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

WOMEN'S WAY INTO SCIENCE

Lessons Learned and New Challenges for Gender Equality

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More Women In Science:

The Institutional Challenge





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, organizational change approach
 - Provide models for other universities



WISELI Programs

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



Vilas Life Cycle Professorship Program

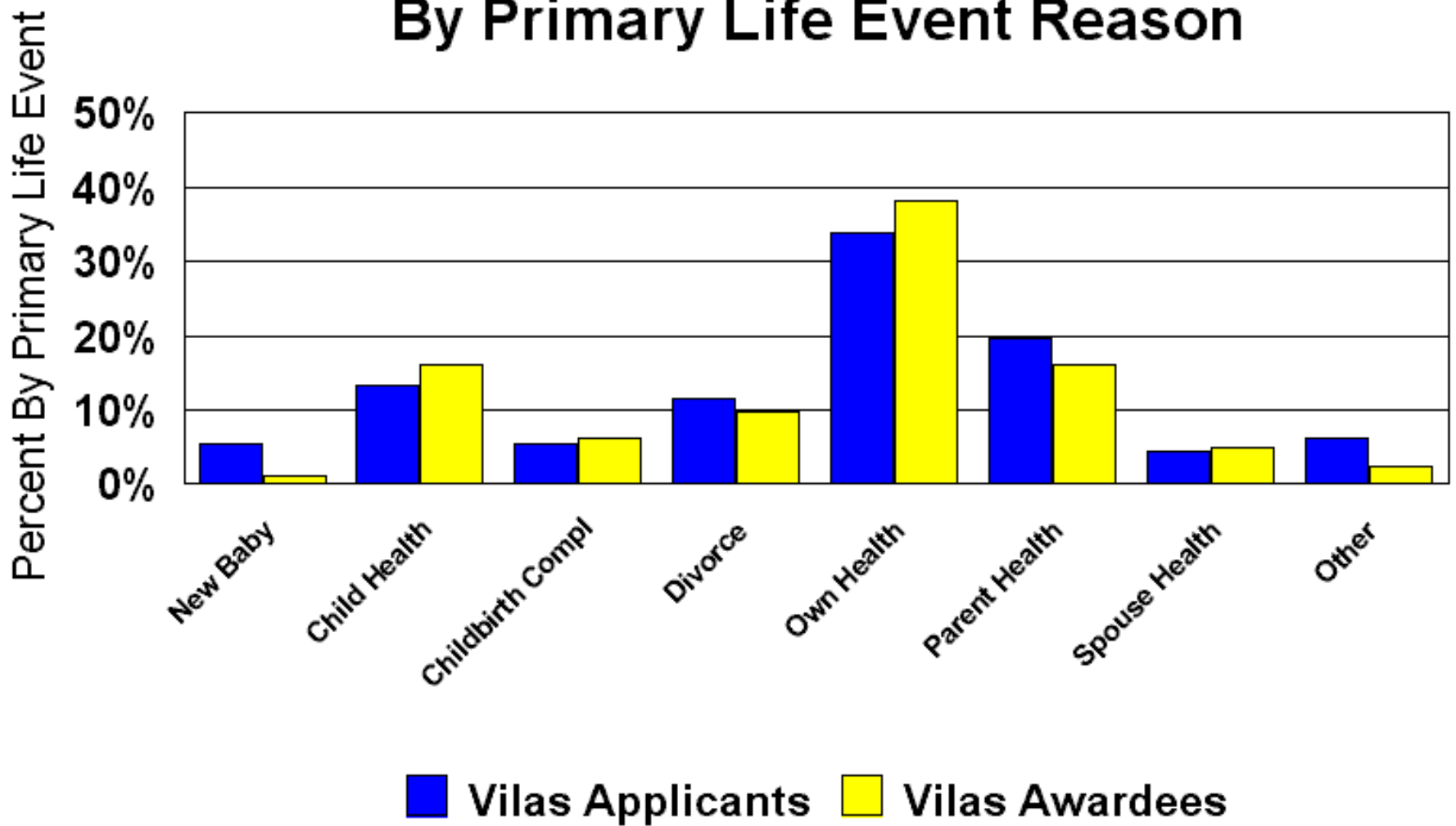
- Recognize that life events outside of one's control happen
 - Both men and women experience such events, but women are more likely to experience them early in the career, when they are more vulnerable
- Reduce turnover by providing research support for faculty in crisis
- Understand what events are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



Vilas Life Cycle Professorship Program

- Funded by the Vilas Trust since 2005
- Three rounds per year
- Approximately 21 applications per year
 - Fund approximately 14 faculty per year
- \$372,000 per year distributed
- *Program in flux due to economy!*

