

# A Look at National Awards

**Robin Autenrieth**  
**Co-PI, ADVANCE Program**  
**Interim Department Head, Civil Engineering**

# At issue

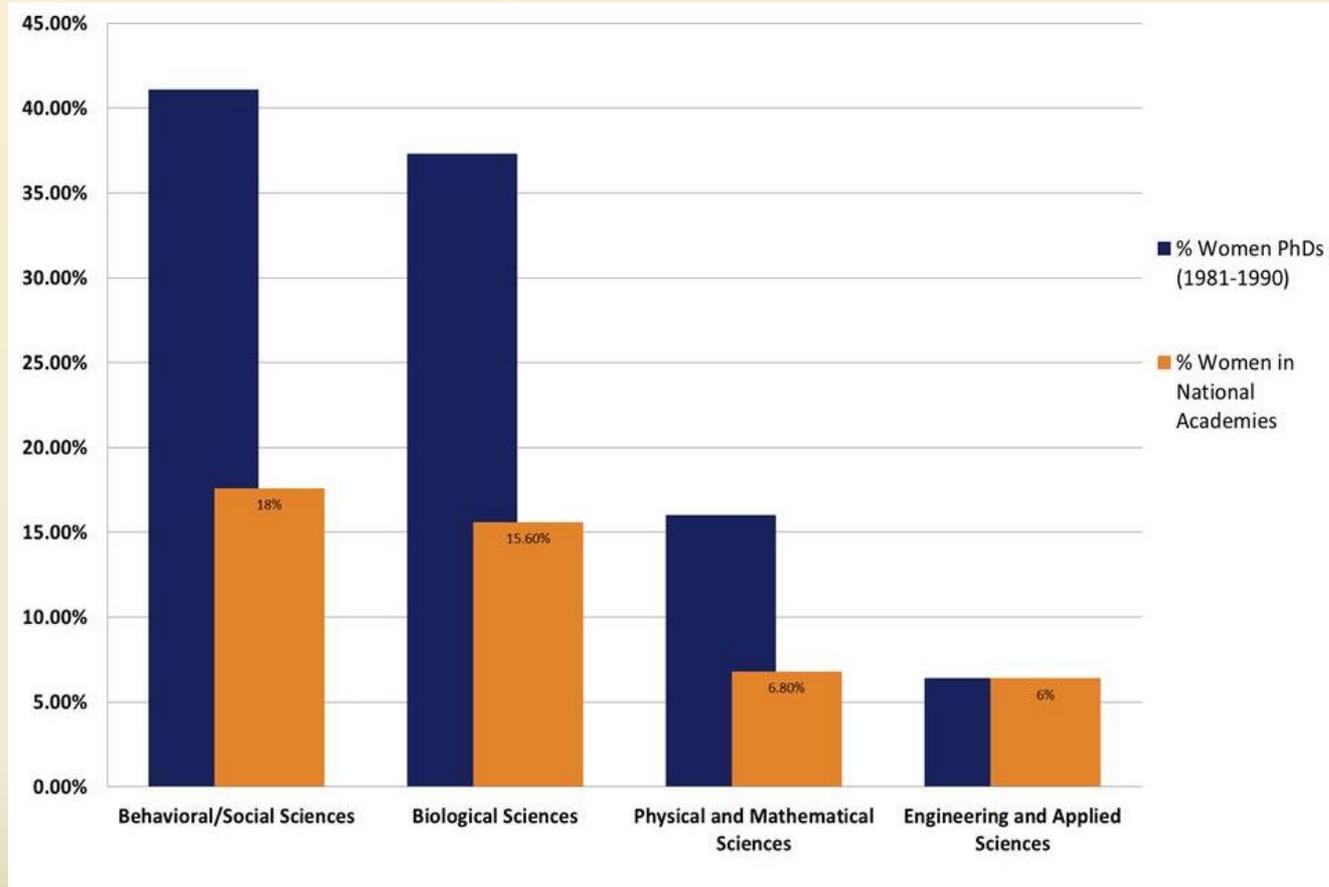
- women's receipt of professional awards and prizes has increased in the past 20 years
- men continue to win a higher proportion of awards for scholarly research than expected based on their representation in the nomination pool

