SUCCEED Committee

Supporting UIC's Commitment to a Community of Excellence, Equity & Diversity

**Dept of Math, Statistics & Computer Science
Statistics Faculty Search Committee Training
Tuesday, October 12, 2010**

SUCCEED's Mission

Supporting UIC's Commitment to a Community of Excellence, Equity & Diversity

To support UIC's commitment to creating a community of excellence, by assisting search committees identify, recruit & hire talented and diverse faculty and heads

Subject of today's presentation

- Climate and advancement of women in academia during the last three decades – "why so slow?"

- Procedures to ensure an inclusive and effective search

What's the Issue?

- Over the last thirty years, the proportion of women PhDs in the pipeline has been increasing steadily

- There has not been a commensurate increase in the percentage of women in tenured/tenure track and leadership positions in US academic science and engineering departments

- WISEST focus on STEM women, but same issues for under-represented minorities

The underlying issues are important for search committees in general to understand.

Percent of PhD's Earned by Women in Selected Fields, 1980 to 1998
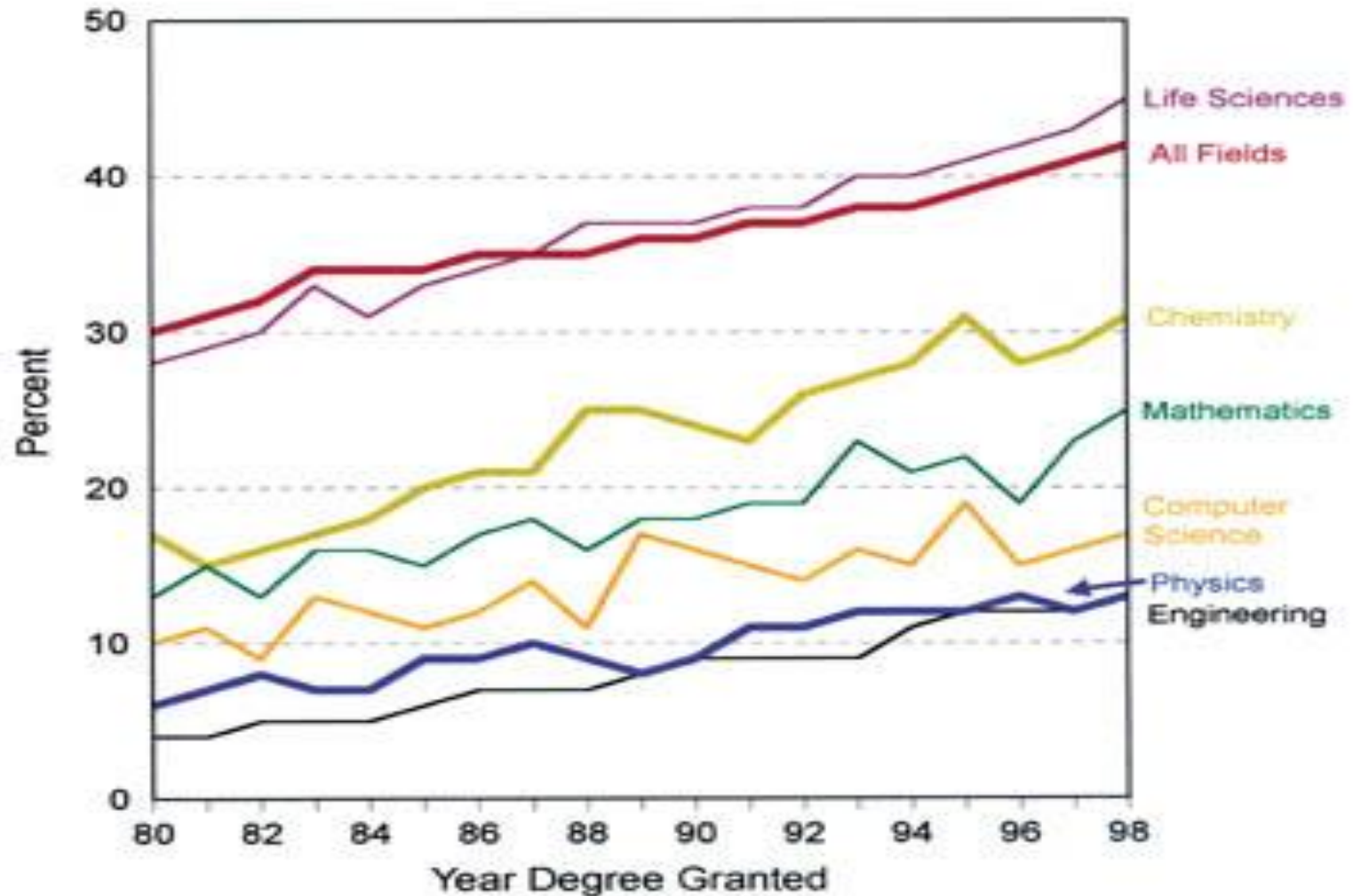
(Compiled by AIP Statistics. Source: NRC *Summary Report*, various years. The data cited for physics PhDs earned are from the AIP *Enrollments and Degrees Report*.)
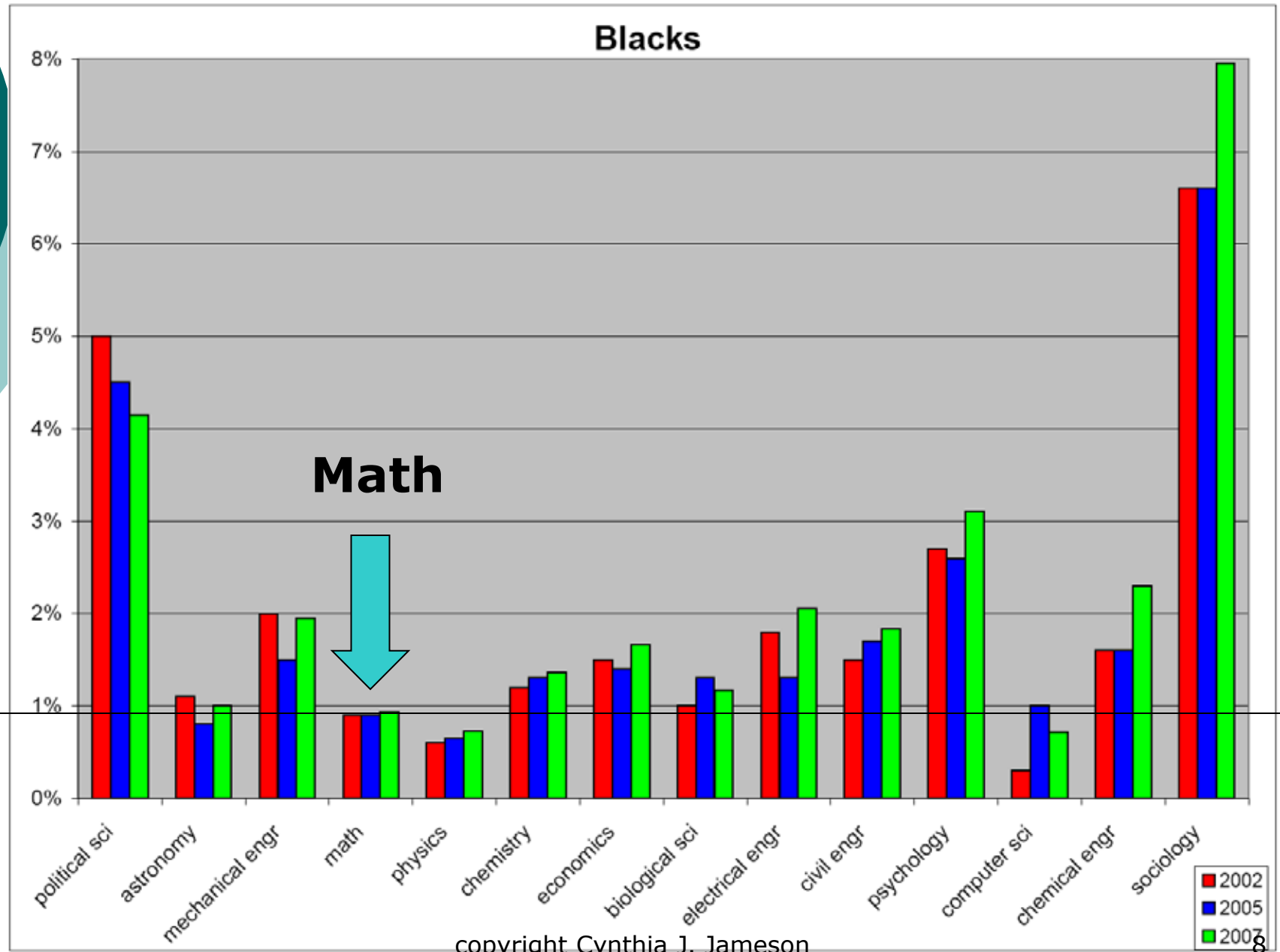
% of "Top 50" STEM faculty
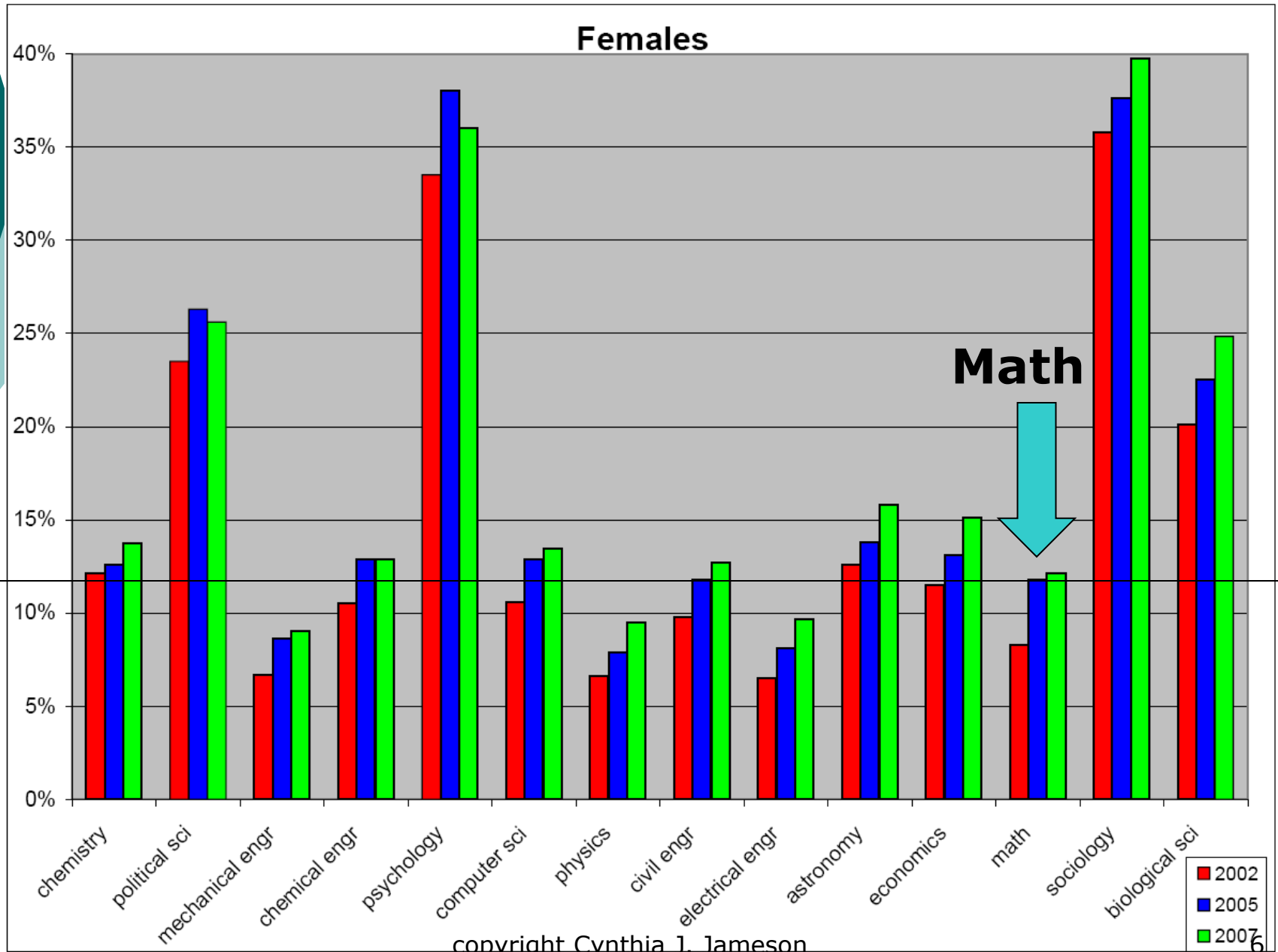
% women of recent PhDs vs. Asst Profs in Math & Statistics

- 12.9% women in all professorial ranks in top 100 Math depts (2007) vs 44.9% BS recipients (2005)

- 28.7% recent PhDs vs 28.0% Asst. Profs in top 50 Math depts, 25.2% in 51-100 (FY 2007) ~ 93 "% utilization"

