

HOW TO... CONFRONT INEQUALITY FOR WOMEN IN SCIENCE

Why do so few women make it to the top in science? **Valerie Bevan**, author and Chair of the British Society for Microbial Technology, looks at the issues.

The quantitative studies I undertook at the Health Protection Agency (now incorporated into Public Health England) clearly confirmed the literature that men dominate the upper grades in healthcare science.

My career was just one example of a woman who, for many years, knew my place in the masculine world of science and this is a central tenet of my recently published book, *Knowing Her Place – Positioning Women in Science*, which draws on experiences described by women and men healthcare scientists. In the book,

Caroline Gattrell and I identify four interlinked mechanisms which women need to overcome to advance in science and avoid being stuck in the lower grades: subtle masculinities, secret careers, creative genius and [m]otherhood.

Although the book focuses on research scientists, much also applies to biomedical scientists, where gendered professional power politics also adversely affect the career prospects of all genders.

Men favour men

The first area for scrutiny is subtle masculinities, which privilege male scientists within the masculine culture in

science. Men (often unconsciously) favour other men's advancement, rather than promoting women, as they tend to promote people like themselves, because it makes them feel more secure. We all do it, not just men, but as men tend to be in the more senior roles anyway, promotion of men to the top jobs is self-perpetuating. So it's important to be aware of bias in yourself as well as others. For instance Will, who headed a laboratory, believed that men were more likely to rise to the top because he (mistakenly) considered that there were more men than women in his organisation. He seemed to be only aware of the gender proportions of his peers, saying: "Our organisation has always been numerically top heavy with males, so I suppose it's more likely that men will rise to head laboratories."

In our research, men praised women because they conformed and helped men

who were over confident to advance. Confident men were seen as being good scientists; less confident women were seen as lacking merit and competence.

Another subtle masculinity discussed is how men exclude women for instance by disregarding their input at meetings. One woman said her comments were dismissed when she said something the chair didn't like, and her colleagues took his lead and nobody supported her. In this environment, we found women tended to keep quiet about their career ambitions.

At the top

If you look at the high-flying scientists in your hospital or organisation, how many of them are women? Women's scientific potential may not be spotted by bosses because a high-flying scientist is congruent with men. In the UK, probably the most highly regarded scientific award

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VALERIE BEVAN'S TIPS AND ADVICE

The following is a list of few ideas to help you tackle gender inequality:


- ✓ Develop confidence based on knowledge and professionalism – becoming an expert yourself is a sure way to being taken seriously, so that you can propose changes and be respected as a scientist.
- ✓ If you are already in a position of influence, you can help make sure that everyone has diversity and unconscious bias training and help turn the rhetoric of "equality" and "values" into reality on the ground. If you feel that people do not take diversity training seriously, get them to talk about masculinities – even men enjoy that.
- ✓ A woman on her own may not be able to make much impact, so communicate with others about the issues women face.
- ✓ Nothing can change without the input of men – get men involved and consider how men might give up some of the power they hold.
- ✓ Be bold and challenge unfairness in your workplace by speaking out.
- ✓ Find an benefactor – but be wary.
- ✓ Learn to negotiate.
- ✓ Lastly, probably the most important factor, is spotting the inequalities. Knowing about them is a good start in tackling them.

is that from the Royal Society where women represent only 8% of current Fellows elected to the Royal Society (131 of 1644). Even in 2016, only a third of elected Fellows were women (15 of 46).

The Chief Medical Officer, Dame Professor Sally Davies, has stated that it is important for a woman scientist to identify a sponsor for support. In our research, advocates were vital in helping women progress but the help was strictly under the benefactor's control and in some cases was withdrawn unpredictably.

Tackling inequality

A 2014 House of Commons Science and Technology Committee Report, quoting evidence from ScienceGrrl, notes how "soft [relational] responsibilities are not highly valued in the science workplace where these skills normally considered essential to leadership are undervalued" (including mentoring and pastoral care). Although these skills should be manifested equally in women and men, it is usually women who take them on.

Consider how women's potential for motherhood associates them with the support roles, not with being the high-flying scientist. Unfair treatment of pregnant women is seen as commonplace and some women in my research who were pregnant were refused training. Furthermore, there is literature to show that even women who may become pregnant are discriminated against. 

Valerie Bevan is Chair of the British Society for Microbial Technology and a Teaching Fellow at Lancaster University Management School. *Knowing her place: positioning women in science* is available now.