

The History of Science and Athena SWAN VideoTranscript.

I'm Claire Jones, a senior lecturer here in the Faculty of Humanities and Social Sciences at the University of Liverpool. My research centres on gender in the history of science, from the early 19th century right through to WW1. It's a specialism which straddles history and literature, with a little bit of philosophy of science thrown in too. A large part of my work focuses on how science – or at least much of science – has developed and been constructed as very male, and this isn't just because more men tend to do science, but somehow science itself seems to have a very masculine colouring. Indeed, today, even looking at the lower numbers of women in science, we find there's a tension between femininity and science which we can identify as coming from the mid-19th century that still seems to be present today. In the Victorian era, a woman who had scientific interests would sometimes describe herself as having a masculine mind. This tension between femininity and science is still, arguably, a barrier to women seeking a career in STEMM subjects and something that Athena Swan initiatives are tackling head on.

But to go back in time a little - in Victorian literature, a woman having scientific interests is sometimes taken as a device to show that she is strange, a little bit odd and unfeminine, basically an unnatural woman. As the female baddie in Wilkie Collins's 1883 novel *Heart and Science* says, 'I sometimes dissect flowers, but I never trouble myself to arrange them'. Dissection, experimentation, the manly heroic space of the laboratory – all these spaces were thought of as particularly unsuitable for women.

Looking at my research, there are lessons which I think we can draw on to connect to our own attempts to address gender equality within the University.

There is a lot of interest today in the idea of unconscious bias – this idea that, however well-intentioned we are, we all carry the baggage of certain gendered assumptions, created by our own social upbringing and cultural class background, and we may act unknowingly to discriminate when we apply these assumptions. This is a process that I can see clearly to have happened to women who had access to science in the past (even when the term 'unconscious bias' wasn't invented and much of the bias in the Victorian age was conscious anyway). I think the lesson is that we need to be careful that we do not assume that women or men are naturally suited to certain roles, and then unconsciously discriminate against anyone - woman or man - who steps outside those parameters. For instance, assuming that women are naturally better at teaching and pastoral support of students, and men to leadership and research. I think we need to make sure that we have good data collection to look at the trends and ensure that this kind of unconscious bias isn't in operation. Importantly, we need to realise that people apply their own unconscious bias to themselves. I'm reminded of Mary Somerville, the celebrated mathematician and astronomer, who wrote modestly (and incorrectly) that she had perseverance and intelligence, but no genius

as ‘that spark from heaven’ as she put it, ‘is not granted to the [female] sex’. We need to be sure that women have the support and training to have confidence and make the most of all their abilities, that women do not discount themselves from certain careers or roles as a result of their own unconscious bias.

The history of science that I research is cluttered with examples of female and male collaborators where women have been discounted by history as the lesser of the sex, as assistants and followers, due to our own assumptions about gender. Even Nobel prize-winning physicist and chemist Marie Curie was accused during her lifetime of seeking to take the credit for her husband’s work. We need to watch and be sure that we give credit fairly, that we do not assume that women take the secondary role, and to support women to ‘blow their own’ trumpet a little more – something that often does not come easily to women.

Something else about my research that I’ve discovered is that women scientists of the late 19th and early 20th century especially made great use of their own female support networks, even creating parallel laboratory facilities in late 19th century Cambridge. This is something that can be replicated so that women can support each other in their own female networks and this will give them the support to navigate a gendered institutional landscape.

Connected to this is the importance of giving women an equal institutional presence, for example never having an all-male interview panel, making sure that the portraiture on our walls includes women as well as men, making sure that we include women on the syllabus of our modules, or the reading lists, on the topics we cover, even on the images and resources we give to our students. (Importantly, this diversity of course is equally important when we come to race as well as to gender.)

Athena Swan began as a much-needed initiative to improve the number and status of women in STEMM subjects, and, for me as a historian of science, it is heartening to see that looking at the history of science can provoke reflections on how we can work towards gender equality in a broader way.