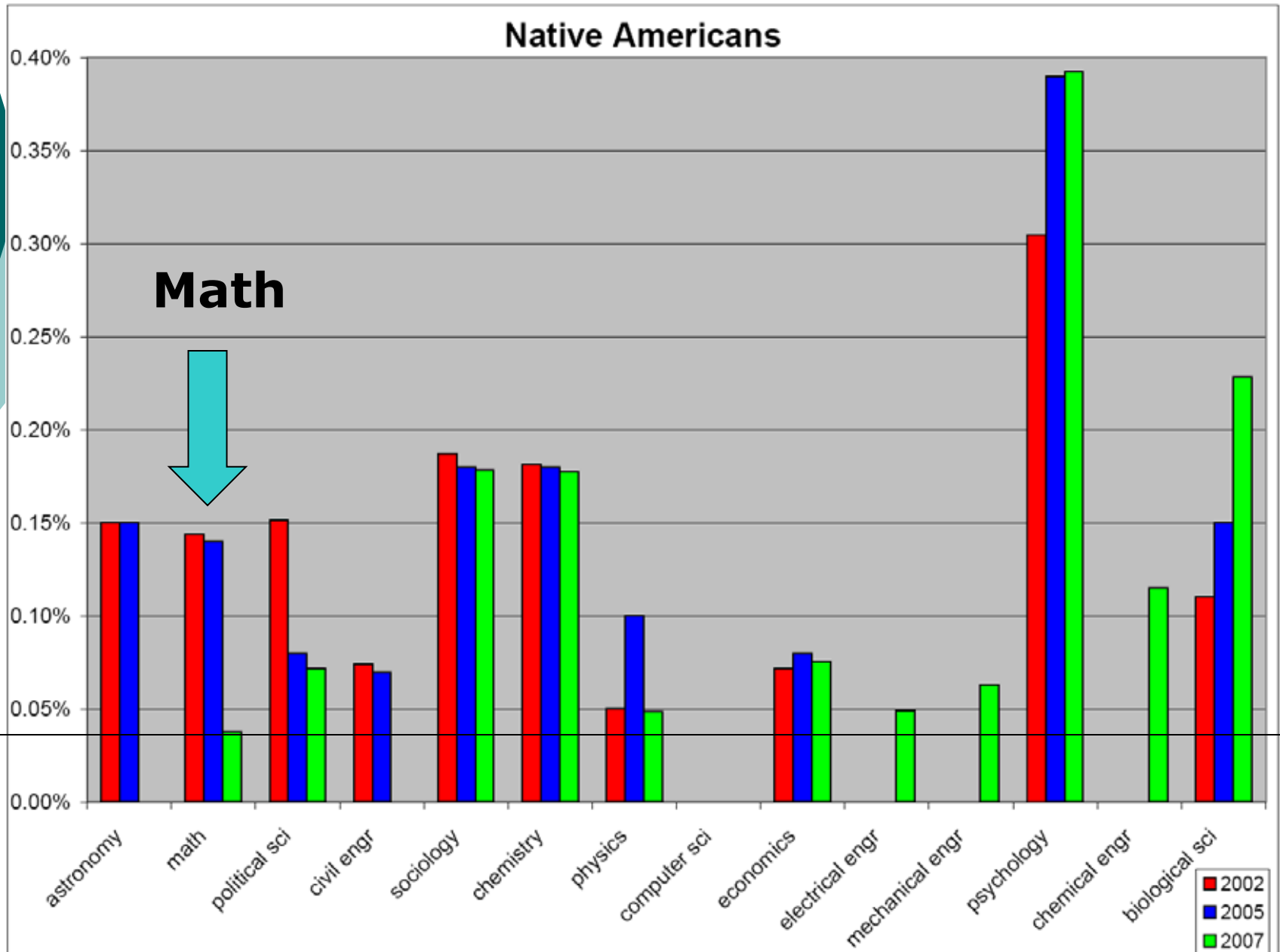- other STEM fields much worse, especially engineering

