A Look at Unconscious Bias

Studies, examples, activities
Objectivity is Compromised by Cognitive Errors and Unconscious Bias

- Peer review process assumed to be objective.
- Some givens about cognitive errors:
  - Biases are often unintentional.
  - Everyone makes them.
  - Decisions made quickly are more susceptible to unconscious bias.
  - Biases can be advantageous or disadvantageous to those being evaluated.
Experimental Data: Height

In one example (Biernat, Manis, & Nelson, 1991), college students saw photographs of other students and estimated their height in feet and inches.

The students nonetheless judged the women as shorter than they really were, and the men as taller.

The experimenters had matched the photos so that for every photo of a male student of a given height there was a female student of the same height.

From Virginia Valian
Example of Gender Bias

- Study of Swedish Medical

Example of Gender Bias

- Analysis of 300 letters of recommendation for medical school faculty position.
- Descriptions of women by letter writers emphasized teaching.
- Descriptions of men by letter writers emphasized their role as researchers and professionals.
- Fewer superlatives used to describe women.
Example of Gender Bias

Reference letters cite “her training”…“his research”
Gains from Awareness of Bias?

- European Molecular Biology Organization (EMBO) has monitored gender as a factor since 1996 and has educated evaluators on cognitive errors.
- Evaluation of Fellowship and Young Investigator Awards in 2006 was gender-blind.
- Success rate for men was still higher than for women (+20% and +12%, respectively).
- Merit measure correlated with this differential in ratings was number of publications.
- Applicants for YI awards surveyed in 2001 to identify factors responsible.

(Ledin et al., EMBO reports VOL 8 | NO 11 | 2007, pp 982-987)
Differential Results from EMBO Study

- Men more frequently than women
  - Worked more than 46 hr/week
  - Had a partner who worked less or part time
  - Had a mentor
- Women more frequently than men
  - Moved for their partner
  - Wanted a mentor
  - Saw men receiving more support
  - Saw or experienced discrimination
Cumulative Disadvantages Reported in EMBO Study

Productivity Factors Ledin et al

- % Young Investigator Applicants
- >46 h/wk
- Part-time partner
- Partner < 46 h
- Moved for partner
- Has mentor
- Wants mentor
- Men more support
- Seen discrimination

Men vs. Women
Tutorials for Change

http://www.hunter.cuny.edu/gendertutorial/tutorials.htm

- Four tutorials on gender schema and science careers
- Can be taken online or downloaded as slides to be used later
- Voiceover narrative by Dr. Virginia Valian or download transcript of text
Implicit Association Test

- [https://implicit.harvard.edu/implicit/demo/takeatest.html](https://implicit.harvard.edu/implicit/demo/takeatest.html)

- based on the premise that associated concepts will be easier to categorize together than unassociated ones

- 10-minute test to measure your degree of bias or association depending on how rapidly you link words to categories