

Suggestions on how to overcome the gender problem at the Bernstein Conference.

We judge by merit and invite the best speakers, there is no bias This logic is very appealing to us as scientists, because we believe that science is and should be a meritocracy. The logic goes as follows: we promote and foster “the best” regardless of gender, race or nationality. The problem is that there is no universal definition of what constitutes “the best”. This is easily understood by considering an example. In this study [E Uhlmann and G Cohen, Constructed Criteria: Redefining merit to justify discrimination, *Psychological Science* 16, no. 6, pp. 474-80 (2005)] participants were asked to pick a person for the promotion to a police chief. The obvious answer to this problem is: “the best” and most capable person should be promoted. But as in real life no candidate was perfect. When time comes to make decisions, we all choose from a finite imperfect pool of applicants and have to weigh the pros and cons. It turns out when participants are given CVs of applicants of both genders, in which the men had more formal education but less street experience compared to women, the participants weighted the formal education higher and promoted a male to be the police chief. The reasoning is, of course, formal education is important to design effective crime prevention strategies and therefore they selected a man. Interestingly, when this was reversed and the females had more education but less street experience, a male was still voted to be the police chief. You can guess how the logic went: street experience is important for a police chief to make realistic and effective decisions. Now replace these two criteria with the quality measures that apply to scientists such as “the number of grants”, “number of papers given the age”, “impact factors of articles”, “amount of grant money”, “papers per time”, “works on the cool topic A that fits our conference” or apply any other metric and repeat the experiment. By now you get the picture for why it is so hard to define who is “the best” candidate for a speaker spot at a conference. Science tells us in study after study that the definition of “the best” is heavily biased towards the male gender, across disciplines and career levels. Even when given identical CVs the men are offered more money, are mentored more and receive job offers at a higher rate [Link: Moss-Racusin et al, Science faculty’s subtle gender biases favor male students, *PNAS* Vol. 109, no. 41, pp. 16474-16479 (2012)], and of course are invited to speak more often. Let us not try to talk away these studies but devise strategies to overcome our collective biases.

There are just no good women, we can’t find any! A dearth of qualified women has been spoken about a lot, yet the numbers just don’t support it. For example in Germany, over 35% of math and science Master and Bachelor graduates in 2013 were women [Links: www.komm-mach-mint.de/Service/Daten-Fakten, <http://www.genderreport-hochschulen.nrw.de/>, www.destatis.de]. At the PhD level, the data shows that already 5 years ago in 2010 about 38% of natural science PhD students were women [Link: <https://www.destatis.de/DE/Publikationen/Thematisch/BildungForschungKultur/Hochschulen/Promovierende.html>]. Yet, by the time these cohorts progressed in their careers and became PhD graduates, postdocs or professors we didn’t see their representation in the Bernstein conference speakers neither as contributing nor as invited speakers. What makes matters worse is that it looks like every one today wants to hire and promote more women and has the best of intentions. However, when time comes to put together a conference program we do not see women being successful to the extend they deserve. How can this be? Studies show that we suffer from a perception problem, whenever we are asked to come up with names of accomplished scientists we intuitively come up with male names. In fact, numerous studies show that we associate more quickly “science” with “male” and take significantly longer if we are asked to linked “female” to words related to “science” [Link: <https://implicit.harvard.edu/implicit/Study?tid=-1>]. Therefore, it is easy to

imagine why female speakers are rarely invited. Hence, it becomes even harder to think of candidates for the next conference because we rarely see them present their work. If we add to this implicit bias the typical situation, where committee members are busy and on a deadline and you begin to understand why even the best-intentioned committee members can come up with the Bernstein Conference gender mix of overwhelmingly male speakers.

How to find the best speakers, despite the bias Since criteria for who is “the best” are heavily biased by our perception of gender it is best to counteract it by deliberately putting together a list of the best candidates that is 50% male. Similarly, it is common sense to define the criteria for who is “best” before thinking of candidates and involve both men and women in the decision-making. We feel it is important to mention the importance of failure controls. As scientists, we believe that crosschecks are necessary to make sure that the ideas and methods we use are solid. Obviously, the same should apply to our decisions regarding speaker selection, promotion or hiring in our institutions. If you discover that your list includes largely one gender, for example ~90% male speakers in the last 10 years of the Bernstein Conference in Germany, then let us agree on the obvious: our collective decision-making process failed and needs to improve.

How to find good women? It is plausible to assume that search committees need help in identifying the names of accomplished female scientists. Once they have them, we will assume that they are good-intentioned people and will work hard to hit gender balance. To test this hypothesis, an easy intervention would be to collect names of female scientists working in neuroscience and specifically computational neuroscience, construct an easy-to-use, searchable database, and make its use compulsory for any program committee. Thankfully, such databases are already widely available and many non-profits and individuals already invested hard work to put them online. To motivate this strategy further, let's provide evidence that such a simple intervention can deliver measurable results in a short time. A few years ago the Cosyne conference in computational neuroscience suffered from a lack of women, in fact in 2004 there were no women among the 12 invited speakers. Many reasons were mentioned, one of them was, of course, the classic: “there are no qualified women”. So female neuroscientists headed by A Churchland kindly compiled a list that now includes over 100 women. This list served two important functions, busy organizers can now achieve gender balance with a single click. Second, it improved the reputation of the conference and of the field as a whole. Here is a selection of curated websites that provide a searchable database of excellent female scientists to help close the gender gap at the Bernstein Conference.

www.academia-net.org

<http://anneslist.net/>

If despite your best efforts you experience difficulty finding an appropriate candidate, any of the supporters listed on <http://biaswatchneuro.com/participants/> would be happy to help, please contact them to assist you.