% of "Top 50" STEM faculty

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% of "Top 50" STEM faculty

Native Americans
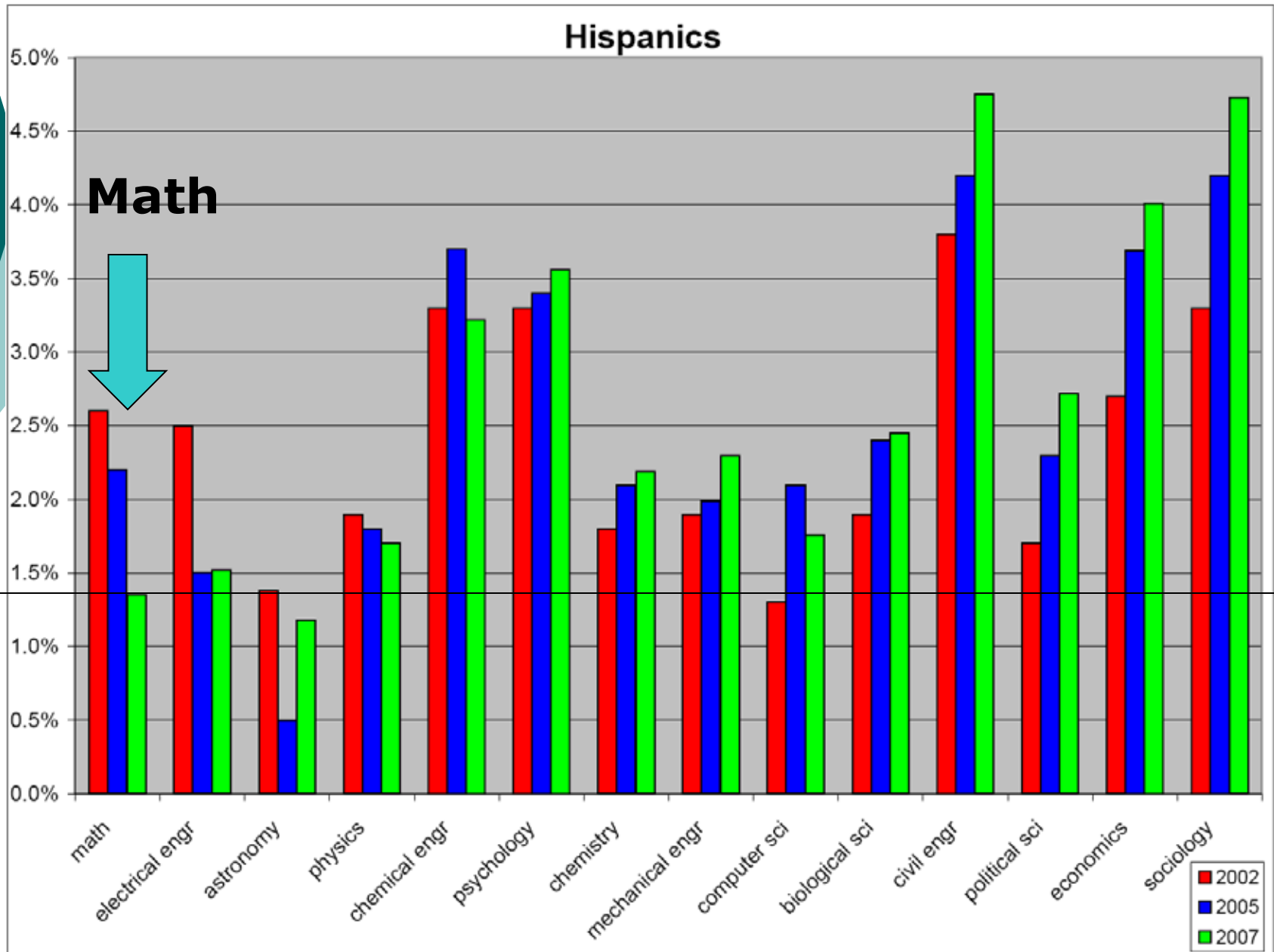
Math

Women T/TT Faculty in Math and Statistics, all ranks

Ph.D.s in the Mathematical Sciences **%** female:

1999   Statistics **35.7%** All other fields **25.7%**

2008   Statistics **52 %** All other fields **25 %**

AY2008-2009 faculty demographic survey ("current report" posted in AMS web site)

- 13.0% women in T/TT faculty of doctorate-granting Math departments

- 30.1 % women in T/TT faculty of Statistics departments (not all doctorate-granting)

- 15.7% women faculty in Mathematics and Statistics depts combined, vs. 12.9% in top 100 departments in 2007 Nelson report

Many factors for disparities in distribution of women and underrepresented minorities in recent PhDs vs Asst Profs

- **Workplace Environment**
- **Unconscious Bias**
- **Family Responsibilities**

are among the issues mentioned in the AAUW 2010 report
'Why So Few? Women in Science, Technology, Engineering, and Mathematics'

Commonly Held Beliefs Debunked By Research

○ *"We are not biased. Gender and ethnicity of the candidate does not matter. Women's and men's accomplishments are viewed and rewarded equally."*

Counterpoint: [Wenneras and Wold, *Nature* (1997)]

○ *"The lack of women in leadership positions will fix itself over time. If women behaved like men, they would succeed at the same rate."*

Counterpoint: [Merton (1948) *Antioch Review*, 8, 193-210 and (1968)] *Science*, 159, 56-63] Very small differences in treatment can, as they accumulate, have major consequences in salary, promotion, and prestige.

Counterpoint: [Martell et al. *American Psychologist* 51, 157-158 (1996)] The effect of cumulative bias has been quantitatively simulated.

Commonly Held Beliefs Debunked By Research

○ *"Discrimination is only practiced (actively) by a small set of ignorant people."*

Counterpoint: Unconscious gender-based assumptions and stereotypes are deeply embedded in the patterns of thinking of **both men and women.**

Counterpoint: Women (and work performed by women) consistently receive lower evaluations than men (and work performed by men) by **both men and women** evaluators.

○ *"Since many of the problems encountered by female faculty are minor, recent emphasis on remedies to improve the climate is an over-reaction."*

Counterpoint: Cumulative disadvantages impede women's progress toward full participation in academia.

Commonly Held Beliefs Debunked By Research

○ *"Women want different things from their career than men."*
Counterpoint: [Broaddus & Feigel. (1994). Chest 105:1858] Women want what men want: (1) more protected research time, (2) more institutional support. (3) better clarification of expectations of employment, (4) improved feedback.

○ *"Flexibility and family-friendly policies are just accommodations for women who don't want to work as hard as men."*

Counterpoint: [American Council on Education (2005). An Agenda for Excellence: Creating Flexibility in Tenure-Track Faculty Careers. ACE] Both men and women want increased flexibility in academic careers and greater work-life balance.

Concepts that Search Committees Must Understand

- Common misperceptions
- Gender schemas =>
- Lack of critical mass =>
- Evaluation bias =>
- Accumulation of disadvantage

Effects of these aspects on institutions and human resources are well studied in the sociological literature.

Lack of Critical Mass

❑ When women make up ≥30% of an *applicant pool*, individual women are judged more positively by evaluators

Heilman & Stopeck. (1985). *J. Applied Psychology*, 70, 379-388

Isaac, Lee & Carnes. (2009). *Academic Medicine*, 84, 1440-1446

❑ When women make up ≥30% of a *work group*, their work is judged more positively by evaluators

Heilman. (1980). *Organizational Behavior and Human Performance,* 26, 386-395

❑ When there are fewer women (or minorities), stereotypes (schemas) have more influence in evaluation

Valian, V. (1998). Why so Slow? The Advancement of Women

What are Gender Schemas?

- ❑ **<u>Non-conscious</u> hypotheses about sex differences that guide everyone's perceptions and behaviors**

- ❑ **Expectations or stereotypes that define "average" members of a group**

  - ❑ **Men are instrumental, task-oriented, competent**

  - ❑ **Women are nurturing, emotional, and care about relationships**

- ❑ **Schemas are necessary and efficient adaptive function**

- ❑ **Both men and women have <u>the same</u> schemas**

- ❑ **Problems arise when schemas that define the aggregate influence the evaluation of an <u>individual</u>'s capability and their work: Evaluation Bias**

Valian, 1998, *Why So Slow? The Advancement of Women*

Schemas in Action: Evaluation Bias

❑ **"Blind" auditions can explain 30 to 55% of the increase in women winning orchestral jobs**
Golden, C & Rouse, C. (2000). Orchestrating impartiality: The impact of "blind" auditions on female musicians. *American Economic Review* 90, 715-741

❑ **Letters of recommendation for women hired at a large academic medical center differ systematically from those for men hired. They were shorter and used gender terms & stereotypic adjectives. They had more grindstone adjectives and fewer standout adjectives**
Trix and Psenka (2003). *Discourse & Soc* 14:191 2003

❑ **University psychology professors prefer 2:1 to hire "Brian" over "Karen" even though the application packages are identical**
Steinpreis, Anders & Ritzke (1999). *Sex Roles,* 41, 509