Percentage of Vilas LCP Applicants & Awardees By Primary Life Event Reason





Life Cycle Grant evaluation

“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

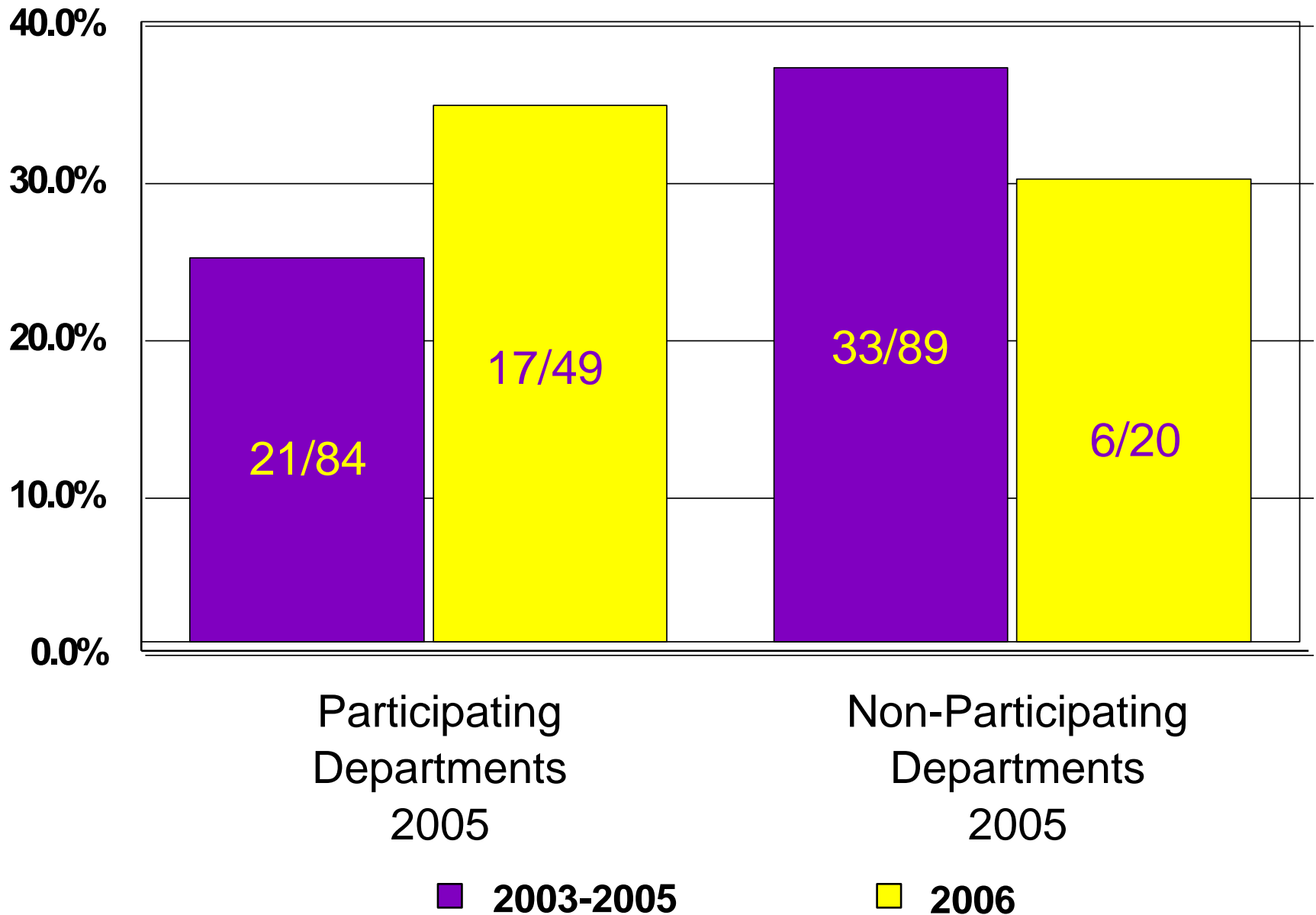
- Five Essential Elements of a Successful Search
 - Run an effective and efficient search committee
 - Actively recruit an excellent and diverse pool of candidates
 - Raise awareness of unconscious assumptions and their influence on evaluation of candidates
 - Ensure a fair and thorough review of candidates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



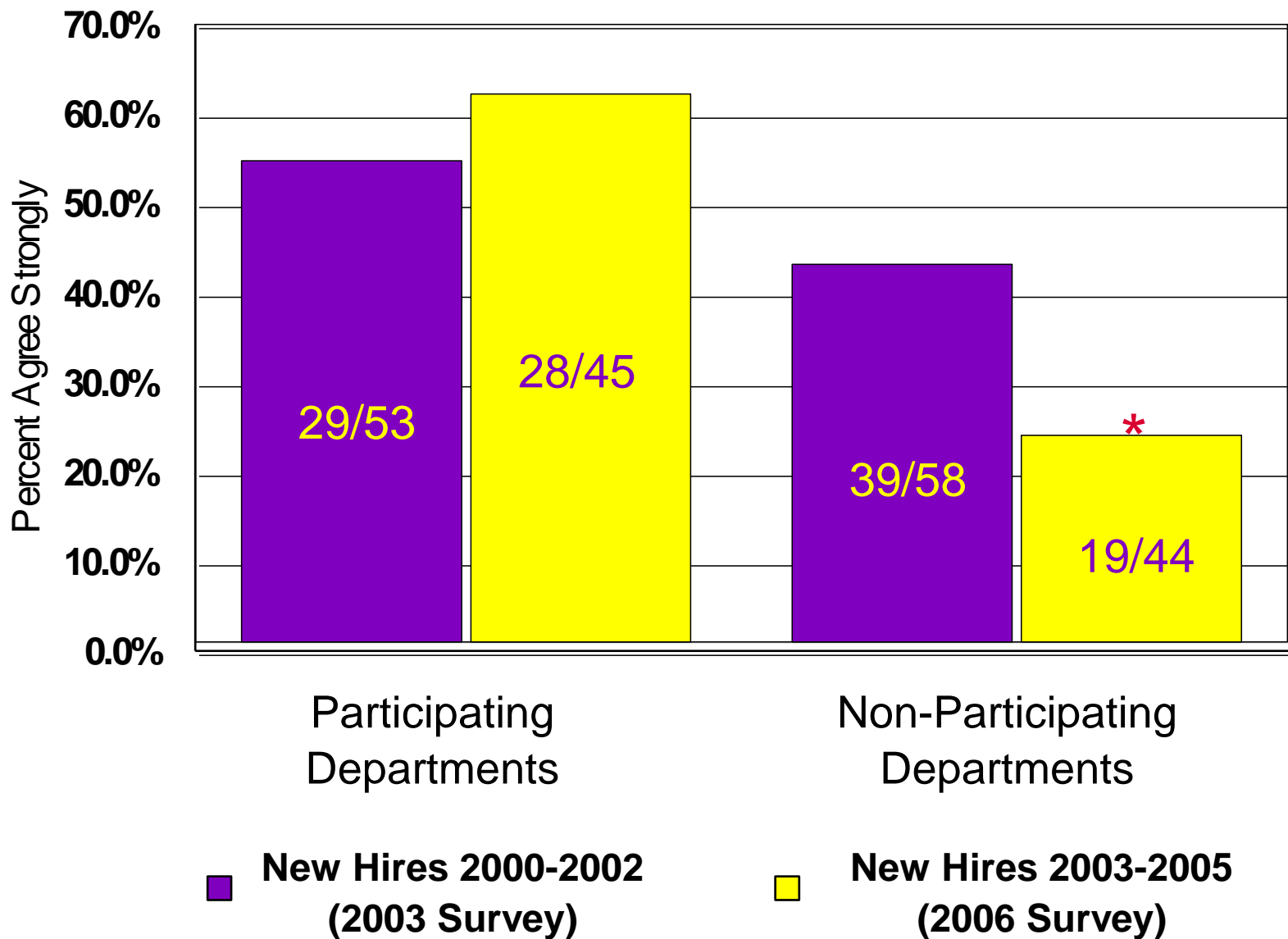
Searching for Excellence & Diversity

- Run approximately 10 workshops per year
 - Most 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