# Awards

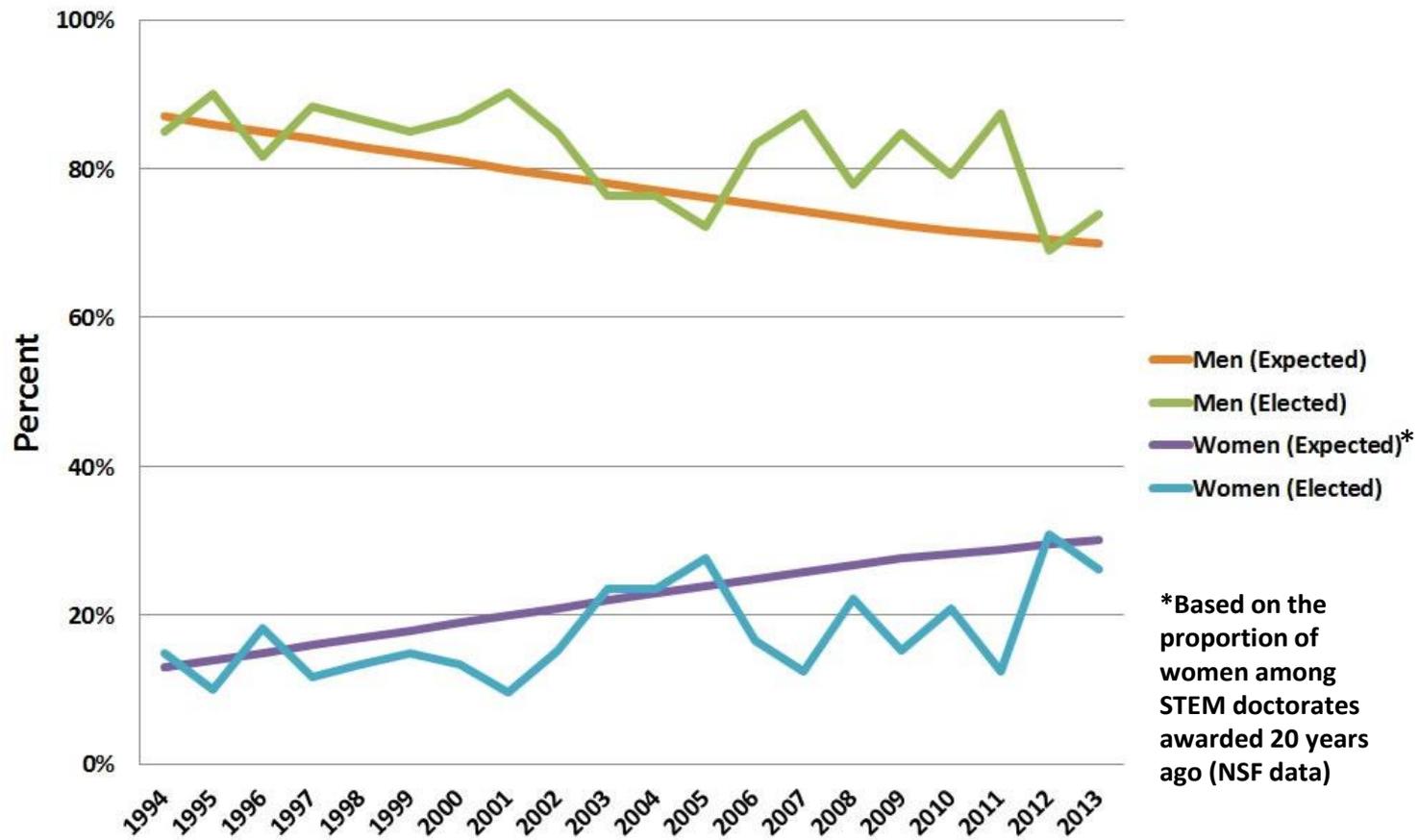
## National Academy of Sciences

- 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

