Day 9: Debbie Chachra Article

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Debbie Chachra A...

WORLD VIEW *A personal take on events*

MICHAEL MALONEY/OLIN COLLEGE

To reduce gender biases, acknowledge them

A former Google engineer's memo on diversity reveals psychological blind spots, not biological differences, says **Debbie Chachra**.

Late in the afternoon of 6 December 1989, a man walked into the École Polytechnique in Montreal, Canada, carrying a hunting rifle, a knife, ammunition and a grudge against women in non-traditional roles — in this case, engineering. He went from class to class, targeting female students. Fourteen women died. It remains the worst mass murder in modern Canadian history.

At the time, I was an 18-year-old studying engineering at the University of Toronto. The shooting was a harsh lesson that some men don't think women belong in science and technology. As I persisted in the field and became a faculty member, I heard this message again and again, albeit expressed less violently.

The latest instance comes in a ten-page memo written by James Damore, a Google employee who has now been fired by the company. He argues that women are biologically less suited for technical roles than men are, and that Google's diversity efforts are therefore misguided. The flaws in his arguments (mainly cherrypicking and over-extrapolation) have been much discussed, but his biggest lapse was in not questioning his own assumptions and motivations.

I have lost patience with arguments from people who think they are saying 'what everyone is too afraid to say' without recognizing that they are simply repeating what women like me have heard throughout our lives.

When my colleagues and I do outreach to support women in engineering, we start with two arguments. The first cites social justice: women deserve the same opportunity to work and succeed as men do. The second is utilitarian: diverse teams of engineers do better engineering. After all, harnessing science and technology for the benefit of everyone demands an array of perspectives. These alone are solid reasons to reshape educational and professional environments in engineering to make them more welcoming.

But there is a third argument that I make for people with scientific and technical backgrounds: if you value rationality and objectivity, you need to engage with gender bias. That's because bias is part of us: we live in a world steeped in conventional gender roles. To borrow a metaphor from computing, biases have root privileges in our brains.

Why do gender disparities still exist despite the dismantling of most structural barriers, such as the explicit exclusion of women from engineering classes? One explanation is that we live in a world that is now equitable, but that women are innately less suited to engineering and technology, and so participate less and drop out more. A second explanation is that our world remains systematically unequal on the basis of gender, albeit in more subtle ways.

The latter hypothesis has shown considerable explanatory and predictive power. In the 1970s and 1980s, orchestras adopted 'blind' auditions in which candidates were concealed behind screens when performing, and the proportion of women who were given positions rose sharply. Orchestras thought they were already selecting the best musicians, but this change in practice made clear that wasn't the case.

The history of science is littered with findings later attributed to researchers' biases. For instance, for a long time, researchers' observations showed that in mated pairs of songbirds, the males were often sexually promiscuous, but the females weren't. However, in the 1990s, genetic testing showed that females, too, were often promiscuous.

I absolutely have a bias towards the null hypothesis that women and people of colour are as capable in science and technology as are their male or white counterparts. This might be attributed to my perspective as a woman and person of colour in engineering. But members of historically dominant groups — that is, white people and males — have perspectives and biases of their own.

One of the deepest unrealized biases is that men are uniquely suited to work in technology, and that women don't belong there. To riff on the US writer Upton Sinclair, it's difficult to get a man to understand something when his self-image depends on his not understanding it.

If Damore had engaged with his own biases — if he had applied his desire for objectivity to the question of precisely why he was writing the document — he might have found explanations beyond biological differences. It is telling that he did not cite studies of hypothetical job applicants who were evaluated differently based on nothing but their names, and the gender and ethnicity they indicated.

COUNTERING SOCIETAL BIASES REQUIRES UNCEASING AWARENESS AND EFFORT.

I have a challenge for those who genuinely believe science can show that under-represented groups simply don't want to be, or are less suited to be, technologists — and that is to work to eliminate bias, by recognizing and reducing factors that make it harder for under-represented groups to succeed. I would love to live in a society that has systems so equitable that everyone's true potential could be expressed.

For that to happen, we first need to become aware of our own biases, which means recognizing the lenses that we've looked through for our entire lives. For example, groups of people can be encouraged to recall their earliest memories of women and science, and to discuss what perceptions were conveyed. But one-time discussions are not enough, however eye-opening. Countering societal biases requires unceasing awareness and effort. It demands that we design systems — such as rubrics and blinded assessments — that actively offset them.

If research on biases has told us anything, it is that humans make better decisions when we learn to recognize and correct for bias. ■

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