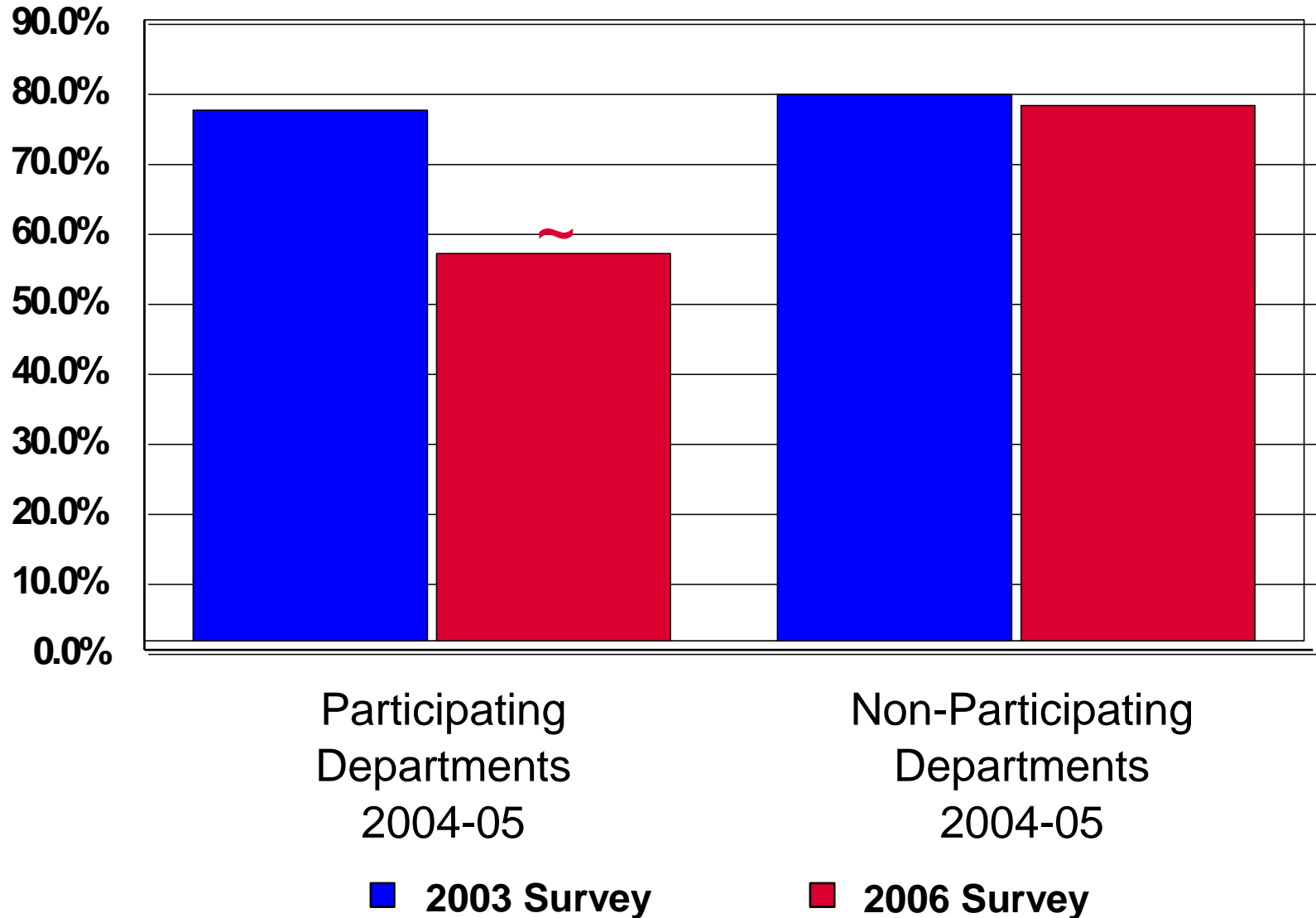


New Hires' Satisfaction* With the Hiring Process Biological & Physical Sciences



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

