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SCIENCE

Female Scientists Turn to Data to Fight Lack of Representation on Panels

By APOORVA MANDAVILLI SEPT. 5, 2016

One day in August 2015, the Princeton University neuroscientist Yael Niv saw an email notice of a conference on deep brain stimulation, a hot topic in treatment for depression and other mental disorders. Dr. Niv noticed that none of the 21 scientists scheduled to speak were women.

This was not the first time Dr. Niv had lamented a skewed lineup.

For years, she had tried to persuade other conference organizers, sometimes successfully, to invite more women to speak. But something about this particular conference, perhaps that the organizers were women, pushed her and about 20 other female scientists to take action. Over a series of furious emails that night, they decided that the best approach they could take was scientific: They would collect data — irrefutable evidence — on the numbers of male and female speakers.

The very next day, they started a website called BiasWatchNeuro, with an inaugural post on the conference. Since then, they have posted gender ratios among speakers at more than 60 conferences in various areas of neuroscience, and compared them with the base rates — the proportion of female scientists in that particular field. The base rates are estimated from the number of women in grants databases. If anything, Dr. Niv said, the site errs on the side of underestimating the

base rates.

At about half of the conferences listed on the site so far, the number of female speakers matches or surpasses the base rate in that field in general. But what fuels the project, Dr. Niv said, is how many conferences continue to fall not just a little, but far short, of the proportion of women in that field.

For the gender ratio of panelists to mirror the base rate in that particular field, assuming the site's estimates are accurate, the dark blue dots, above, would have to turn pink and the dark red dots would have to turn blue.

There were a total of just 11 women (compared with 213 male speakers) at 13 conferences that fell in the egregious offender category — those that were more than two standard deviations below the base rate. You can also see that six conferences on the left had no female speakers at all, and that few conferences reached the 50 percent gender mark.

Dr. Niv said that she and her colleagues believed that the gap between the ratio of the women in the field and on panels was primarily the result of implicit bias, which some of them have studied.

"Implicit bias is just that — implicit: We are not aware of it," she said. "We are not saying that conference organizers are bigots and purposefully discriminating; they just can't help it."

Some conference organizers have been receptive to the criticism, adding more women to their lineups. But others in the world of neuroscience have taken issue with the mission. Panels should be organized based strictly on the speakers' merit, they say, and not on any notion of fairness.

Veerle Visser-Vandewalle, one of the organizers of the deep brain stimulation conference, said she was "puzzled by the gender issue" and had never experienced any bias. In selecting speakers for the conference, "it was not our goal to have an equal distribution between, for example, European and American lecturers, or black and white, or male and female," she said. "Their scientific excellence was the criterion."

Among the defenders of the project, however, is Anne Churchland, a neuroscientist at Cold Spring Harbor Laboratory who studies how people make decisions. In 2001, she started Anne's List, a directory of 170 women in computational neuroscience, intended to silence claims that no good female scientists existed in that field.

Her research suggests that someone you recently had lunch with or someone from your hometown might spring to mind when selecting a speaker, even though neither has anything to do with science.

"It doesn't feel like irrelevant information influences our judgment, but it does," Dr. Churchland said.

Being invited to speak on panels is more than a matter of prestige; it's how your peers come to know who you are, Dr. Niv said. "When you're not known in science, you're basically doomed, because when your papers are reviewed, they're less likely to be accepted," she said. "Your grants are less likely to be funded."

When less than 50 percent of a field is made up of women, and then they are barely represented on panels, their ideas may never be heard by their colleagues, Dr. Niv said.

"Science should not be biased," she said. Addressing that, she added, "should be everybody's priority."

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