



W I S E L I

*Women in Science & Engineering Leadership Institute
University of Wisconsin-Madison*

**Insights from Social Science
Research on Achieving
Academic Awards and Honors:
A local and a national example**



Potential Pool of Applicants for Pioneers

Women earn:

- 45% PhD's in biological sciences
- 20% HHMI awards
- 50% MacArthur genius awards
- 25% of R01 applicants
- 23% of all NIH grants



Qx: Is it statistically likely that all 9 would go to male scientists?

Binomial probability test

Pool of potential applicants = 23% ♀

Phase 1 (N=1300) = 20% ♀

$P < .001$

Phase 2 (N=240) = 13% ♀

$P < .01$

Finalists (N=21) = 10% ♀

NS

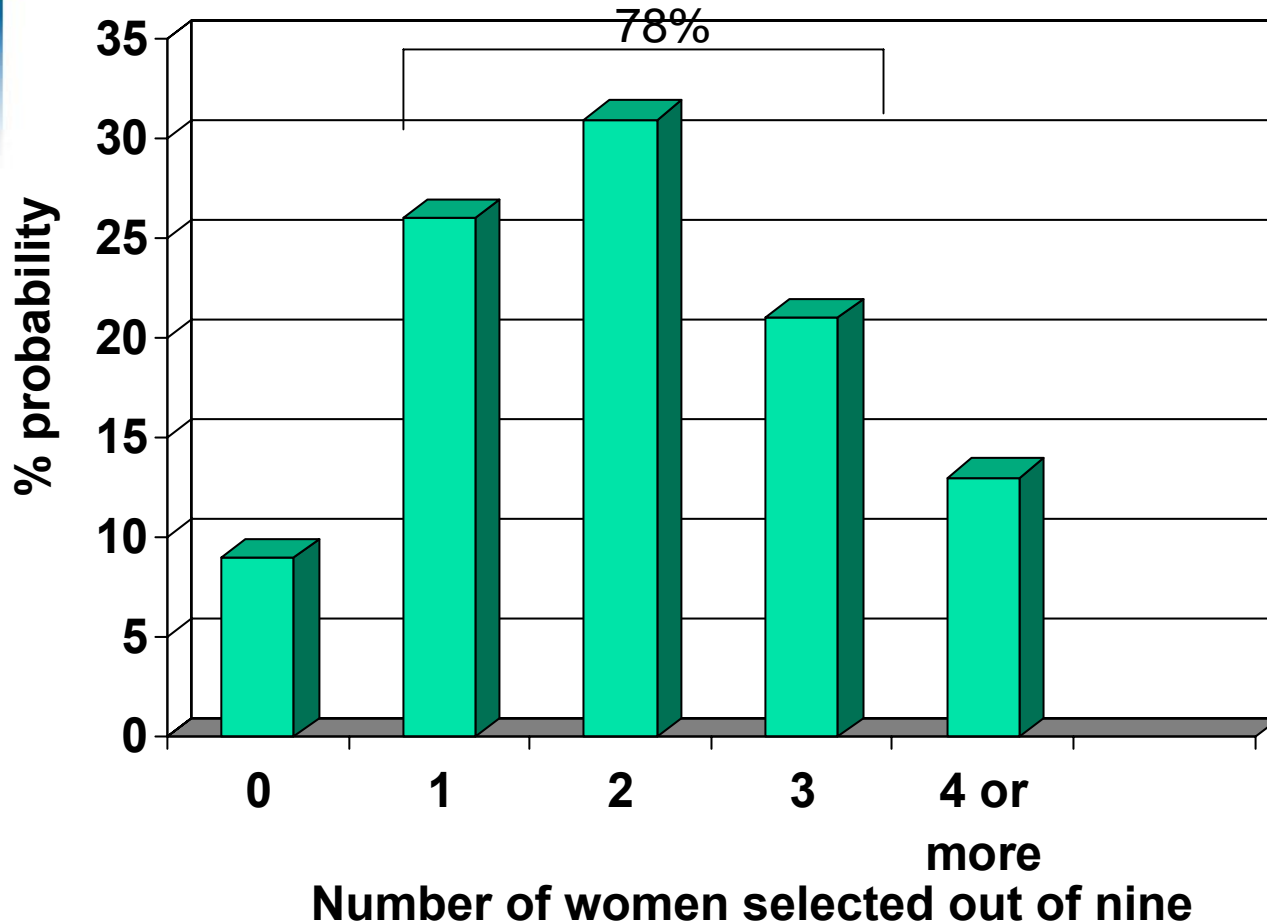
Awardees (N=9) = 0 ♀

NS

Ans: Probably not



If nine people are selected from a population of equally eligible individuals in which 23% are female what is the probability of 0, 1, 2, 3, 4 or more women being chosen?



NIH Pioneer Awards: all 9 men

3 UW-Madison campus professorships in biological and physical sciences: all men x 2 y



Process	Example of at least one study suggesting bias against women
Time pressure on evaluators	Male police officers evaluated higher than females for same behaviors when evaluators had time pressure and high attentional demand Martell RF. J Applied Soc Psychol, 21:1939-60, 1991
Absence of face-to-face discussion of applicants	Knowing someone on the review committee had same magnitude of benefit as being male Wenneras and Wold, Nature 387:341; 1997
Ambiguity of performance criteria; emphasis on prescriptive male traits	Multiple studies showing unconscious assumptions of competence for men in traditional male jobs e.g. Eagly AH and Karau SJ. Psychological Review 2002;109:573-598.

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Process	Example of at least one study suggesting bias against women
Emphasis on self-promotion	Women self-promoters not chosen as partners (particularly by women) for computer game even with reward for winning. Rudman LA. J Personality and Social Psychology 1998; 74:629-646.
Weight given to letters of recommendation	Women's letters shorter, less likely to have "stand-out" adjectives, more gender terms, stereotypic adjectives, doubt raisers, references to personal life. Trix and Psenka, Discourse & Soc 14:191 2003



Some solutions?

- AT UW-Madison:
 - Graduate School concerned;
 - Presented to Deans for discussion;
 - Wants to work with WISELI to improve nomination and review process
- NIH – took a lot of heat (yeah!)
 - changes are not evidence-based with respect to social science research
 - Self-nomination only
 - More women on review committees
 - JAMA paper rejected despite glowing reviews