



W I S E L I

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

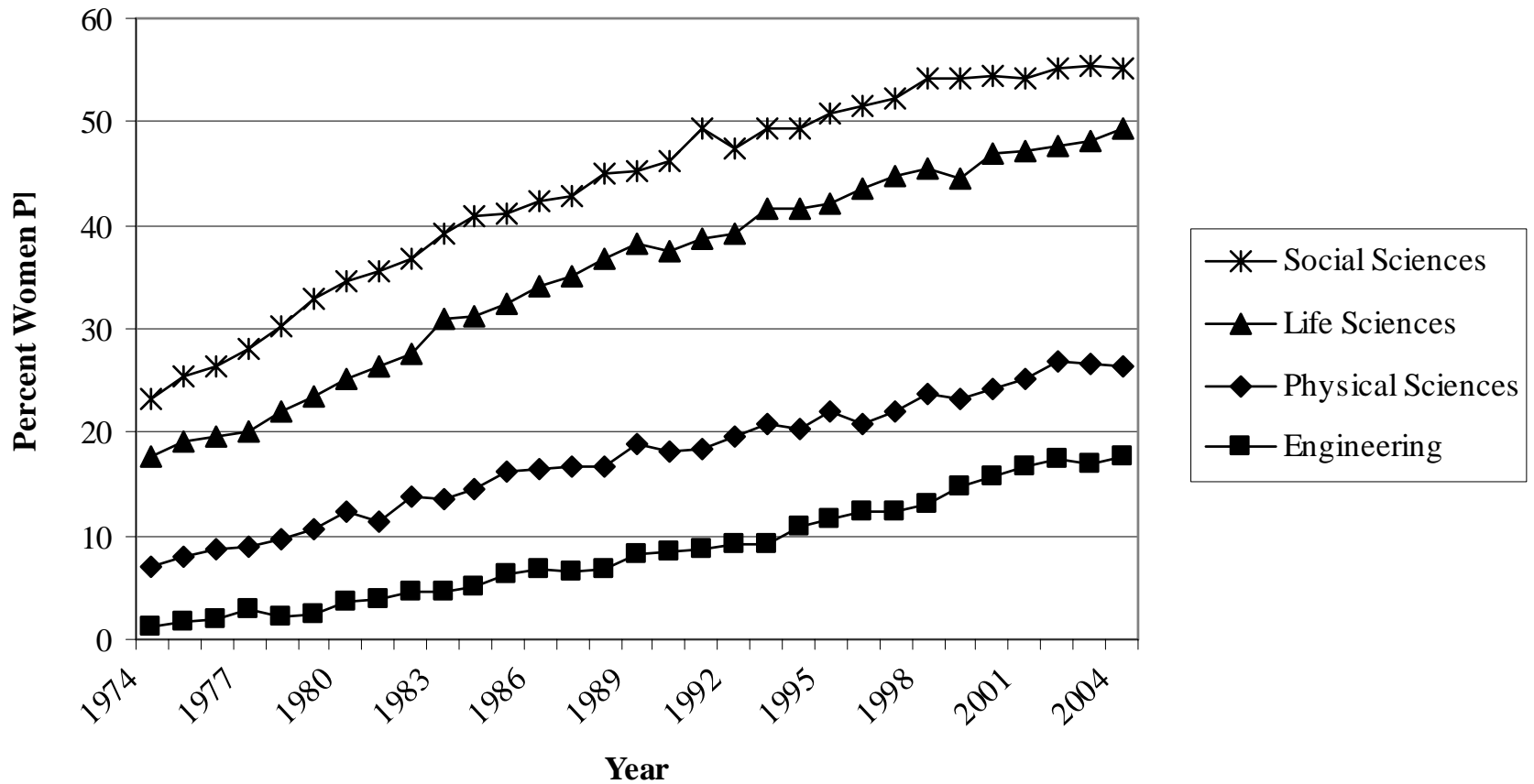
# More Women In Science:

## *The Institutional Challenge*



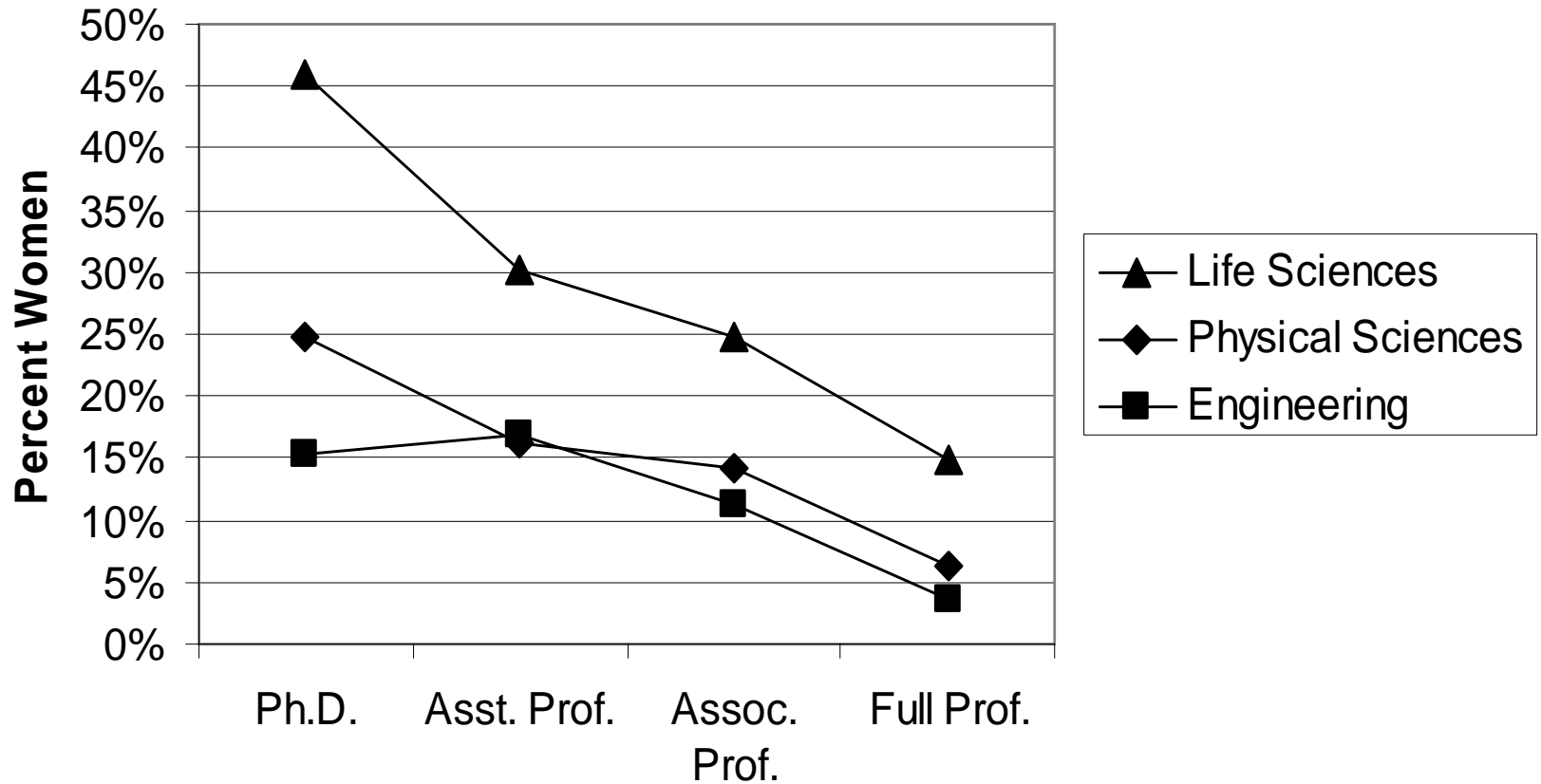


# The Problem





# The Problem





## The Problem



- Women from minority racial and ethnic backgrounds are virtually absent from the nation's leading science and engineering departments



# Past Solutions

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- Increasing the pipeline
  - Biology? Chemistry?
- Increased funding for women
  - POWRE awards?
- Teach women how to succeed
  - Leadership training
  - Mentoring
- Policy changes
  - Extend tenure clock
  - Dual career hire



## New Approach: Institutional Transformation

- Rules that appear neutral may function in a way that leads to differential treatment or produces differential outcomes for men and women
  - **Tenure process coincides with family formation years**
  - **Outside activities (e.g., family obligations) indicate a “lack of seriousness” about career**
  - **Use of programs designed to increase flexibility?**
  - **Deviation or delay from “normal” path**
  - **Salary increases/outside offers**
  - **Childcare needs (conferences, field study, time in laboratory)**

*“Academic organizational structures and rules contribute significantly to the underuse of women in academic science and engineering.”*



## New Approach: Institutional Transformation

- National Science Foundation ADVANCE program
  - 2001 first solicitation
  - Large, prestigious awards
  - Goal is to transform the *institution*, not the women!
  - Take a scientific approach: data, social science research
  - Provide models for other universities



## WISELI Programs

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- Vilas Life Cycle Professorships
- Searching for Excellence & Diversity
- Enhancing Department Climate: A Chair's Role
- Research & Evaluation



# Vilas Life Cycle Professorship Program

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- Recognize that life events outside of one's control happen
  - Both men and women experience such events, but women are more likely to experience them early in the career, when they are more vulnerable
- Reduce turnover by providing research support for faculty in crisis
- Understand what events are problematic and which career junctures are most critical
- Understand what faculty need when they are in crisis



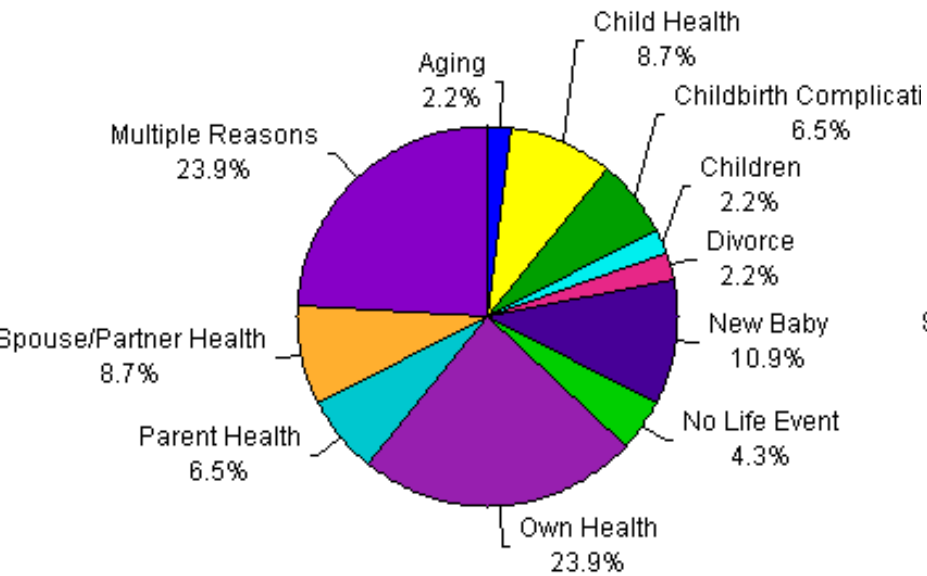
# Vilas Life Cycle Professorship Program

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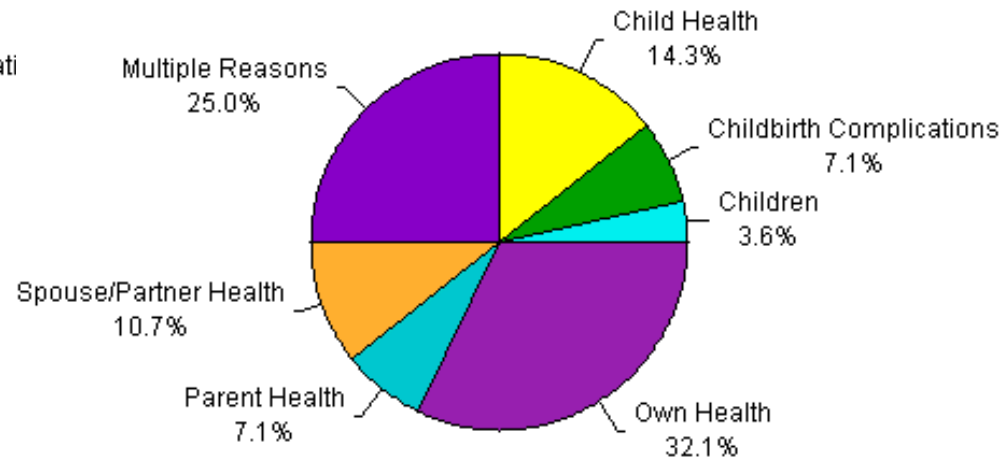
- Funded by the Vilas Trust since 2005
- Three rounds per year
- Approximately 21 applications per year
  - Fund approximately 15 faculty per year
- \$372,000 per year distributed