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

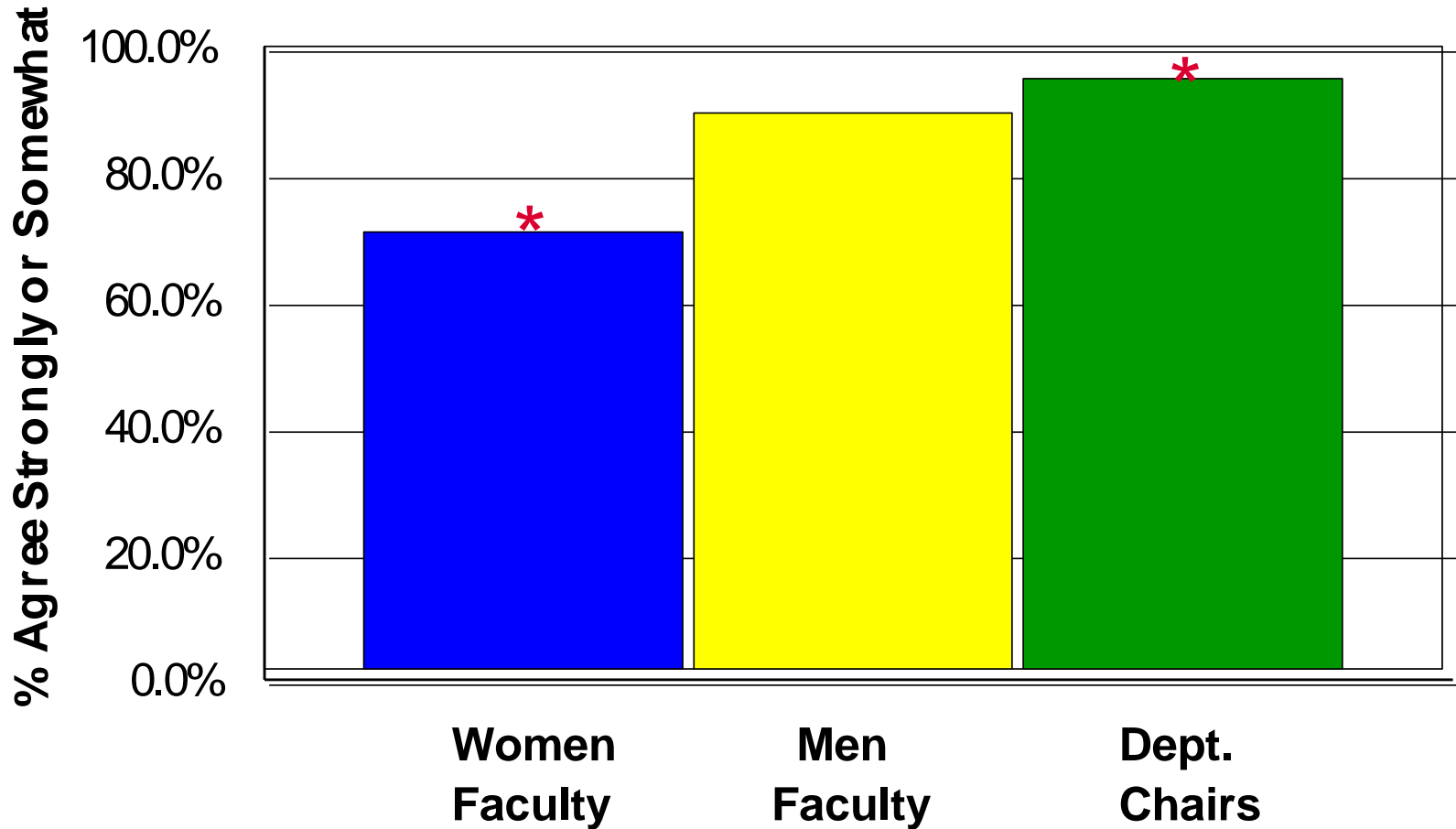




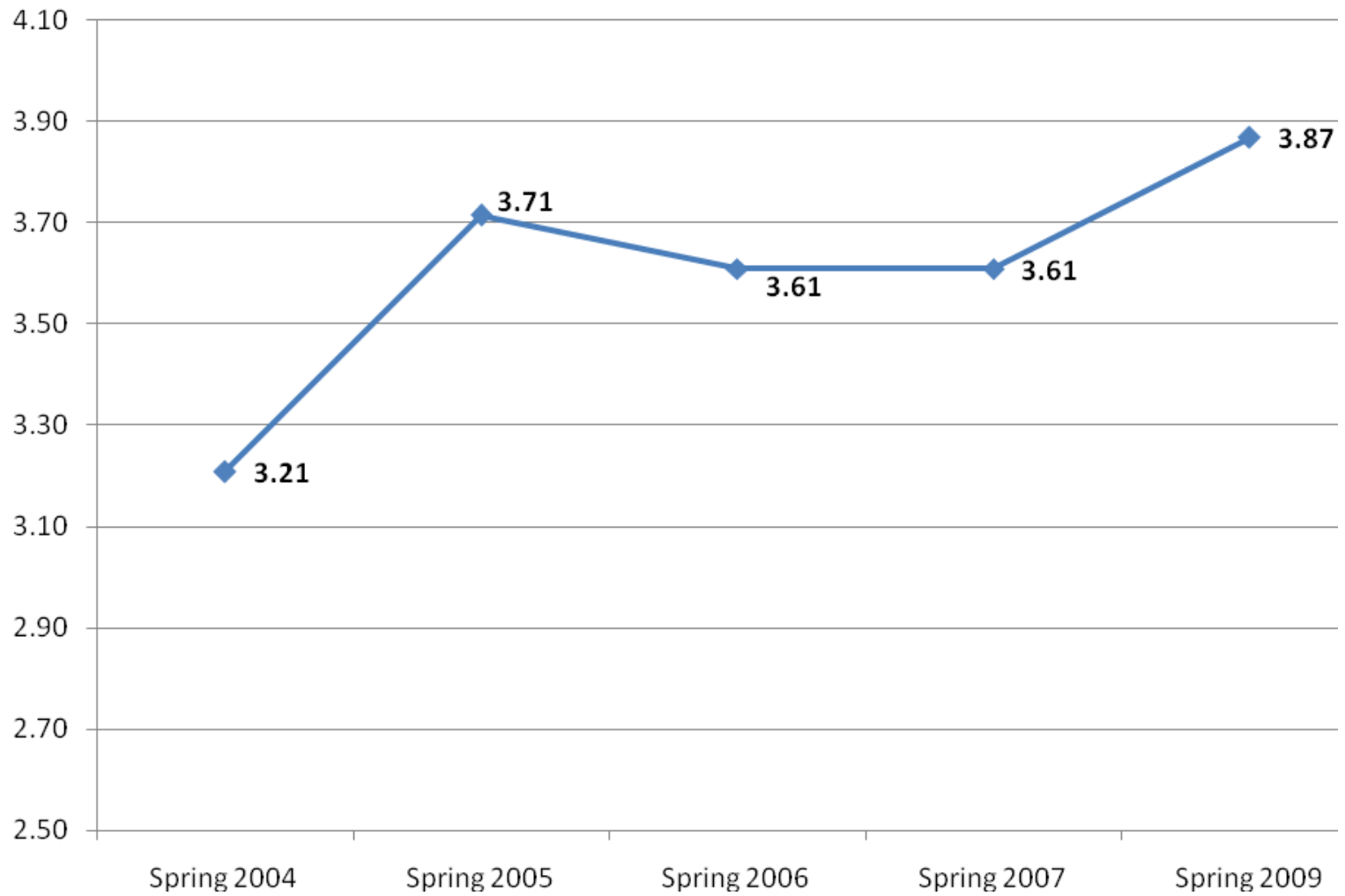
Enhancing Department Climate: A Chair's Role