Wenneras & Wold (1997) *Nature* 387, 341
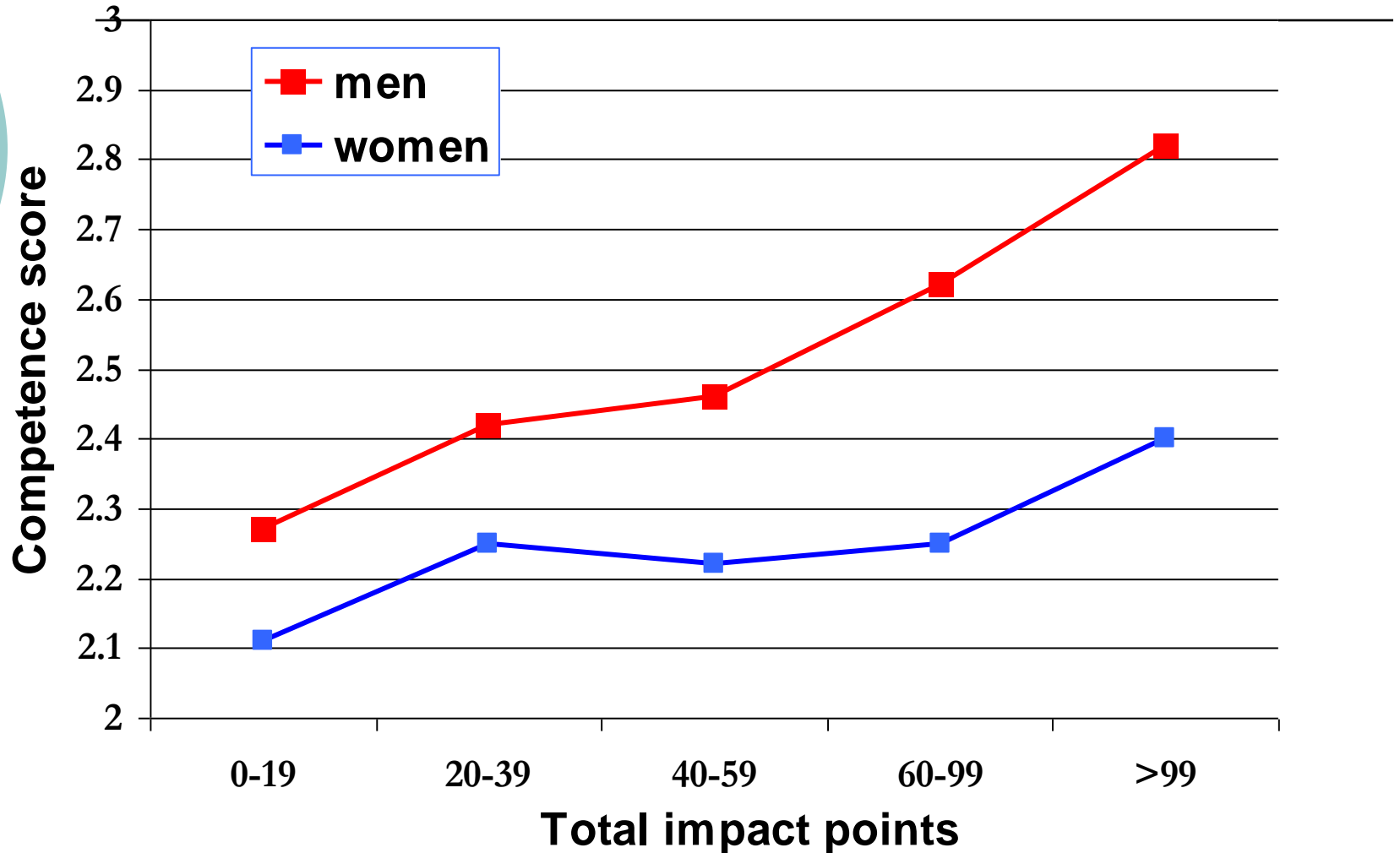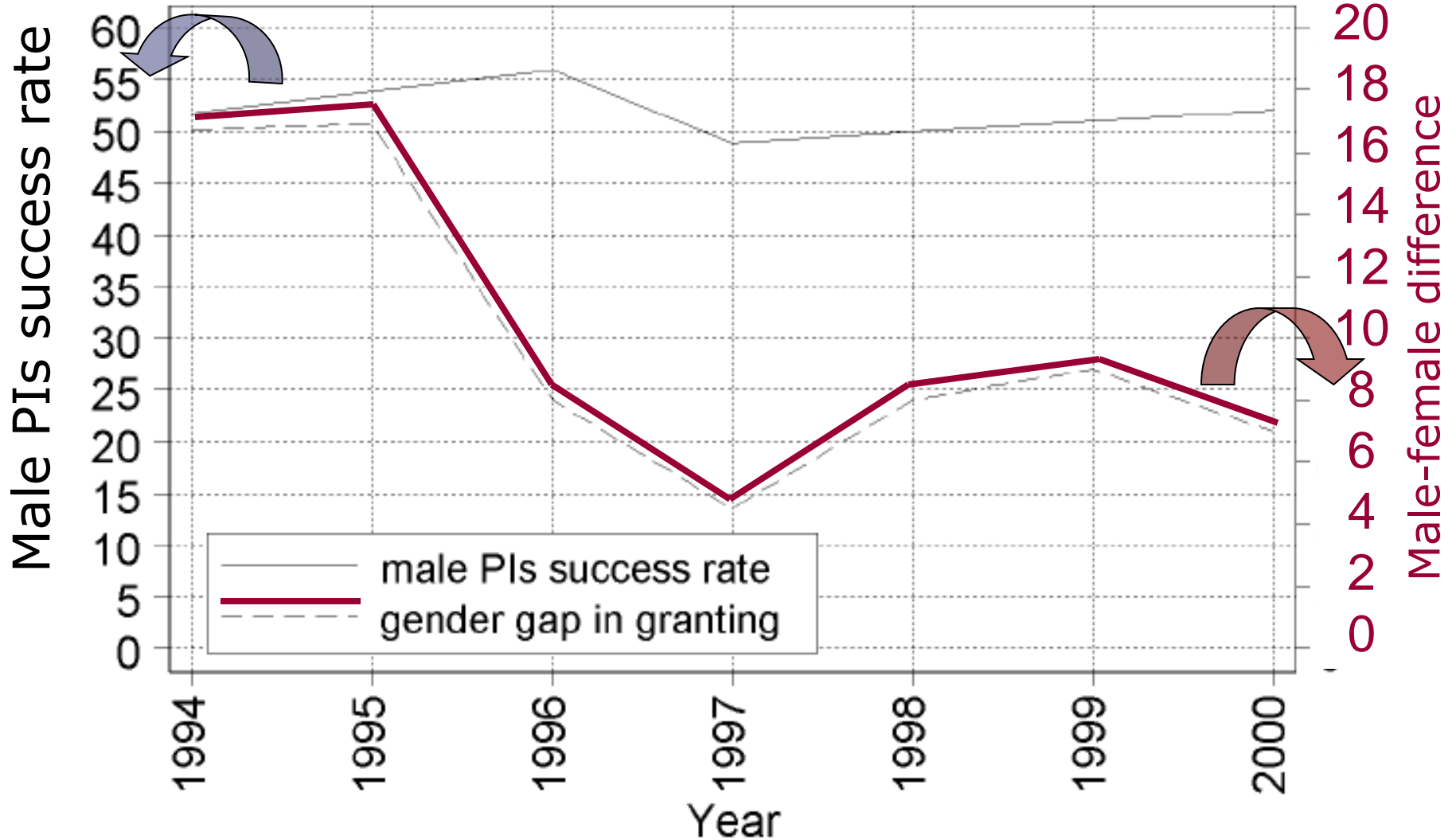
"The WOLD effect" copyright Cynthia J. Jameson

NIH Director's Pioneer Awards

- All 9 went to men in the first round (2004)
- In subsequent rounds, women received:
  - 2005 = 43%
  - 2006 = 31%
  - 2007 = 33%
  - 2008 = 25%

Were women doing better science after 2004?