# Vilas Life Cycle Professorship Program



Applicants



Awardees



## Life Cycle Grant evaluation

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***“This program generates a feeling of commitment to this institution, and a desire and willingness to give back, to help ensure that others benefit from similar institutional support in the future. . . I have mentioned it to job candidates as an illustration of how this institution takes seriously life cycle issues and is genuinely humane and supportive.”***



# Searching for Excellence & Diversity

- Five Essential Elements of a Successful Search
  - Run an effective and efficient search committee
  - Actively recruit an excellent and diverse pool of candidates
  - Raise awareness of unconscious assumptions and their influence on evaluation of candidates
  - Ensure a fair and thorough review of candidates
  - Develop and implement an effective interview process

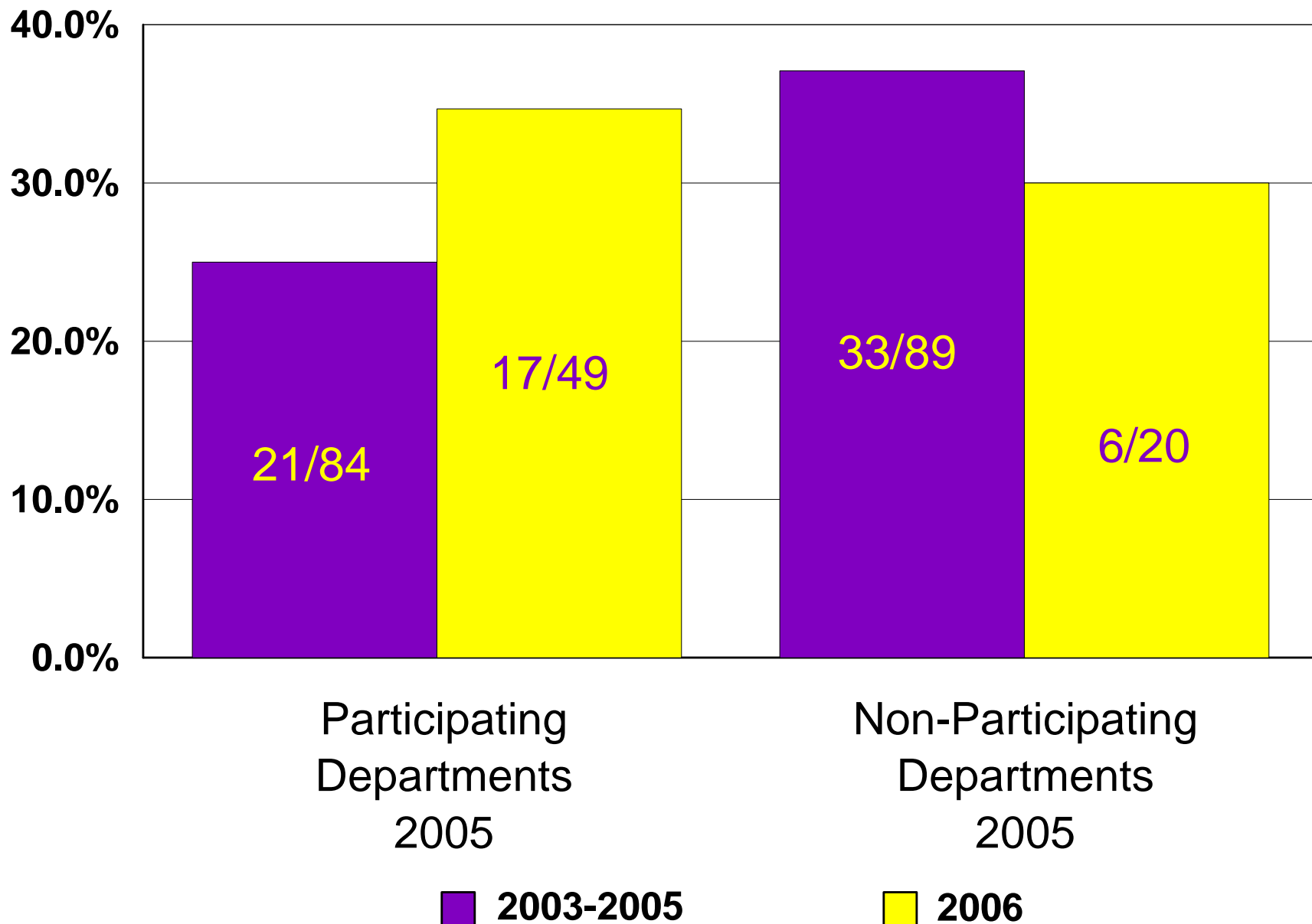


## Searching for Excellence & Diversity

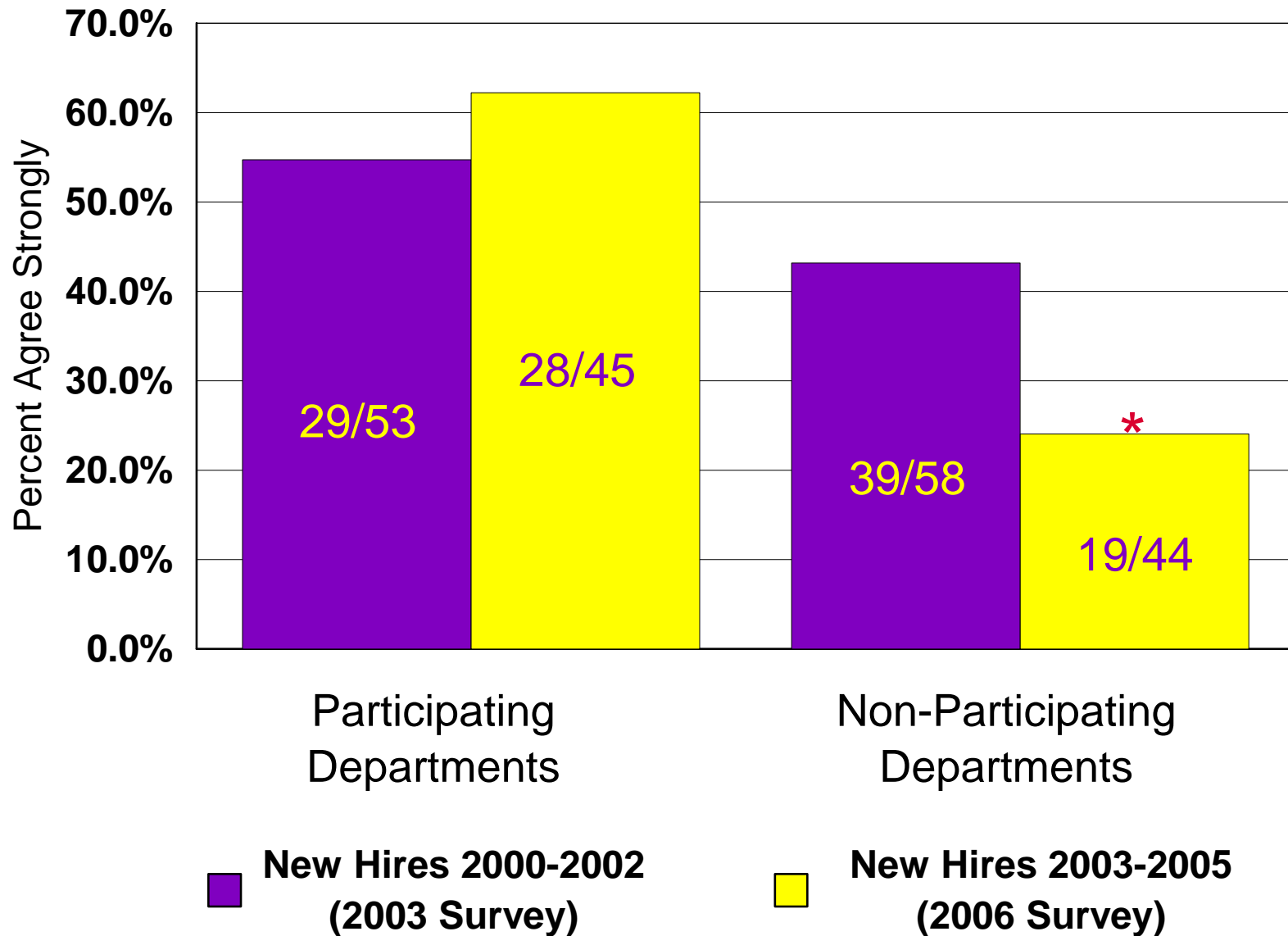
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- Run approximately 10 workshops per year
  - Some workshops are 2 sessions
- Approximately 90 faculty per year participate
- Multiple formats used
- Materials available to other universities at cost

# Percent Female, New Tenure-Track Faculty Biological & Physical Sciences

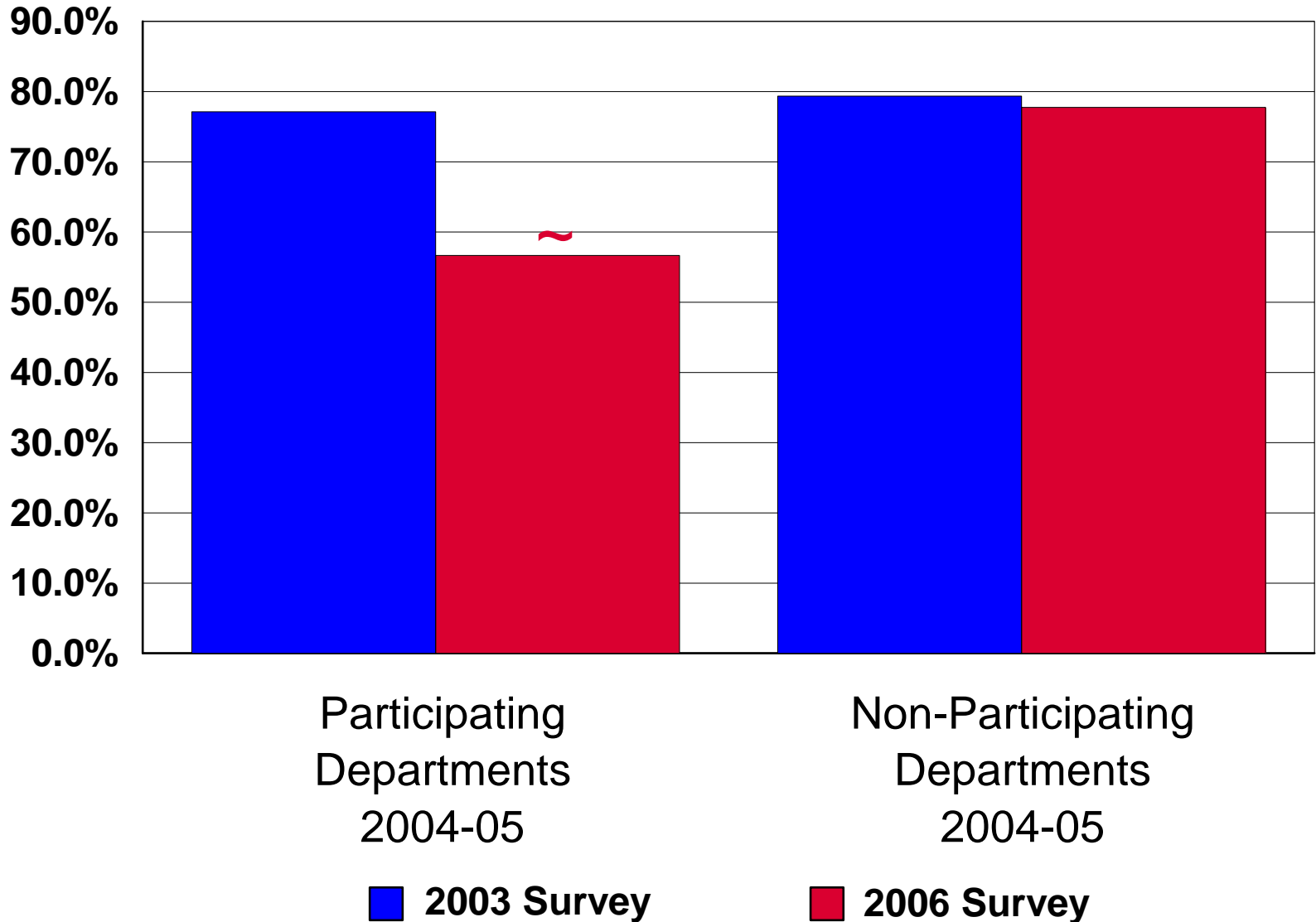


# New Hires' Satisfaction\* With the Hiring Process Biological & Physical Sciences



\* Agree Strongly to the item "I was satisfied with the hiring process overall."