- Individuals experience climate in their immediate workplace – the department
- Chairs can significantly influence women's experiences in their departments
- Chairs' perspectives of climate differ from those of other faculty, especially women faculty
- 38 depts have participated since 2004

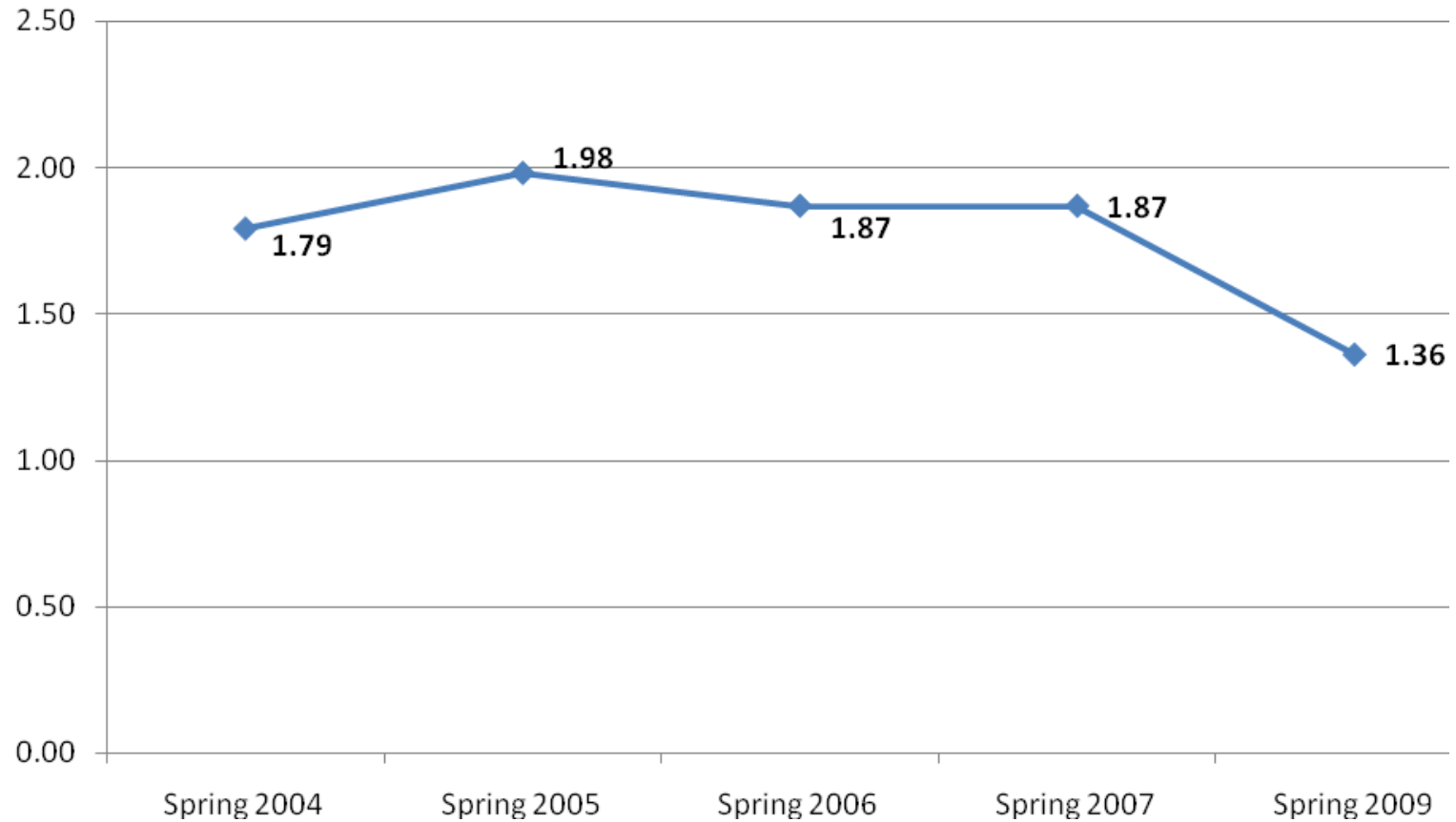
Figure 1. The climate for women in my department is good