What made the difference?

gender priming

○ Priming an individual with words picture or media images that align with gender stereotypes promotes gender bias in subsequent behavior

Wording of 2004 RFP included:

"aggressive" "risk-taking" "high-risk"

"technological breakthroughs"

(Words stereotypically associated with males)

Characteristics of target scientist and research

Risk-taking emphasized:	Emphasis on risk removed:
• "exceptional minds willing and able to explore ideas that were considered risky"	• "pioneering approaches"
• "take…risks"	• "potential to produce an unusually high impact"
• "aggressive risk-taking"	• "ideas that have the potential for high impact"
• "high risk/high impact research"	• "highly innovative"
• "take intellectual risks"	• URL no longer includes "risk"
• URL includes "highrisk"	

Instructions to evaluators

Technological advances highlighted as desirable:	Mention of technological breakthroughs removed; human health added:
• "support the people and projects that will produce tomorrow's conceptual and technological breakthroughs"	• "encourage highly innovative biomedical research with great potential to lead to significant advances in human health."

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What Can Search Committees Do?

During the Search:

❑ Word the position description so that it conveys the College's commitment to excellence, equity & diversity

❑ Engage in **active recruiting** for individuals who possess the aforementioned attributes. Function as a Search Committee, not a "Letter-Opening Committee"

What Can Search Committees Do?

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❑ Good procedure can counteract critical mass effects & gender schemas [Isaac, Lee & Carnes. (2009). *Academic Medicine*, 84, 1440-1446]

What Can Search Committees Do?

When search is complete:

Search Committee Chairs debrief with administrators on the search process:

❑ What worked well

❑ What were the challenges

❑ What kind of support would have helped facilitate the committee's work

Strategies for Recruiting a Diverse Faculty

Lessons from SUCCEED and WISEST Search Toolkit

Strategies for recruiting a diverse faculty

- **Engage in <u>pro-active</u> recruiting**

  (**Use SUCCEED Rules of Engagement in WISEST Search Toolkit!**)

  Department chairs, search committee members and other senior faculty in the department should personally reach out to prospective women and minority candidates and invite them to apply.

Strategies for recruiting a diverse faculty

- **Plug the leak after grad school** (**Use SUCCEED Rules!**)

  At conferences, faculty members should seek out _**Ph.D. students**_ who may be potential candidates for academic positions. Review conference programs for promising young scholars and prize winners. Attend their talks and research presentations and invite them to campus for a visit with the department or to attend a colloquium on campus.
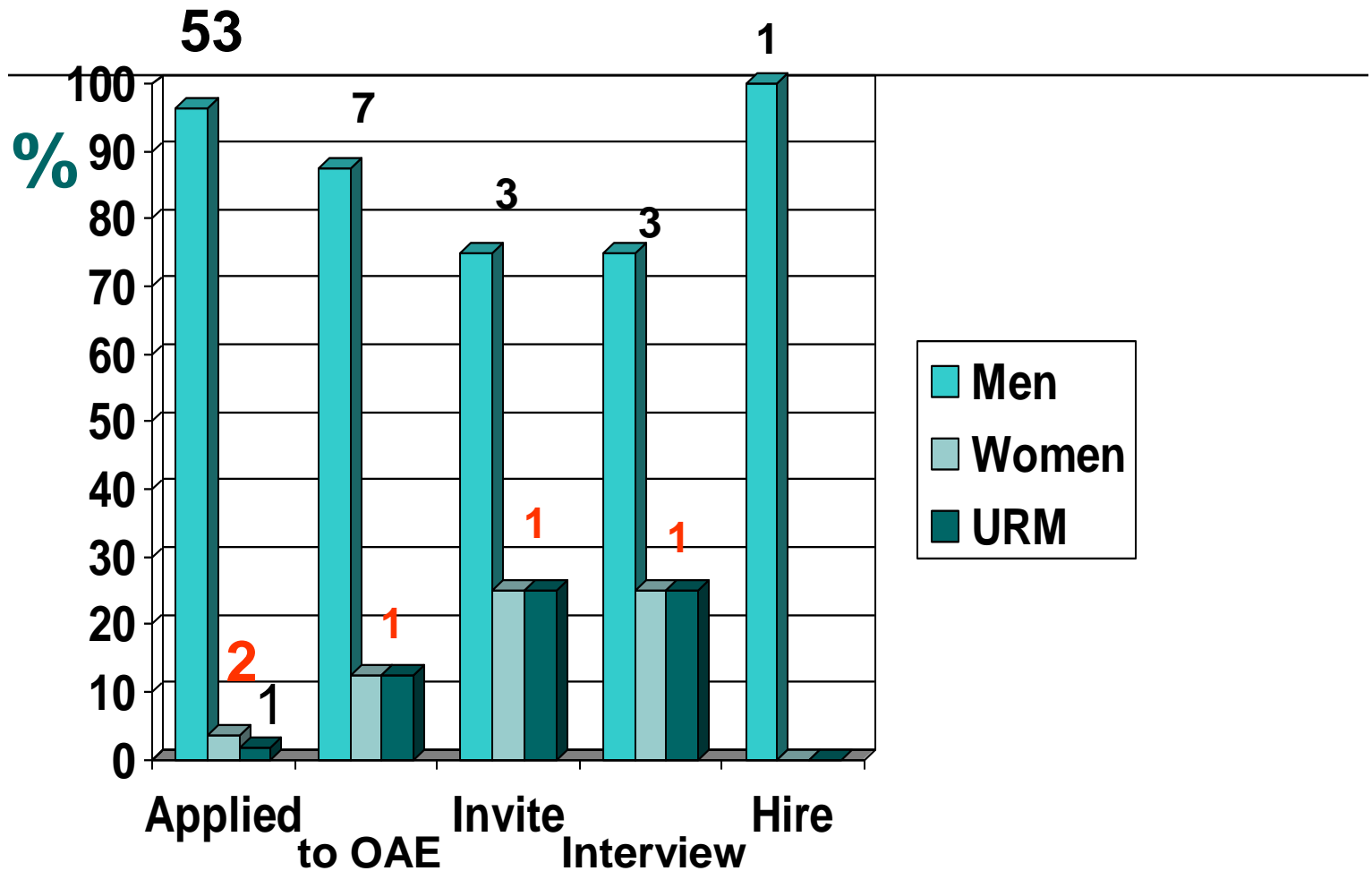
Case Studies