# The Climate for Faculty of Color is Good Biological & Physical Sciences





# Enhancing Department Climate: A Chair's Role

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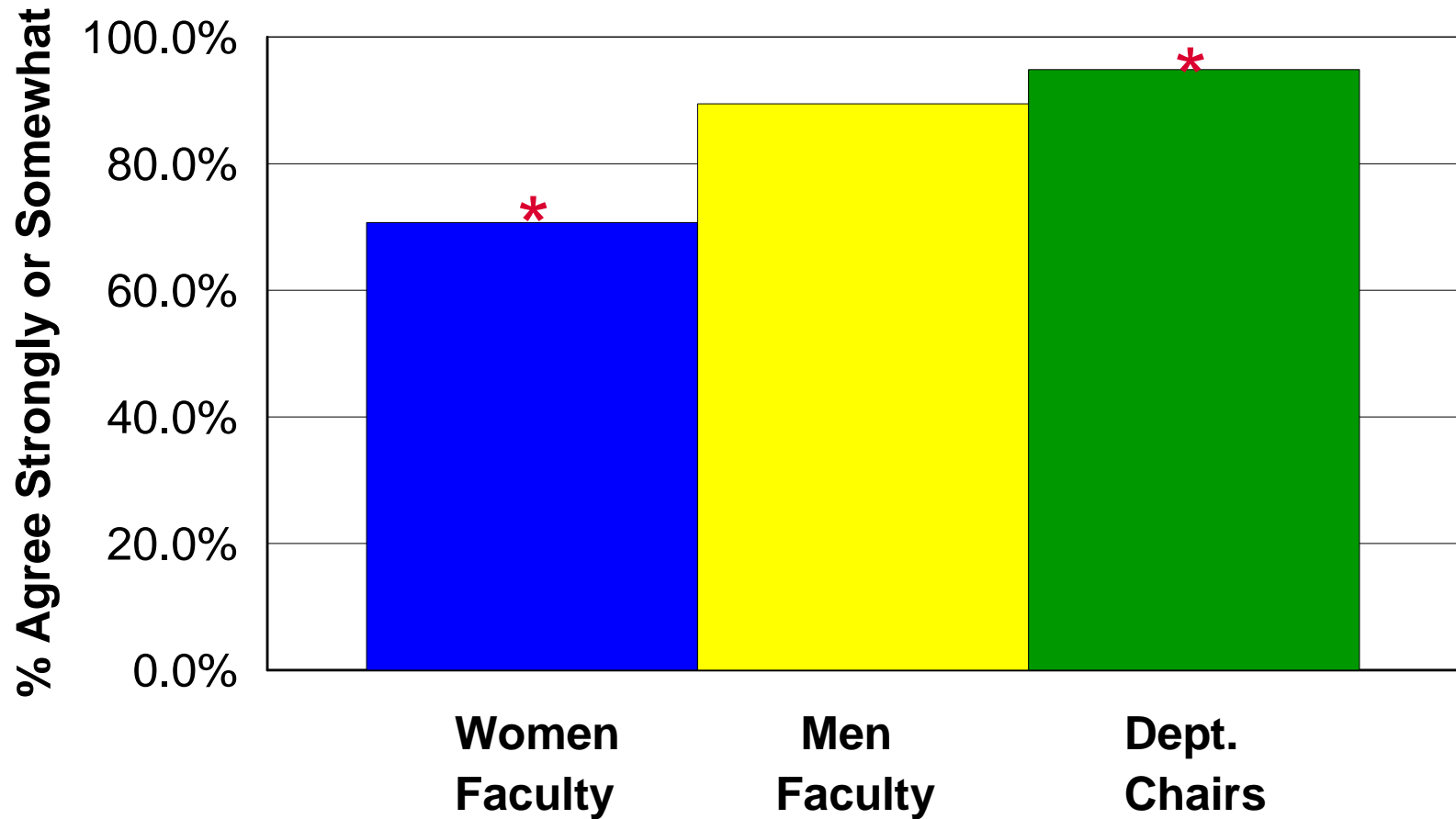
- Individuals experience climate in their immediate workplace – the department
- Chairs can significantly influence womens' experiences in their departments
- Chairs' perspectives of climate differ from those of other faculty, especially women faculty