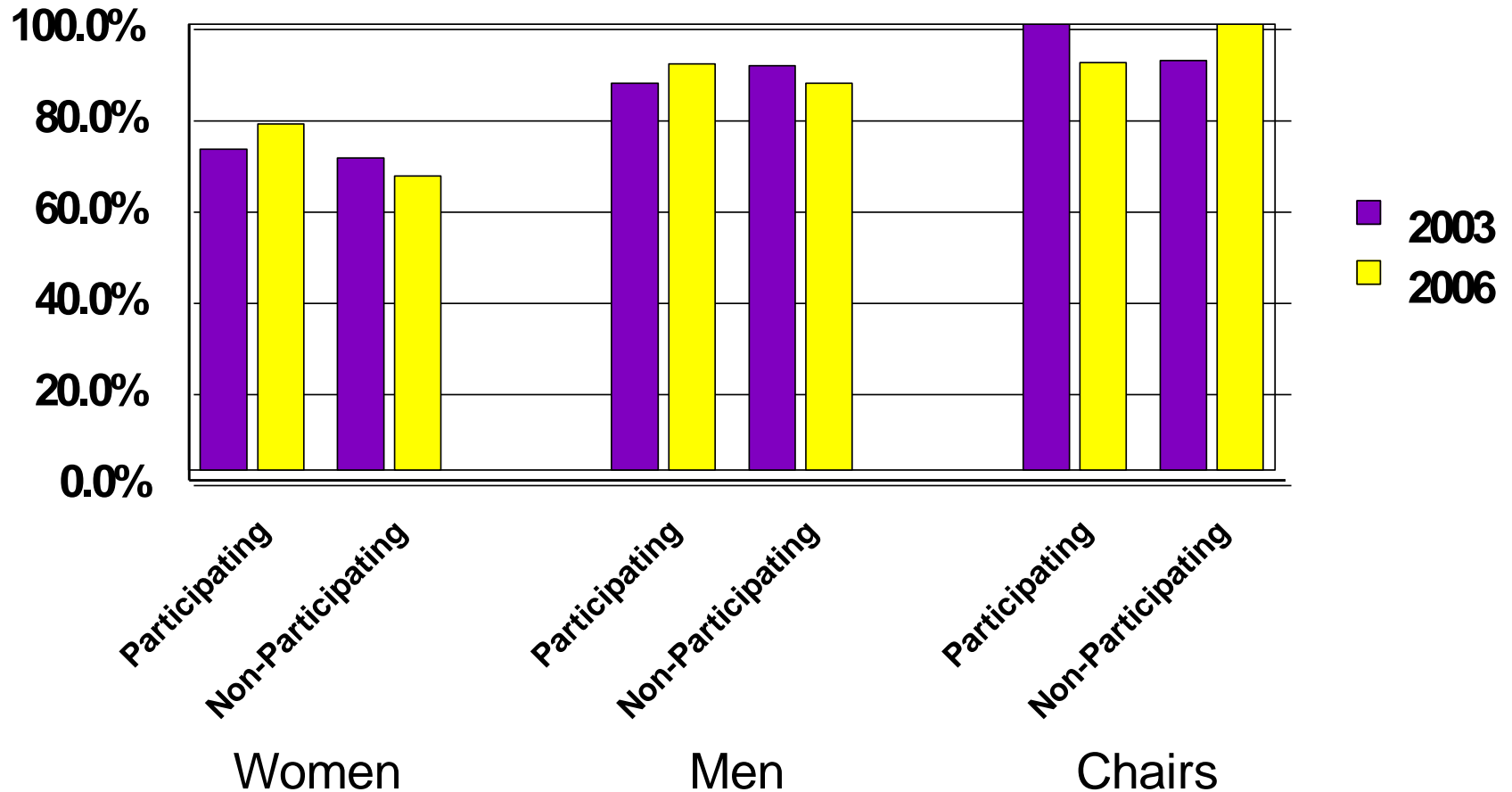
Overall rating of department climate



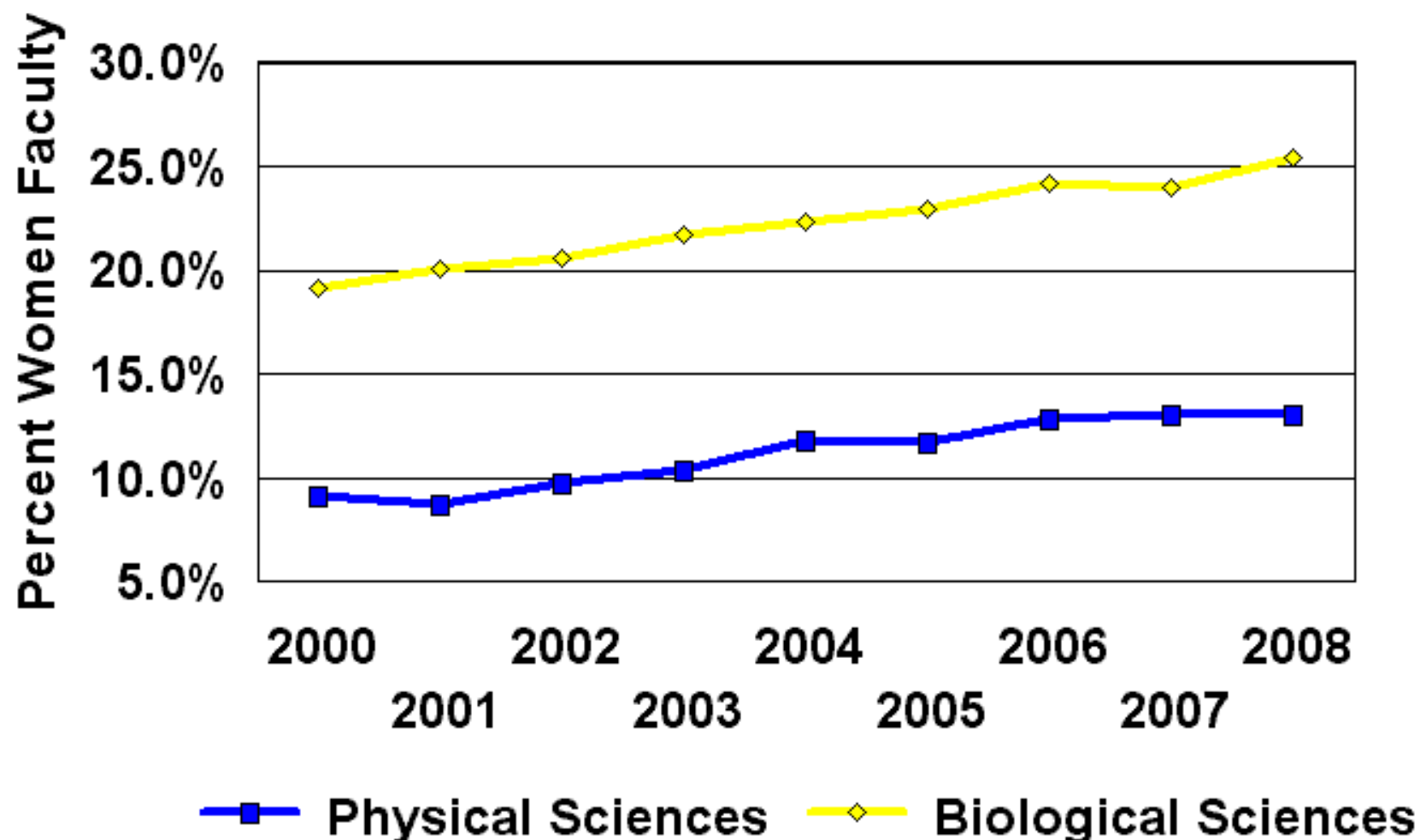
I experience subtle or overt forms of harassment or discrimination due to my gender, race or other personal attributes.