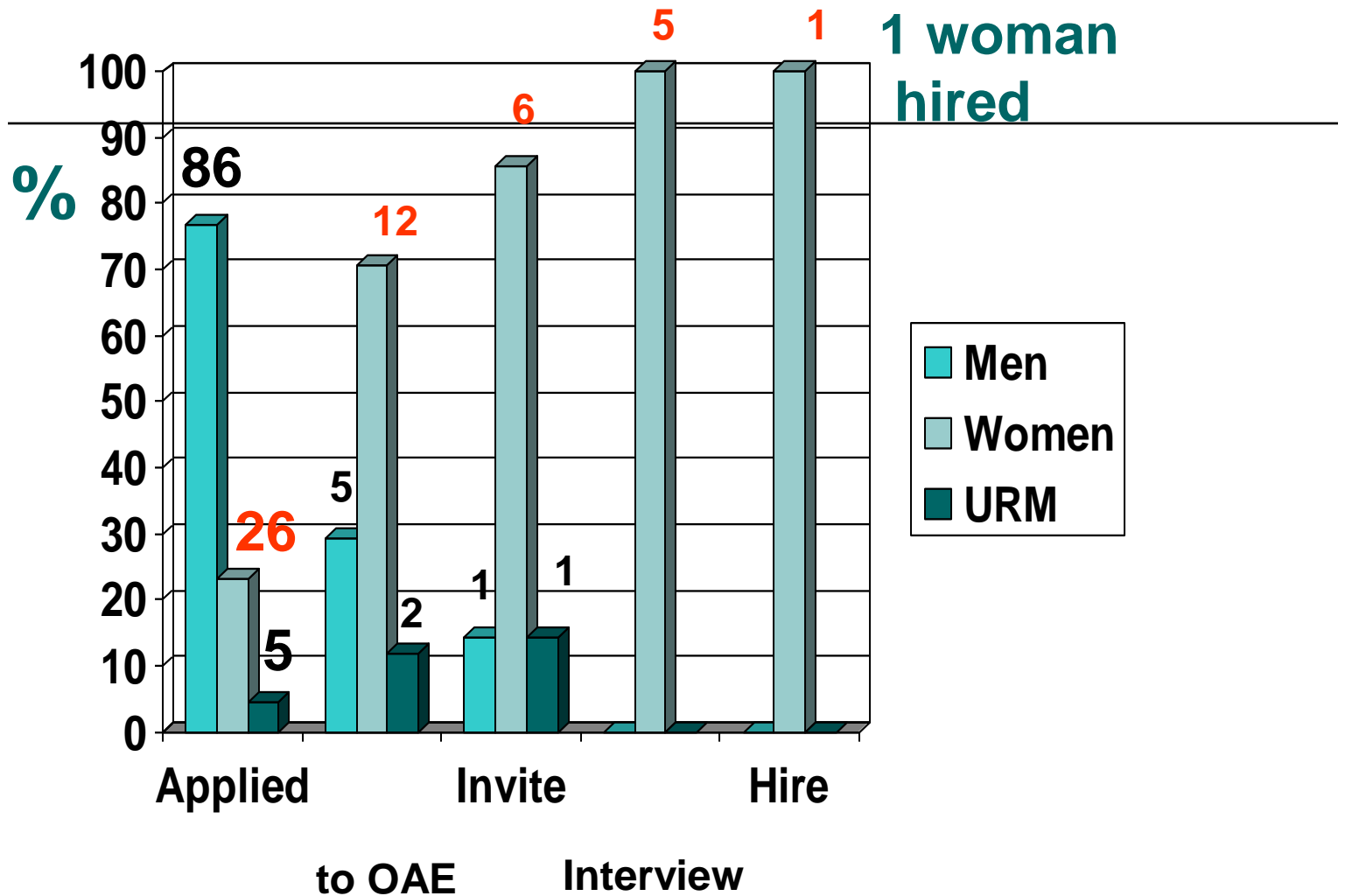## PRO-ACTIVE RECRUITING
vs. Standard Practice