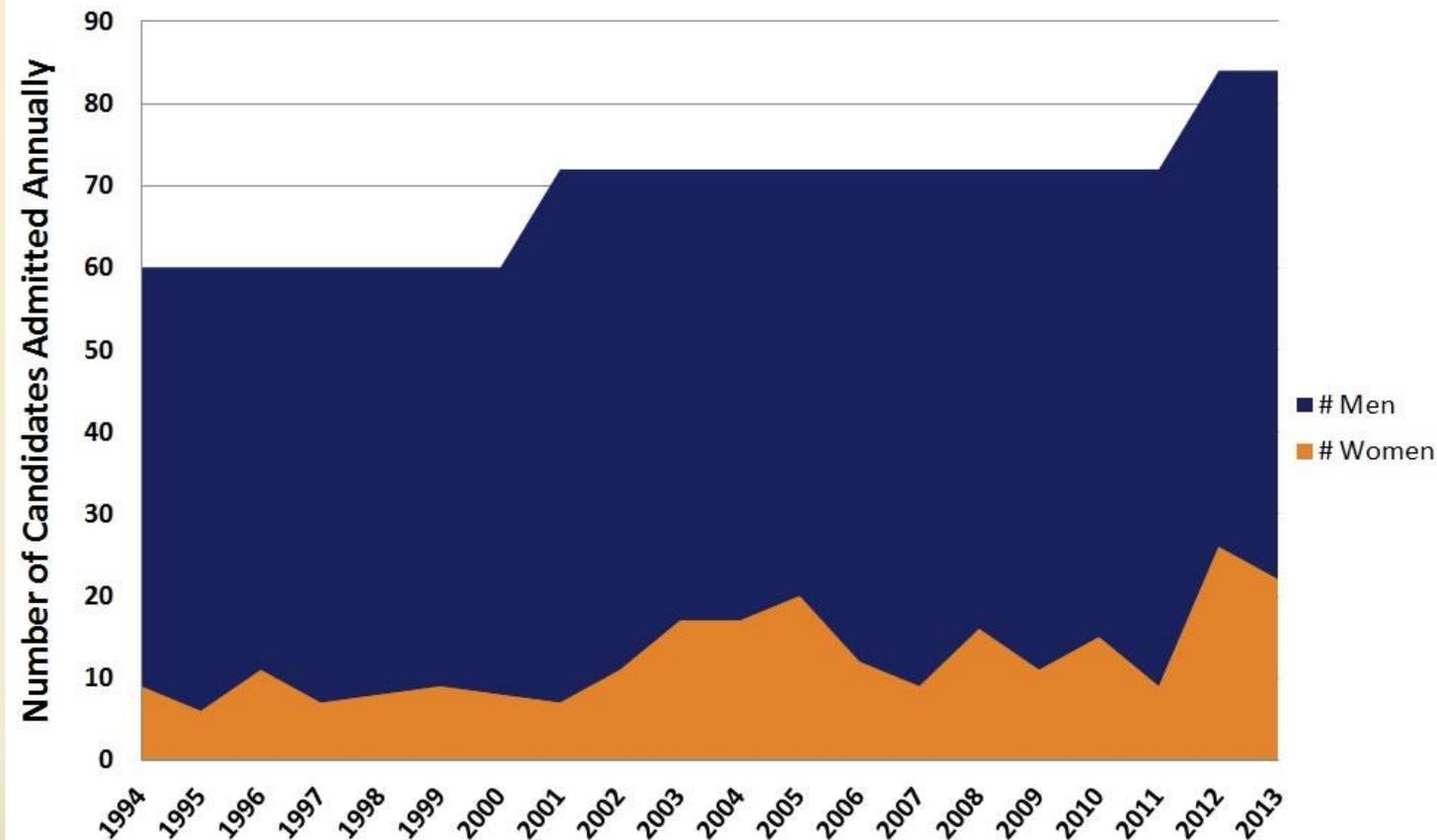
# Percentage of Women in NAS v Percentage of Senior Women PhDs by field



