

Establishing A Fair Process for Selecting ACS Award Winners

Findings from the 2006 NSF, DOE, NIH-sponsored Workshop
*Building Strong Academic Chemistry Departments
through Gender Equity*¹

- Recommended that funding agencies develop policies to ensure gender equity in proposal review through:
 - Instituting procedures for training reviewers and grantees on diversity issues
 - Modifying the peer review processes, where necessary, to ensure gender equity
- 2006 NAS study *Beyond Bias and Barriers* re-iterates these recommendations

¹www.seas.harvard.edu/friend/GenderEquity_report+cover.pdf

Minimizing Bias in Evaluation²

- Implicit bias toward a group
 - Non-conscious hypotheses/stereotypes are often about competence
- Lack of critical mass ⇔ greater reliance on implicit bias
 - Currently few women and minorities are in the physical sciences
- Accumulation of disadvantage
 - Small bias in same direction has large effect over time
 - Very small differences in treatment can have major consequences in salary, promotion and prestige

²Valian, *Why So Slow* (1998)

Implicit biases are...

- **Widely culturally shared by:**
 - All people, even members of under-represented groups, hold implicit biases about these groups
 - People are often not aware of them
- **Applied more when there is:**
 - Lack of information
 - Stress from competing tasks
 - Time pressure
 - Lack of critical mass

Impact of Blind Auditions³

An analysis of audition records of 14,000 individuals & rosters of orchestras from 1970-1996 showed:

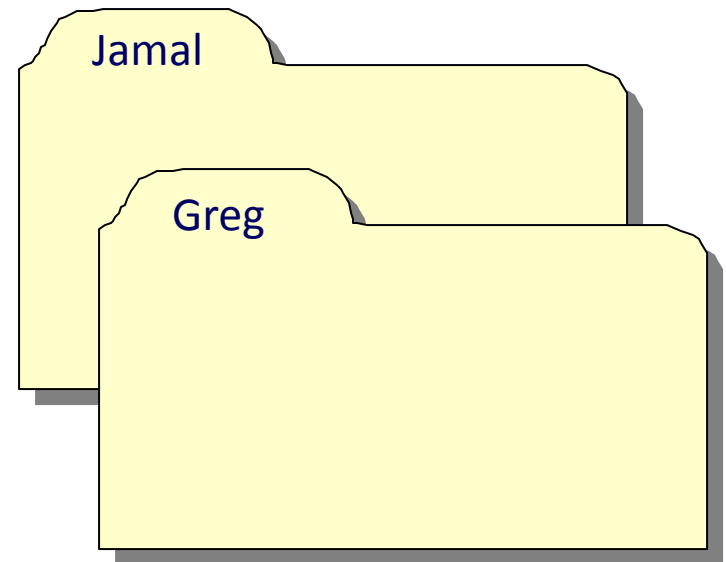
- The use of a screen during auditions
 - Increased the probability that a woman would advance in the preliminary rounds by **50%**
- Since the switch to blind auditions
 - The proportion of women among new hires has increased by **30%**



³Goldin & Rouse (2000) *The American Economic Review*, 90, 4, 715-741.

Evaluation of Identical Resumes: Impact of Race⁴

- Using the same resume but different names:
 - “Jamal” need to send 15 resumes to get a callback, whereas “Greg” required only 10 to get a response.
 - Adding an additional eight years of experience to the resume from “Jamal” yielded as many callbacks as the one from “Greg.”
 - The higher the educational level of the applicants, the greater the gap between callbacks for “Greg” and “Jamal.”



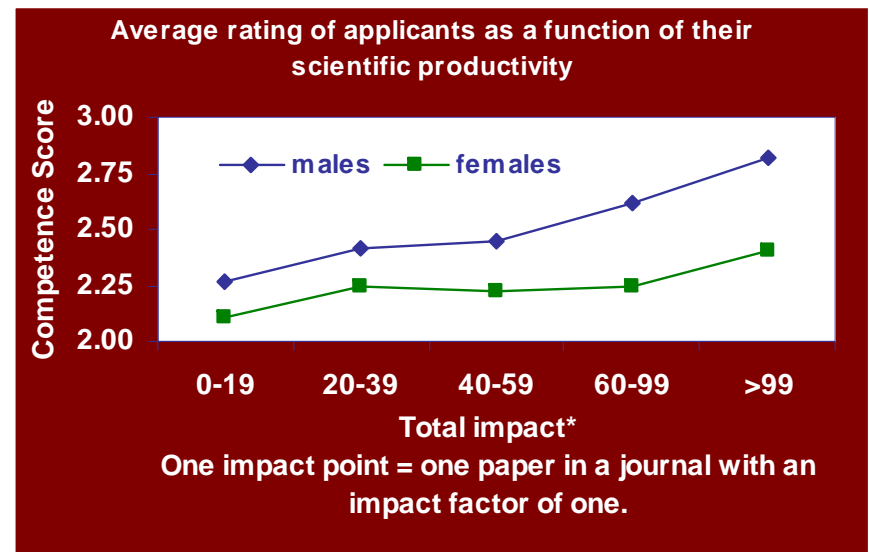
⁴Bertrand & Mullainathan (2004) *Poverty Action Lab*, 3, 1-27.

Evaluation of Fellowship Applications

“...the success rate of female scientists applying for postdoctoral fellowships at the [Swedish Medical Research Council] during the 1990s has been less than half of that of male applicants.”

Wenneras & Wold (1997) *Nature*, 387, p. 341

Women had to be 2.5 times more productive to receive the same competence score.



Similar findings:

GAO report on *Peer Review in Federal Agency Grant Selection* (1994); and *European Molecular Biology Organization Reports* (2001)

*Zare, editorial in 5/15/06 *Chemistry and Engineering News*, 5/15/06

Ways to Mitigate Evaluation Bias⁶

1. Increase awareness of how implicit biases might affect evaluations
2. Decrease time pressure and distractions in the evaluation process
3. Rate on explicit criteria rather than global judgments
4. Point to specific evidence supporting judgments

Please incorporate (3) & (4) in your discussions

⁶Bauer & Baltes, 2002, *Sex Roles*, 47 (9/10), 465-476