

Science inequity rooted in 'moralised' worship of 'hard work'

Decade-long study of scientists' output and attitudes produces book on why structural tactics to tackle gender and race inequalities fail



Science keeps struggling with inequity because of poorly understood cultural attitudes that persistently defy attempts at structural fixes, a decade-long analysis at a major US university has found.

The assessment – covering more than 500 researchers in the sciences – combined publication and other productivity data with personal surveys and interviews to figure out why years of dedicated efforts across higher education remain frustratingly slow to reduce gender- and race-based disparities in the field.

A key discovery, said one of the book's co-authors, Mary Blair-Loy, professor of sociology at the University of California at San Diego, is that many scientific leaders truly believe that hard work will win out in the end – even though the reality is clearly at odds with that.

[THE Campus views: Recognition of academia's 'invisible labour' is long](#)

[overdue](#)

“They really believe in this,” she said. “And so it’s very hard for them to accept this evidence that there’s these fundamentally unfair processes in how they read, assess and evaluate science and scientists. So we are really trying to make the case for them.”

The depth of the problem is reflected in statistics such as women earning [only 24 per cent of the doctorates](#) awarded in engineering in the US, and holding fewer than 18 per cent of the faculty positions in engineering.

Professor Blair-Loy and her co-author, Erin Cech, associate professor of sociology at the University of Michigan, set out their findings in [Misconceiving Merit Paradoxes of Excellence and Devotion in Academic Science and Engineering](#), published by the University of Chicago Press.

They started work in 2012, negotiating with a top-tier US research university – which they agreed not to identify – to get extensive access to data on its faculty output, and to arrange for the surveys and interviews. The data eventually covered more than 500 scientists, the survey got responses from more than half of them, and 85 participated in the interviews.

The synthesis revealed several categories of researchers – those who are not heterosexual men, those who are not personally assertive or self-promoting, and those who are mothers – who consistently do not get the reputational and career rewards commensurate with their work.

Some of the key thought mechanisms producing the bias, the authors argue, include the idealisation of hard work – or at least the ability to project an image of hard work – with some highly gendered impressions of what that looks like.

“It’s not just working hard, but it’s the notion that scientific research demands and deserves single-minded allegiance,” Professor Blair-Loy said.

"It's moralised – this is something good to do."

As with other professions, she said, taking time to raise children is consistently regarded by academics as a sign of a distracted scientist – even as their partner university's data showed its parent-researchers performing as well as others.

In departments where that hard-work view is strongest, job satisfaction is lower, and the proportion of scientists contemplating leaving is higher, the authors found. One female scientist interviewed for the book said her department has "a wonderful ritual" that celebrates people who retire. She was, said Professor Blair-Loy, "in the department for several years, going to all the retirement parties, clinking champagne glasses, wishing people well, and she realised, 'I've never been to a party where a woman has retired in my department,' and she's like, 'Huh, how is that possible?'"

Yet it is not just men perpetuating myths. "What we find is that everyone pretty much thinks that the mothers are less productive – that once a woman scientist has children, she just doesn't have that sustained concentration and drive," Professor Blair-Loy said. "Even the mothers themselves will say, 'Gosh, it's hard, I just don't feel like I'm as productive now that I have kids' – even though the data might show that she is," she added.

"These are not bad apples or sexist old men who hopefully will be retiring soon," Professor Blair-Loy continued. "This is the dominant belief system that most faculty of every demographic background and discipline believe in."

"Once we as a broader society understand this – it's not a matter of blaming individuals, but rather seeing that they are doing what they think is right, they're trying to uphold what they think is true and good about academic science – that gives us empathy for them, and then we can really start to think about, 'OK, well, how do we change this,'" she said.

For that, Professor Blair-Loy went on, the best answer may involve peer-to-peer education. "STEM faculty aren't terribly impressed with the credentials of sociologists," she said, "so what I do is I partner with some faculty, such as engineers, and then together we look at the data." From there, she said, faculty can study their own departments, and see if there are certain groups that are not getting promoted as quickly or have lower salaries.

paul.basken@timeshighereducation.com