## Importance of department chair

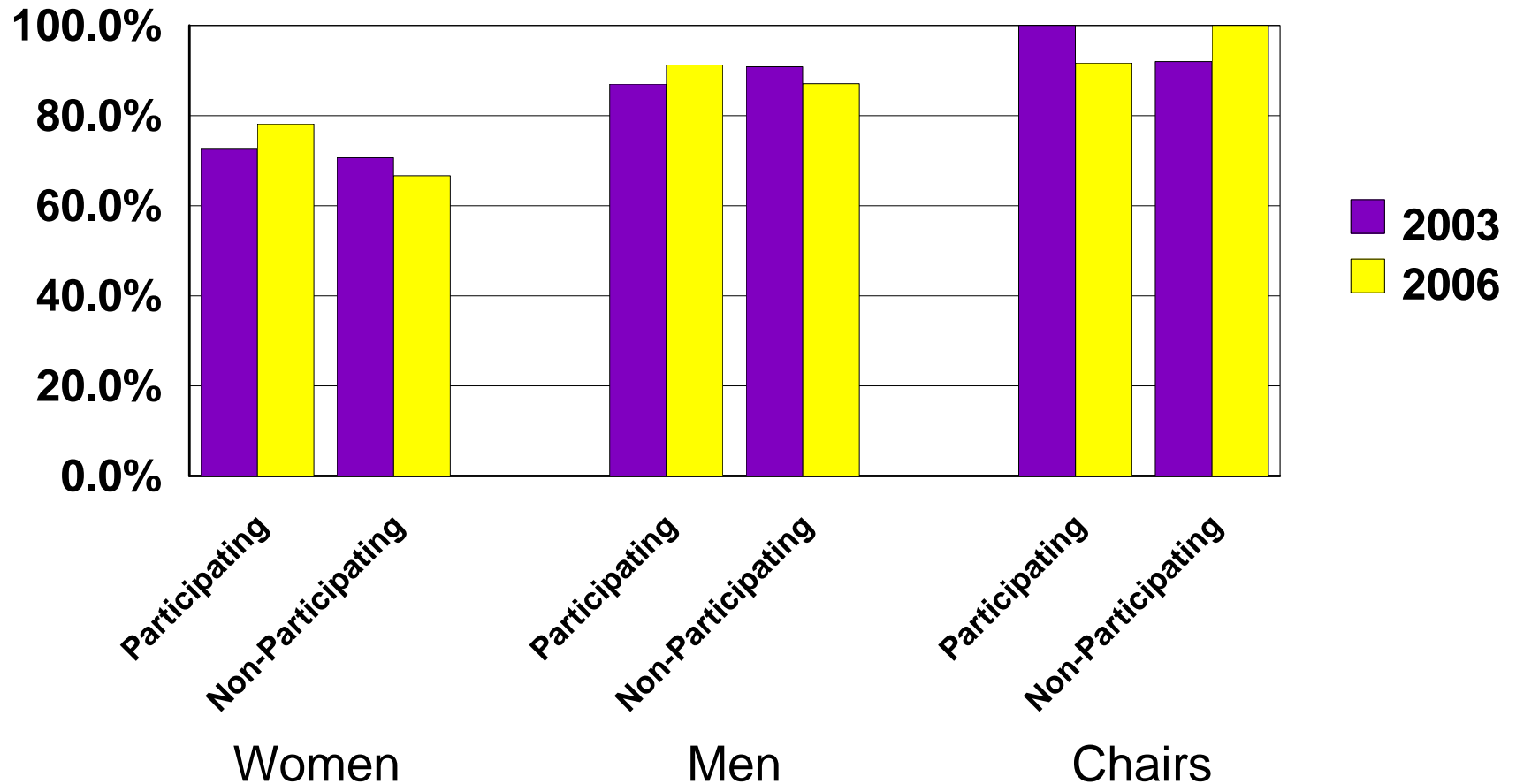
*“Before I got here, when [X] was chair, two other people had babies under his leadership and [it] was fine! ‘Oh! Congratulations! Good. Take the semester off. You have a grad student to fill in. Okay, that’s no problem.’ Blah blah blah. And it was, you know, a handshake and a nod and, ‘Of course . . . do what you need to do. Let me know when you can get back on your feet’-type thing. Versus [the new] chair has never had kids, does not think the idea of parental leave is meritorious.”*

**Figure 1. The climate for women in my department is good**



Departments Resurveyed	Mean 1 <sup>st</sup> Survey	N	Mean 2 <sup>nd</sup> Survey	N	Change
Department A	3.21	24	3.71	56	0.5
Department B	3.07	15	3.29	17	0.22
Department C	3.82	60	4.25	53	0.43
Department D	3.79	124	3.63	86	-0.16
<b>Overall Mean Score</b>	<b>3.47</b>		<b>3.72</b>		<b>0.25</b>

