A Look at National Awards

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At issue

- women’s receipt of professional awards and prizes has increased in the past 20 years

- men continue to win a higher proportion of awards for scholarly research than expected based on their representation in the nomination pool

Membership - hallmark of success in scientific research

84 members elected annually (plus 21 non-citizens)

22,200 total members (400 foreign associates)

The majority of National Academies members are men.

AWIS

- Projection of the population of eligible women in the expected age demographic -- nearly double the percentage of female inductees

- Track the annual admission rates for men and women relative to the available pools of candidates based on those of the appropriate age window holding PhDs
Percentage of Women in NAS v Percentage of Senior Women PhDs by field

Association for Women in Science (2011)
Expected vs. Elected Members of the NAS (1994-2013)

*Based on the proportion of women among STEM doctorates awarded 20 years ago (NSF data)

Association for Women in Science (2013)
Instead of increasing the proportion of women, the NAS increased the total # elected from 60 to 72 in 2000 and from 72 to 84 in 2011.
Projected Representative Population of Elected Members by Discipline, Based on PhDs Earned by Women 20 Yrs Prior

Association for Women in Science (2011)
Why the difference?
Often quoted...

1. fewer women in STEM overall
   - The “women don’t go into STEM” argument

2. women have been in STEM for a shorter time
   - The “pipeline” argument

3. more female members elected from fields that have more women
   - The “self-selection into ‘soft’ sciences” argument
Why the difference? Research Demonstrates...

- Women are less likely than men of equal abilities to self-promote or seek nominations from others.
- Recommendation letters for female nominees tend to be:
  - Shorter
  - mention the candidate’s gender and personal life
  - contain fewer descriptors of exceptional qualities
  - use stereotypically female adjectives such as ‘compassionate’, and
  - include more negative language likely to raise doubt about the applicant.

Lincoln et al.
- Analyzed publicly available data from 13 STEM disciplinary societies:
  - Physical sciences
  - Biomedical sciences
  - Mathematics
- 1991 and 2010
- 296 prizes
  - Excluded female-only awards
- 2,865 recipients

Findings consistent with NAS

1. **Implicit Bias**

   - unconscious mental models about social groups other than our own
   - the favorable or unfavorable attitudes/stereotypes that affect our *unconscious assessment of others*
   - automatic, based on characteristics such as gender, race, age, country of origin, or other dimensions of identity
   - synonymous with unconscious or unintentional bias
   - research indicates that **both men and women evaluate men more favorably** than they do women, even when they have identical credentials

**Stanford Neurobiologist Ben Barres:**

“In addition to becoming privy to conversations that denigrated female scientists’ abilities in general, as a man he reported being told about the perception that research done by his ‘sister’ Barbara – his name prior to [sex-reassignment] surgery – was weaker than work done by Ben.”
Why are we unaware of our implicit bias?

- We view ourselves as fair and impartial
- We believe advancement is merit-based
- We admire the competence of some, which seems to show that we are free of bias
- Some, though the exception, make it to the top and appear to demonstrate that evaluations are basically fair and that the truly capable succeed
- It is hard to remember that an exception is just that: an atypical event, and therefore actually evidence that the norm is different

2. Committee Composition

• men are twice as likely to win an award for scholarly research regardless of their representation in the nomination pool

• a higher percentage of women on the committee benefits women’s odds of winning

• committees chaired by men are significantly less likely to award prizes to women, and male chairs trump any effect of women on the committee

• committees chaired by men awarded prizes to men 95.1 percent of the time, despite the fact that women comprised 21 percent of the nomination pool considered by those committees

Conclusions

What can Department Heads/Committee Members do to improve recognition for women and minority faculty?

1. Recognize and work to reduce implicit/unintentional/unconscious bias

2. Carefully consider committee composition
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