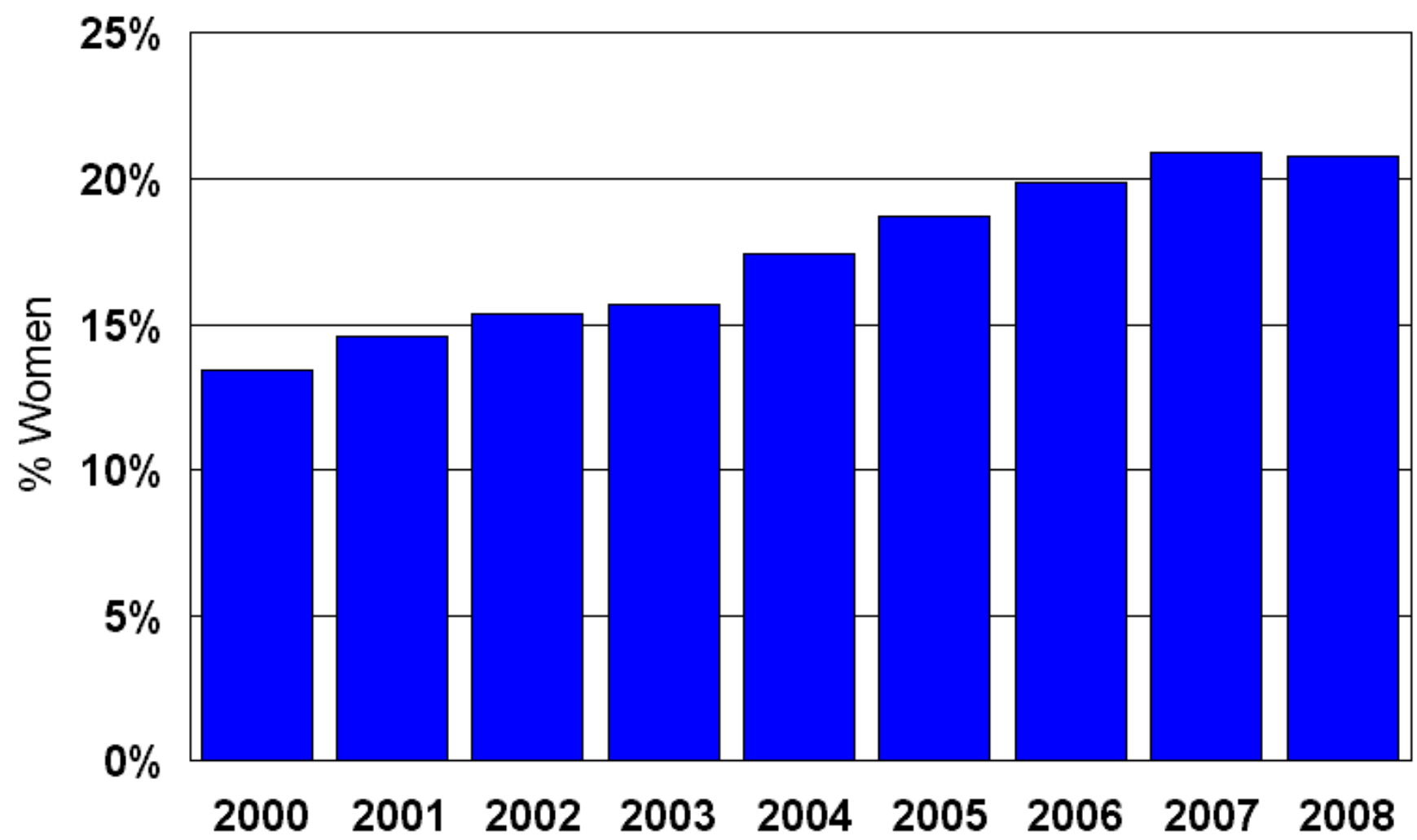
Percent Agree: The Climate for Women In My Department is Good



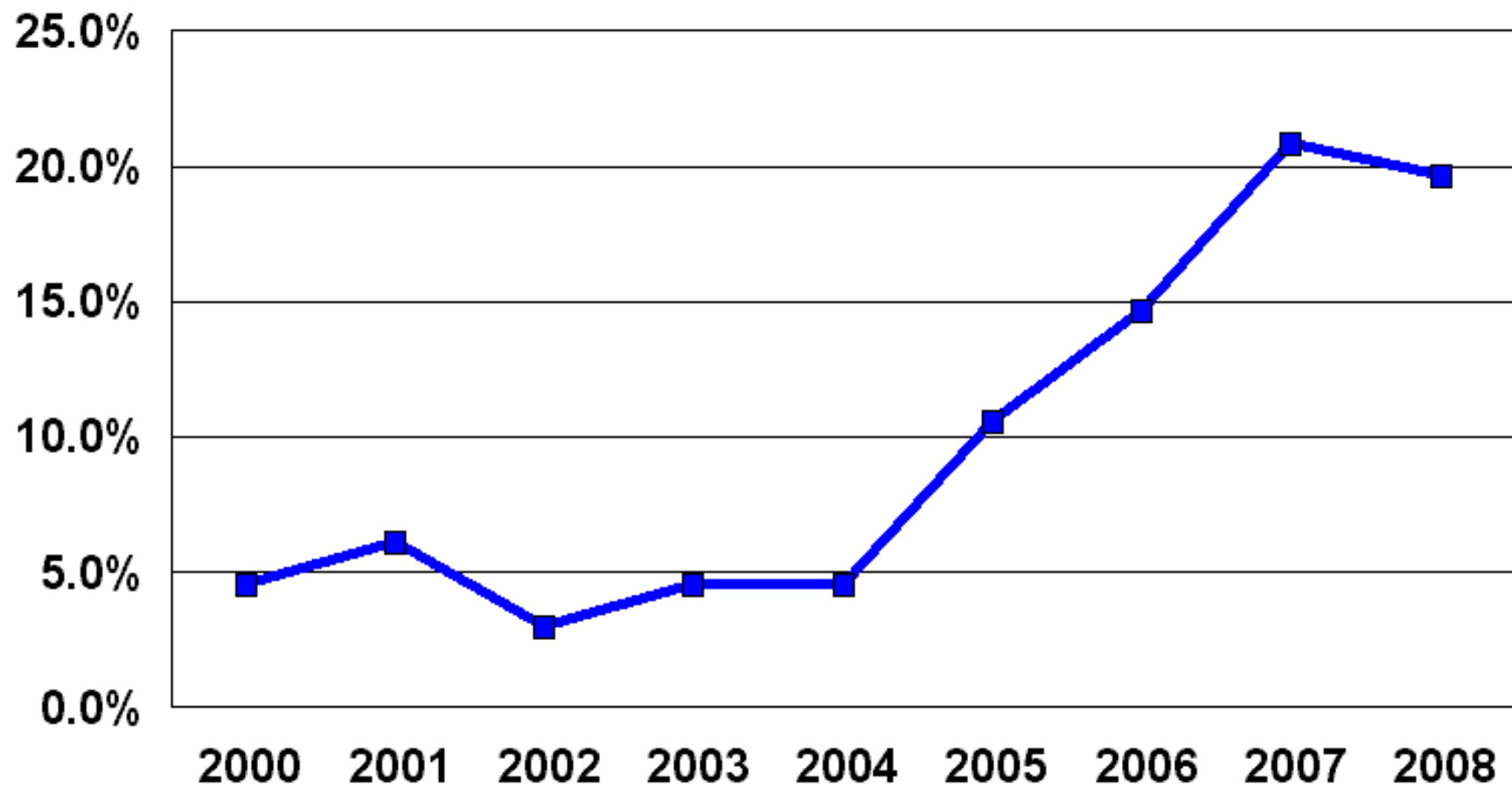
Percent Women Faculty, by Division University of Wisconsin-Madison