# Percent Agree: The Climate for Women In My Department is Good



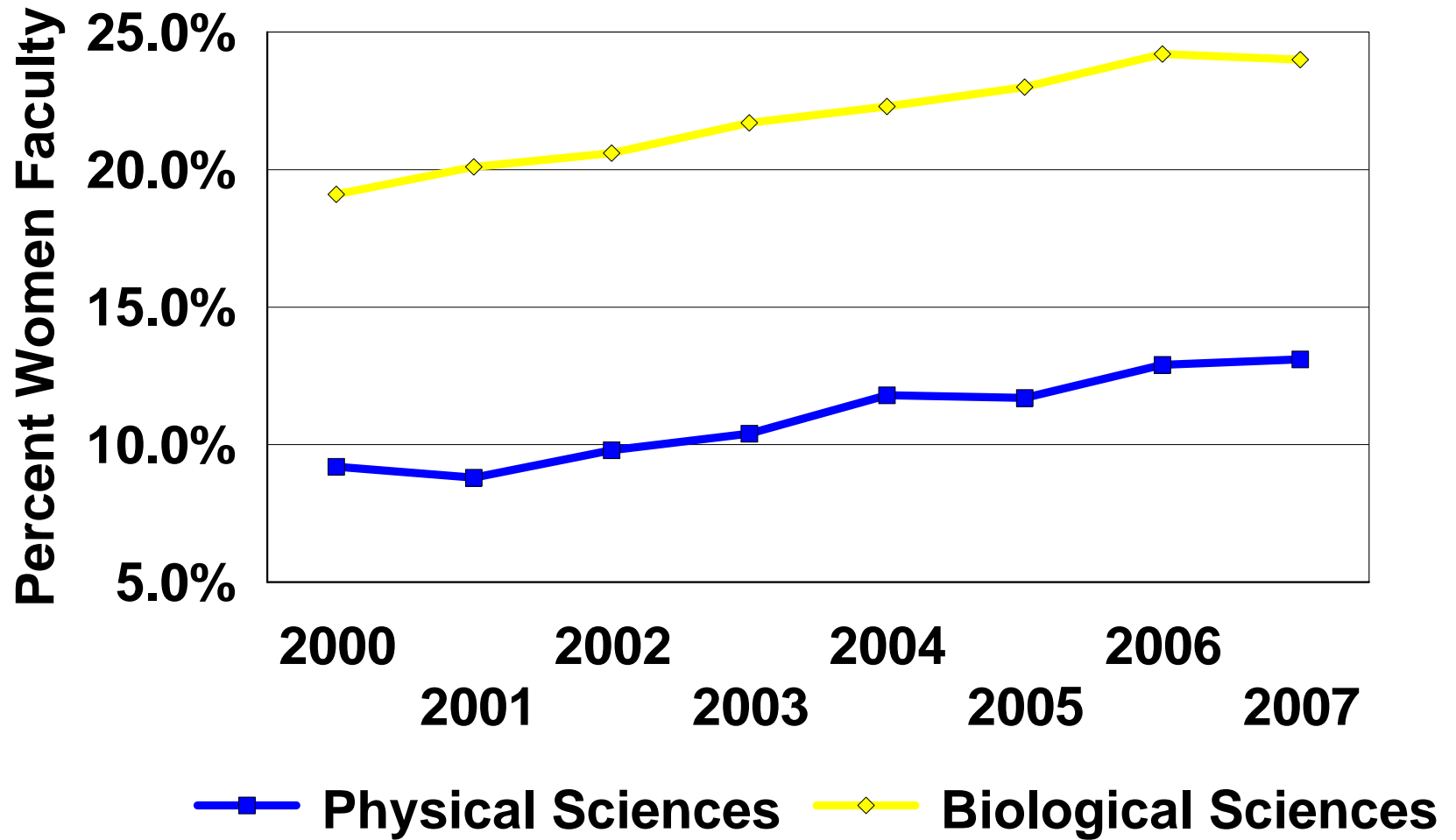


## What else?

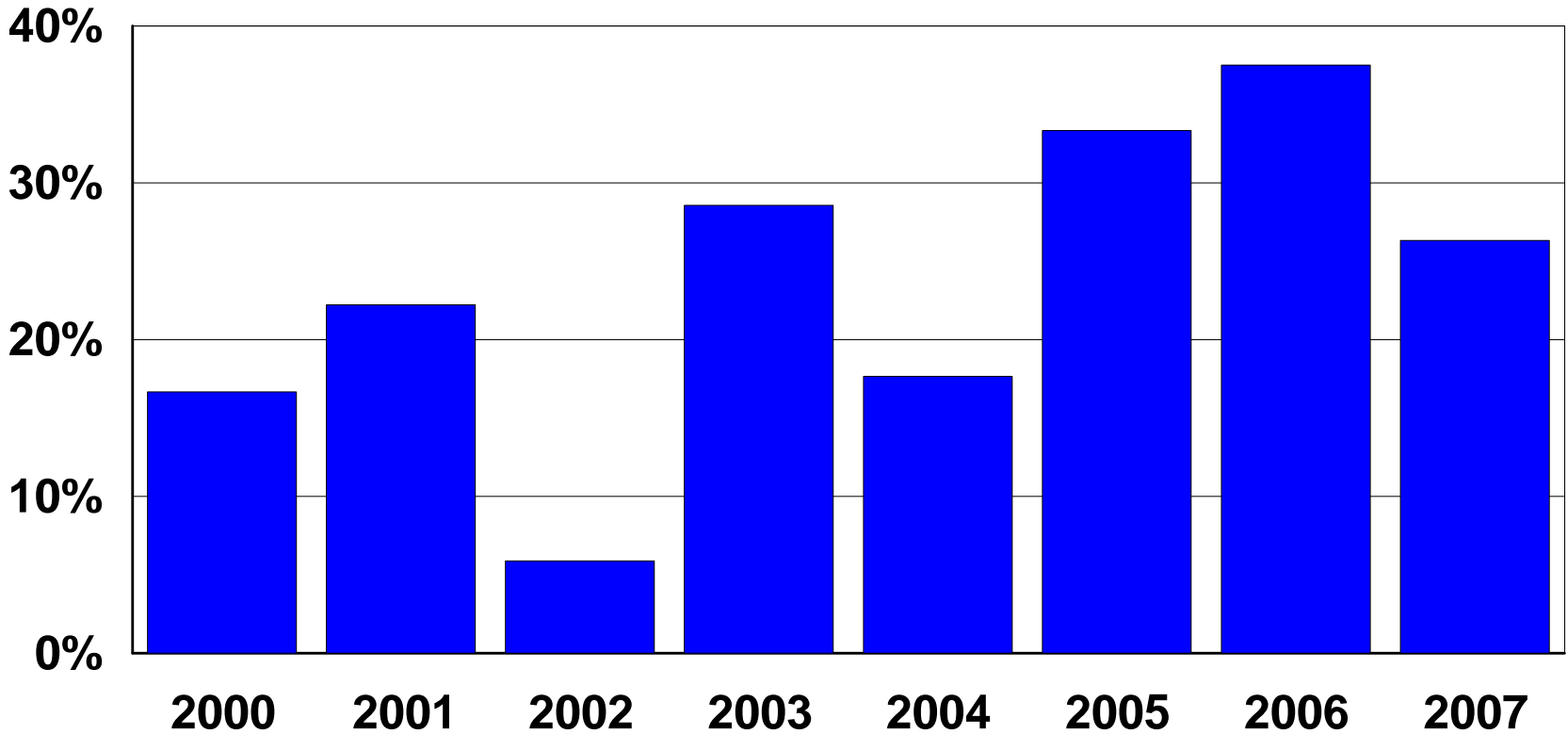
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- Data!
  - NSF indicators
  - Climate surveys
  - Evaluation data
  - Interviews, focus groups

