Fixing the leak

BOOK AND FILM

In 1892, in his presidential address to the Chemical Society, Alexander Crum Brown, one of the main opponents to allowing women to study chemistry at the University of Edinburgh, said "the chemist will still be the man trained in the chemical laboratory, and all the mechanical parts of the work will be done by him". In over 120 years, has this patriarchal viewpoint changed? Women at The University of Edinburgh, along with the Royal Society, decided to find out, and have now presented their findings in a combined ebook and short film titled *A Chemical Imbalance*.

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The book starts with a look at Edinburgh's chequered history: discussing the changes that have occurred between Sophia Jex-Blake's failed attempts to study science there in the 1870s right up to 2012 when Lesley Yellowlees (Professor of Inorganic Electrochemistry at Edinburgh) was named as the first female president of the Royal Society of Chemistry. The book continues with a look at the statistics of gender in STEM (science, technology, engineering and medicine) subjects over the years, showing that the lack of women in science is not just an academic problem but a wider issue in the entire STEM workforce, with female employees making up just 13%. The book describes the negative consequences of women leaving STEM subjects and draws attention to some of their reasons — from workplace discrimination to the decision to have children. The film supports the facts provided in the book and highlights the issues with a lack of mentoring and inflexible working hours for women. It further provides an opportunity for some of the top women in science to share their opinions of the current gender-imbalance problem.

A problem, as I see it, is that a great deal of what is discussed in the book and film can be applied to both sexes. For example, Polly Arnold (Crum Brown Chair of Chemistry at Edinburgh), says that "when you talk to women who are still in science, almost all of us had strong mentors who supported and encouraged us". This is surely true for both men and women in science. The University of Edinburgh and the Royal Society have done a great thing in emphasizing the gender-imbalance issue, and the lack of training and flexibility available in academia, but we need to remember that the latter is not just a female issue. All graduate students and postdoctoral researchers should have training available to them to prepare them for their future careers, whether that be in academia, industry or elsewhere. PhD students who wish to become academics are often left to fend for themselves with departments giving very little career advice for would-be academics. In the UK, the Engineering and Physical Sciences Research Council (EPSRC) doctoral training prize is aimed at helping the most able students (the top 10% of EPSRC-funded graduate students are eligible) to remain in research careers by supporting them for up to two years after completion of their PhD. This goes some way to bridging the gap between student and academic, but more needs to be done to improve the postdoctoral training system for all. The track has to change and adapt to what people want and need. A wish list might include more flexibility during an employee's child-bearing years, for women, and more support for remote (home) working for parents and carers of both sexes.

The consensus, in *A Chemical Imbalance*, is that positive discrimination is redundant and I wholeheartedly agree. Women and other under-represented groups do not seek an unfair advantage in the job market. If my partner and I are equally qualified, should I get a job simply because I am female? No. However, the book discusses the outcome of a study known as Jennifer versus John Yale — in which interviewers were provided with otherwise identical CVs for candidates named Jennifer or John — the male candidate was offered an interview more often and, in many cases, a higher salary. It is clear that some involved in the hiring process will (either consciously or unconsciously) choose a male CV over that of a female one. I believe that it is here that media like *A Chemical Imbalance* can begin to educate and inform.

A great deal of information is contained within *A Chemical Imbalance* and I highly recommend that men and women, alike, read and watch. The book is well written and easy to read and the film is excellently produced, in a way that is informative without lecturing the audience. I hope that policymakers read the book and watch the film so that further advances can be made to patch up the so-called 'leaky pipeline'. As the book asserts, "we need to mentor our people and make sure that the best are applying"; diversity is, after all, key to innovation and progression. We also need "a workplace that supports everyone and allows flexibility". The film and book do indicate that things are moving in the right direction and that the patriarchal viewpoint of Alexander Crum Brown is becoming out-dated, although at a very slow pace. The 2012 appointment of Professor Lesley Yellowlees as the first female President of the RSC is a huge milestone, but in Yellowlees's own words: "there comes a time when you have to run out of patience". Hopefully, *A Chemical Imbalance* will help address some of the key difficulties before more women, like myself, run out of patience with STEM careers. ❐

A Chemical Imbalance
(www.chemicalimbalance.co.uk)
Author, Cameron Conant; Film Makers, Siri Rødnes and Marie Lidé; Executive Producer: Polly Arnold.

REVIEWED BY JESSICA BREEN
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