Department Y: 2 searches for 2 positions

Search 1: Standard Practice

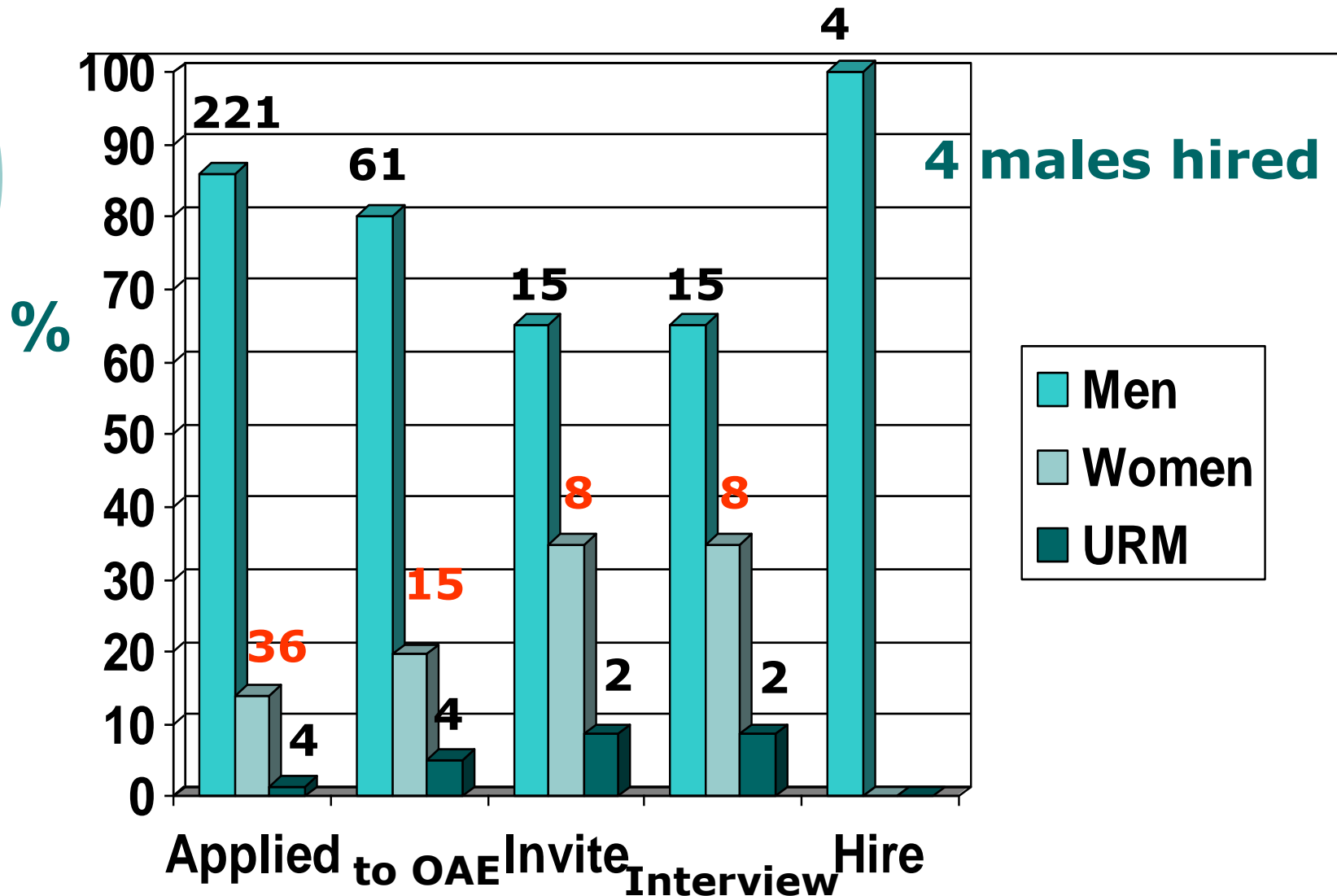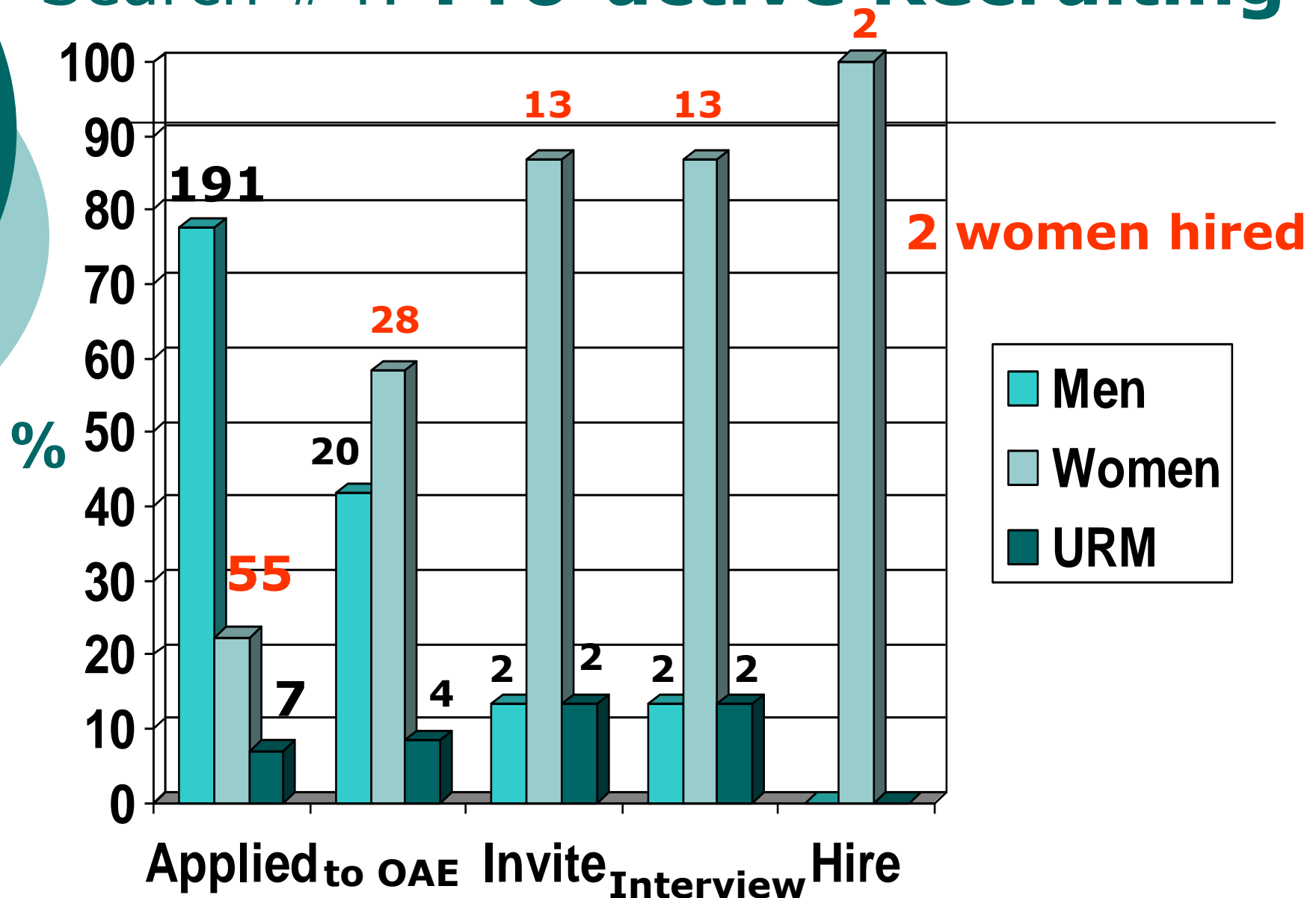# Search 2: **Pro-active Recruiting**

Case Study: Department X

- 3 standard searches for 5 positions
- 1 pro-active search for 2 positions

3 standard searches for 5 positions

4 males hired

Search #4: **Pro-active Recruiting**

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Changes in pools, interview lists, new hires
Summary of 2 departments

Case	PROCESS	per position		HIRES
		POOL	**INTERVIEW**	
Dept Y	standard	2W / 55	1W	1M
	pro-active	**26W/112**	**5W**	**1W**
Dept X	standard	7.2W/51.4	1.6W	4M
	pro-active	**27.5W/123**	**6.5W**	**2W**

1. Increased TOTAL pool with pro-active recruiting

2. Increased probability of hiring a woman

SUCCEED LESSONS

1. **Post the ad in the appropriate venues**
2. **Actively look for possible candidates in the appropriate places, collect evidence of their achievements, invite them to apply.**
3. **Pursue them assiduously, using UIC and Chicago's natural diversity as hooks: they can be comfortable here**
4. **Once they are in the application pool they will naturally rise to the short list of candidates if you have done step #2 properly, & provided the search committee uses objective candidate attributes from the outset**
5. **Maintain communications with those who are invited to interview**

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Thank you !

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