# Percent Women Faculty, by Division University of Wisconsin-Madison

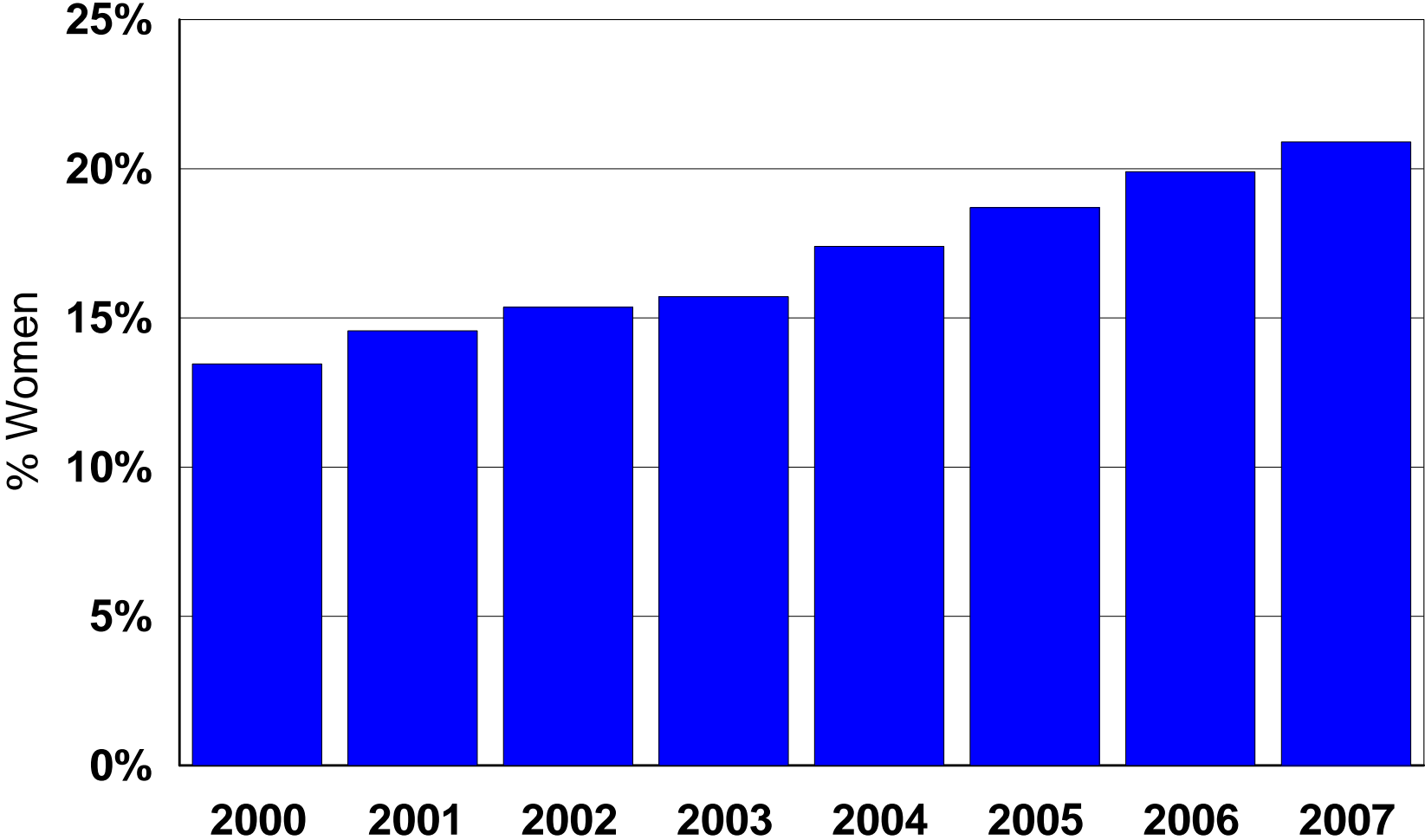


# **% Female, Major UW-Madison Faculty Awards\* Biological & Physical Sciences**

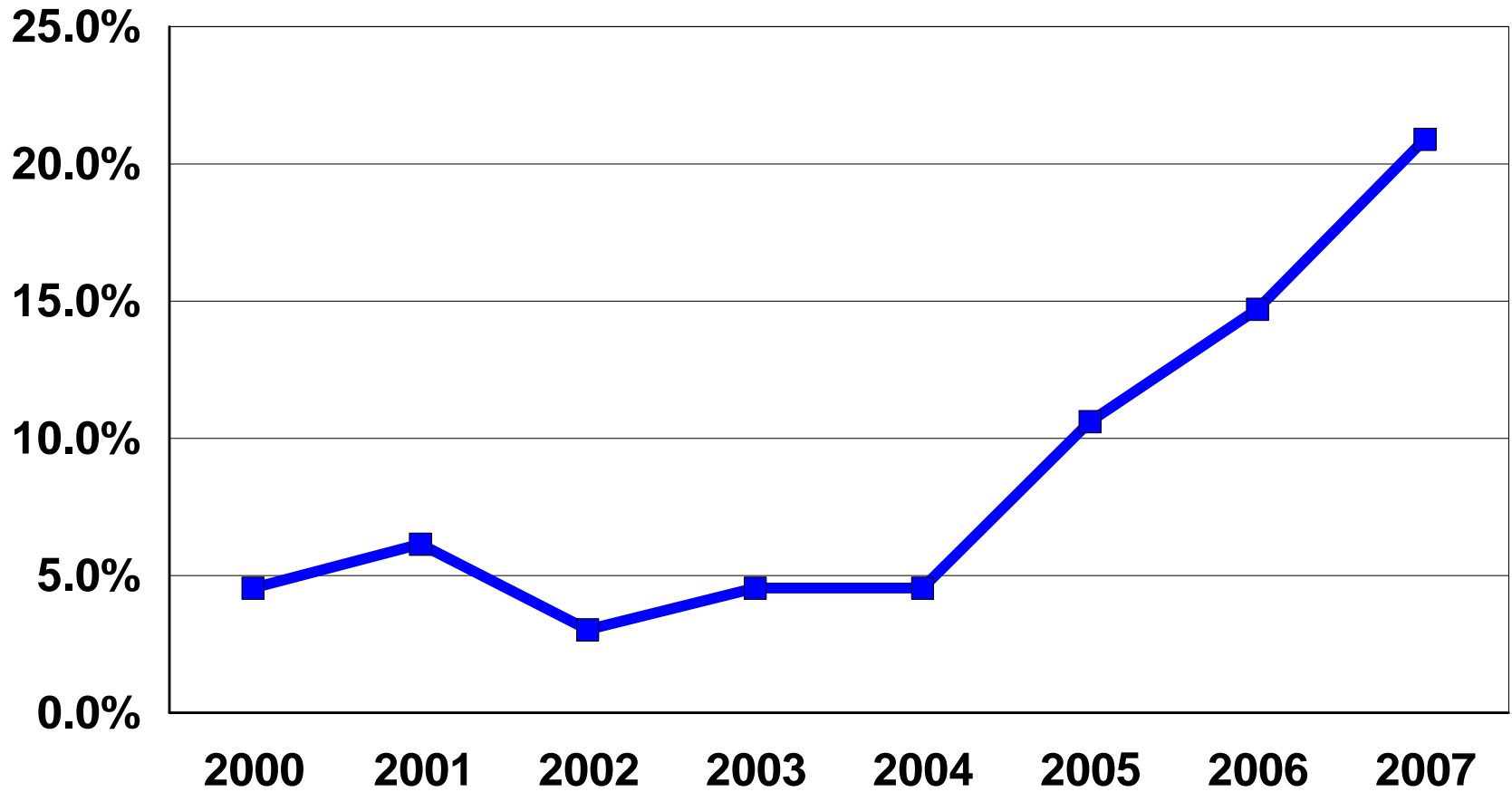


\* Vilas Associate, Hilledale, Romnes, Kellett

# Women as Percentage of Named Professorship Recipients



# **% Women Department Chairs Biological & Physical Sciences**





# ADVANCE Elements of Success

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- Support of high-level administrators
- Resources
- Peer-to-peer interactions
- Use of data (both qualitative & quantitative)
- Use of literature on unconscious bias and assumptions
- Active learning strategies
- Fearless intervention when required
- Refrain from gender-specific programming



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