# Expected vs. Elected Members of the NAS (1994-2013)

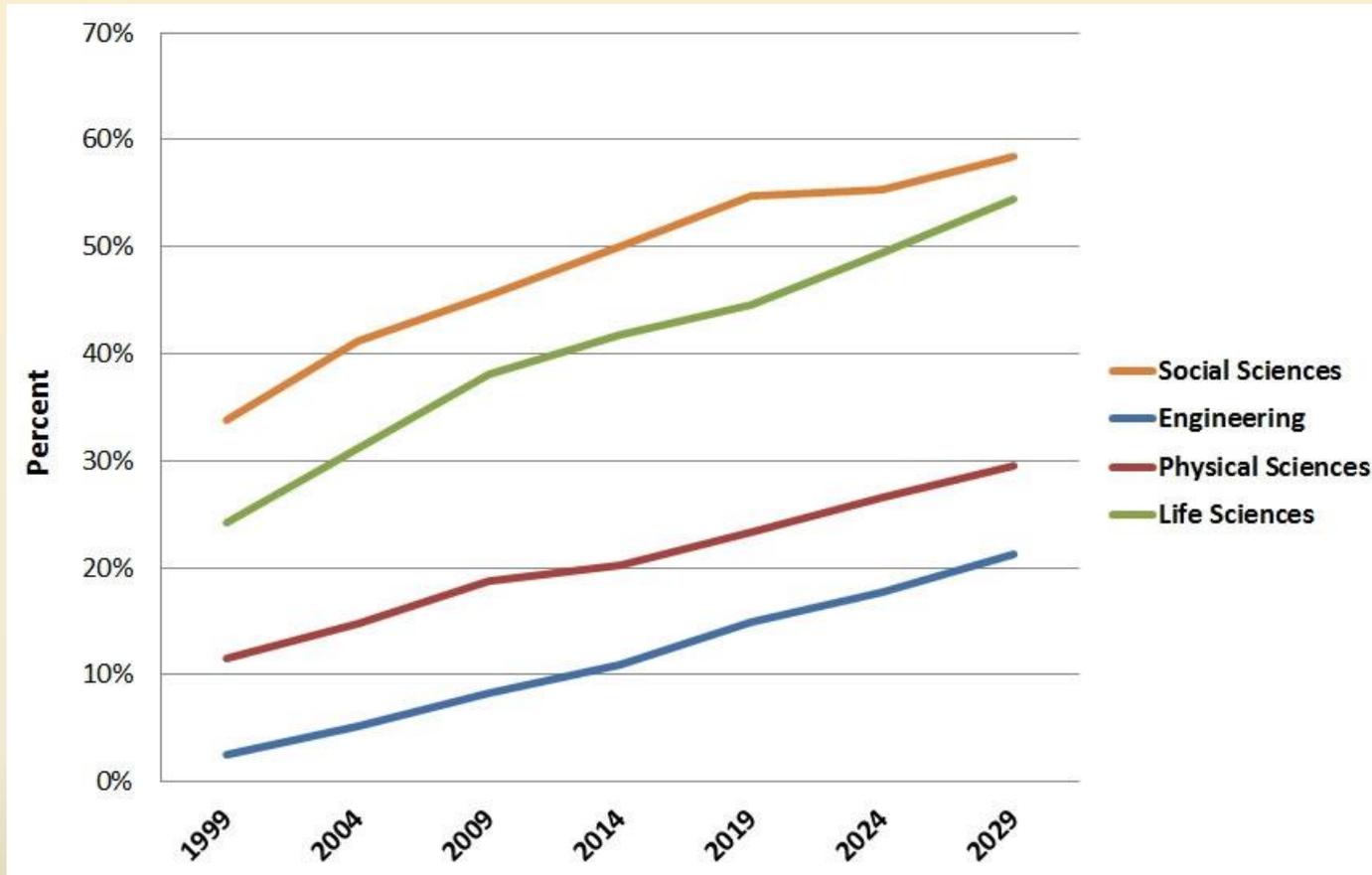


# Number of Male and Female Members Elected to NAS Annually (1994 - 2013)



*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



# 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

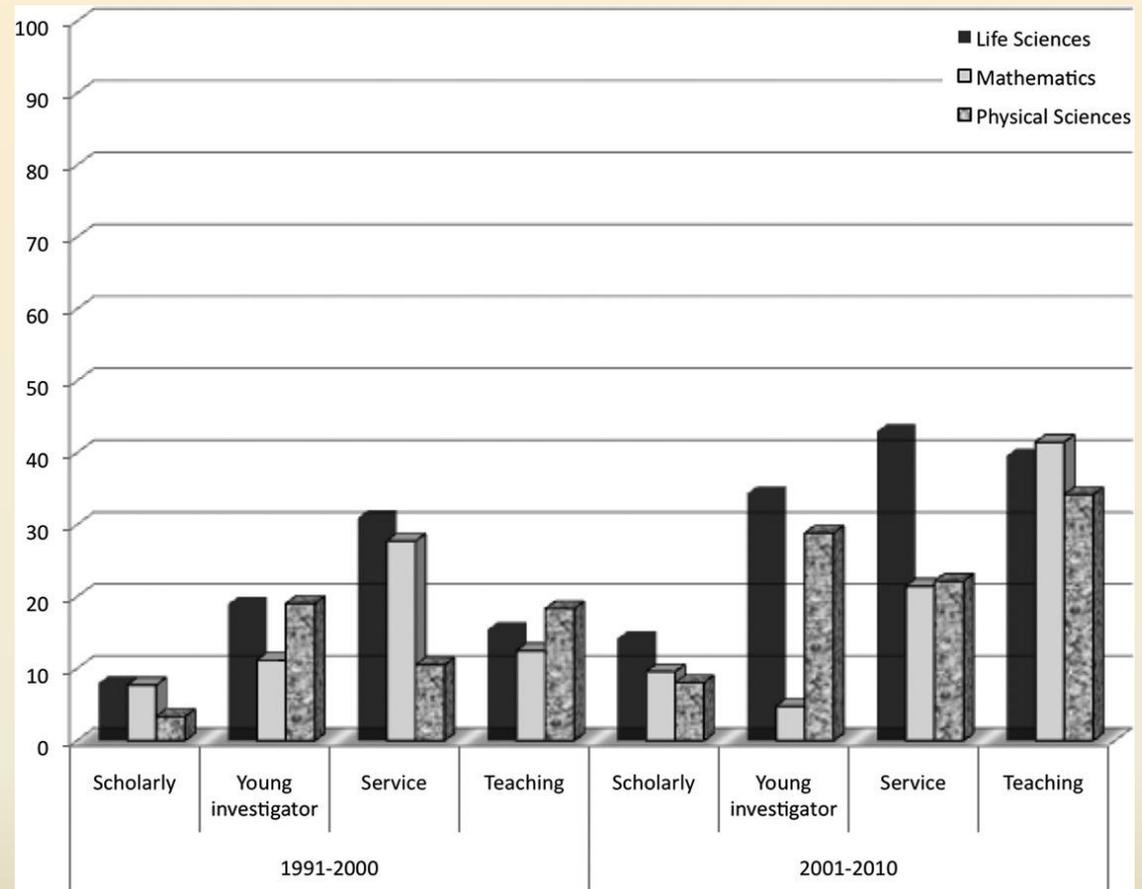
# Awards

## Professional Societies

### 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



# Why the difference?

## Research Demonstrates...

### 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

# Why the difference? Research Demonstrates...

## 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**



**advance.tamu.edu**

**979.845.1235**



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