject to sexual discrimination, but perhaps it is a more institutional form of prejudice. The structures and culture of science may tend to be less favourable for women (and this may make scientific careers less flexible for men too).

[In her blog](#), Athene Donald pulled out some interesting results from last year's [Athena Survey](#), a study of experiences of progression through science careers. For example, more men than women seem to be aware of "women in science initiatives" in their own department. Most importantly, perhaps, women are far more likely to lack knowledge about promotion procedures, and male academic staff are more likely to be appraised as a matter of course than women, which can also effect promotion. These are cultural issues, but ones that managers must be aware of if they are to make a long-term scientific career available to all.

[A personal reflection](#) by former biochemist Kathy Weston published in Science Careers last week noted with some cynicism the type of freedom provided in "what was touted as a meritocracy". Yes, a scientist may be allowed to work whenever they like on whatever they find interesting, but "'whenever you like' often translates into 'all the time,' and 'interesting' is a matter of who you're talking to."

Weston also believes she would have been able to run her lab very successfully if she had been permitted to job-share with a close female colleague, who also had two young children. As Ceci and Williams stress in their conclusion, universities need to find ways of offering part-time scientific posts.

Science is an incredibly competitive career. If you want to nab one of the scarce long-term posts, not only will you need to keep an eye on promotion procedures, you will need to put a huge number of hours in, and may well have to be prepared to work abroad.

This is sometimes seen as a positive test: only the most devoted make it through. But human lives are more complex than that, and there is nothing wrong with a scientific work force made up of people with passions outside their labs. Indeed, one might even see it as a healthy state of affairs for any profession, and one most likely to foster the sort of culture of imagination and innovation that draws people into the field in the first place.

... there is a good reason why *not* to support the Guardian.

Not everyone can afford to pay for news right now. That is why we keep our journalism open for everyone to read, including in France. If this is you, please continue to read for free.

But if you are able to, then there are **three** good reasons to support us today.

- 1.** Our quality, investigative journalism is a scrutinising force at a time when the rich and powerful are getting away with more and more
- 2.** We are independent and have no billionaire owner pulling the strings, so your money directly powers our reporting
- 3.** It doesn't cost much, and takes less time than it took to read this message

Help power the Guardian's journalism for the years to come, whether with a small sum or a larger one. **If you can, please support us on a monthly basis from just €2. It takes less than a minute to set up, and you can rest assured that you're making a big impact every single month in support of open, independent journalism. Thank you.**

Single	Monthly	Annual
€7 per month	€9 per month	Other

Continue →

Remind me in September

VISA



Most viewed