Women as Percentage of Named Professorship Recipients



% Women Department Chairs Biological & Physical Sciences





ADVANCE Elements of Success

- 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
- Collect and feedback data on everything = data drives change



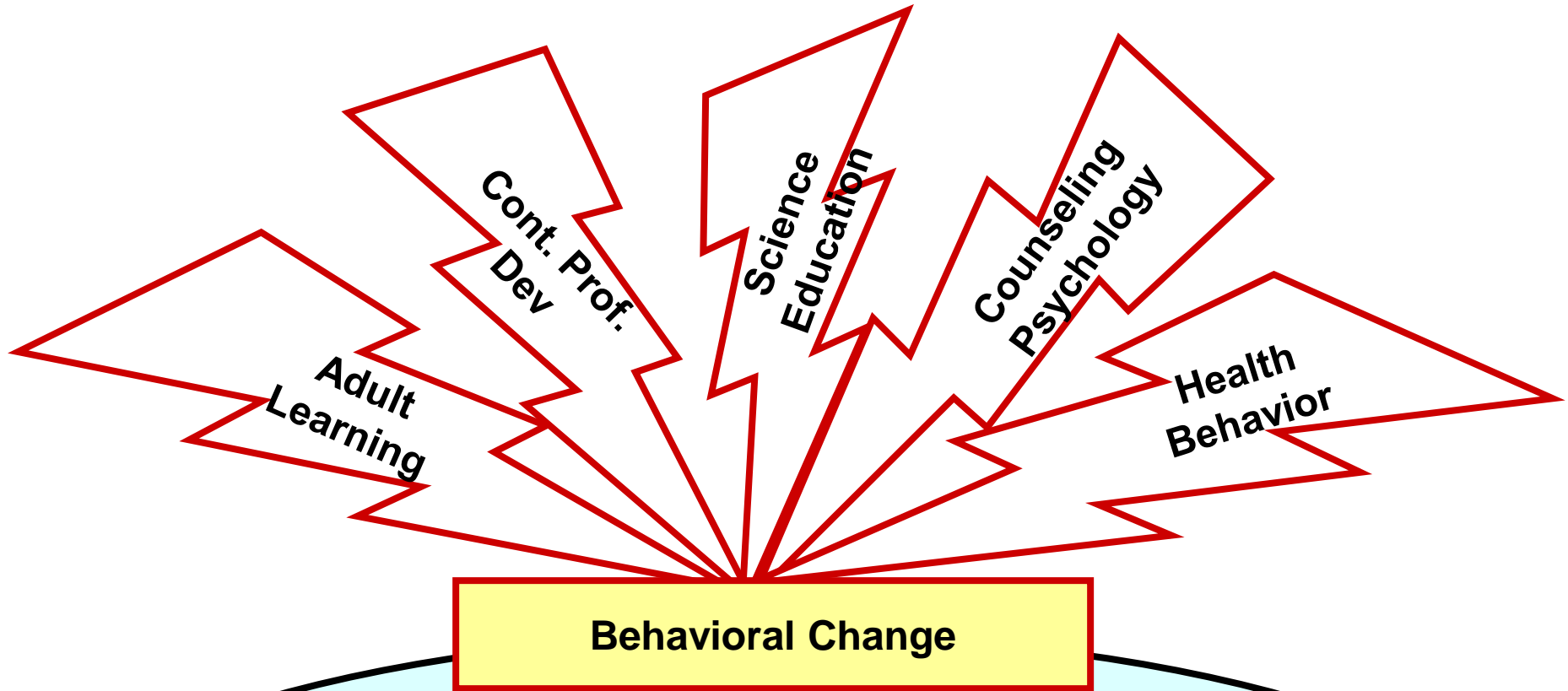
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Next Steps

- Approaching gender bias on the individual level as an unconscious habit
- Mobilizing research on facilitating intentional behavioral change
- Workshop format
- Using conversation analysis in pilot to address negative affect



- **Motivation** – person has to *want* to change
- **Self-efficacy** – person must have self-perceived ability to act in new way
- **Positive outcome expectations** – person must believe that his/her new actions will result in desired outcome
- **Deliberate practice**

Progressive movement toward habitually *acting* without bias (and *feeling good* about it!)

Motivation to respond without prejudice¹

Low External
Low Internal

High External
Low Internal

High External
High Internal

High Internal
Low External

Stages of change – health behaviors²

Precontemplation > Contemplation > Preparation > Action > Maintenance

Adult learning^{3,4}

Unconscious
Incompetence

Conscious
Incompetence

Conscious
Competence

Unconscious
Competence

¹Plant & Devine, 1998; Devine, 1989. ²Prochaska & DiClemente, 1984; Carnes et al., 2005

³Howell, 1982. ⁴Bandura, 1977



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