



W I S E L I

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

More Women In Science: *The Institutional Challenge*



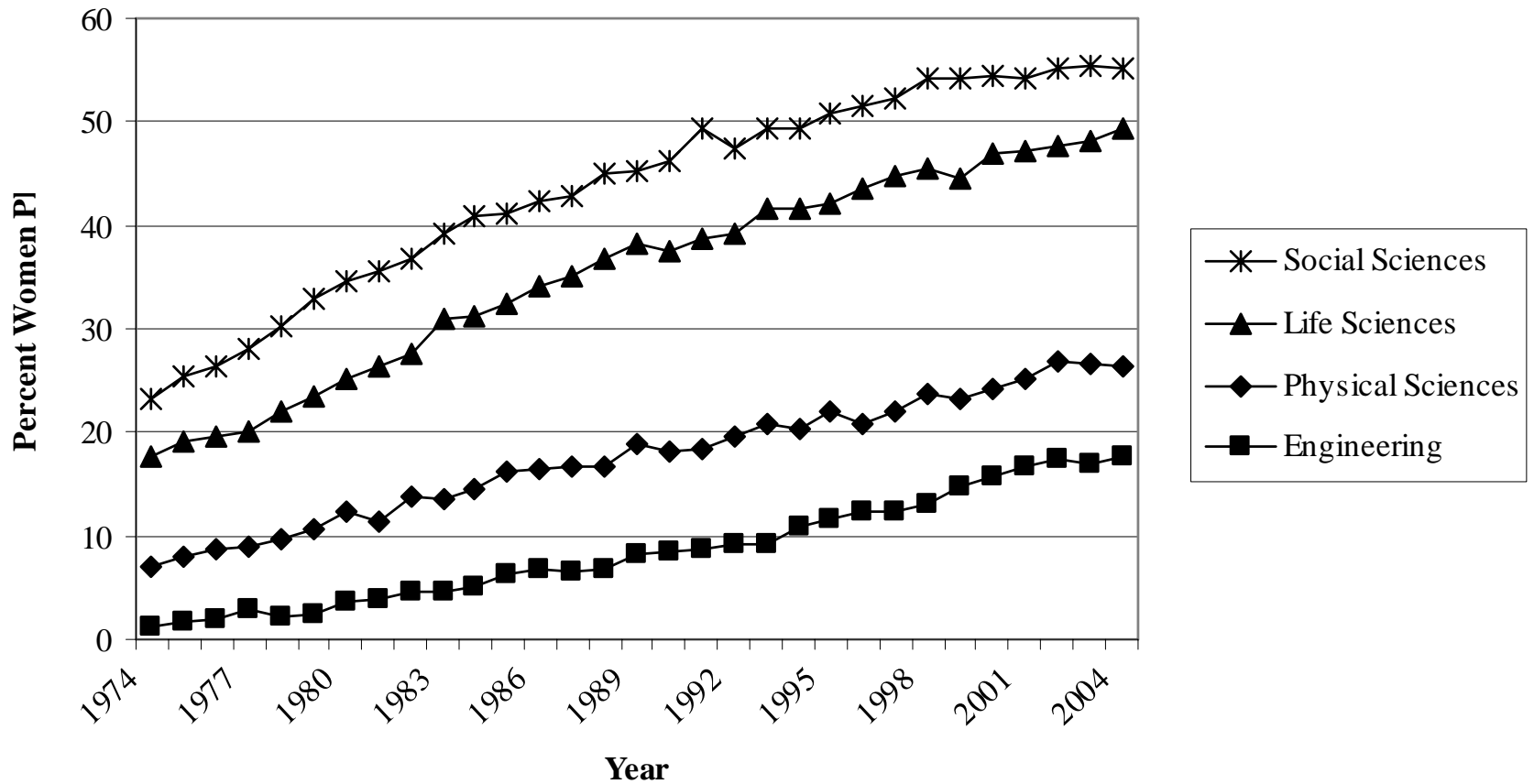


More Women In Science

- The Problem
- Some Solutions
- ADVANCE Innovations
- Elements of ADVANCE Success

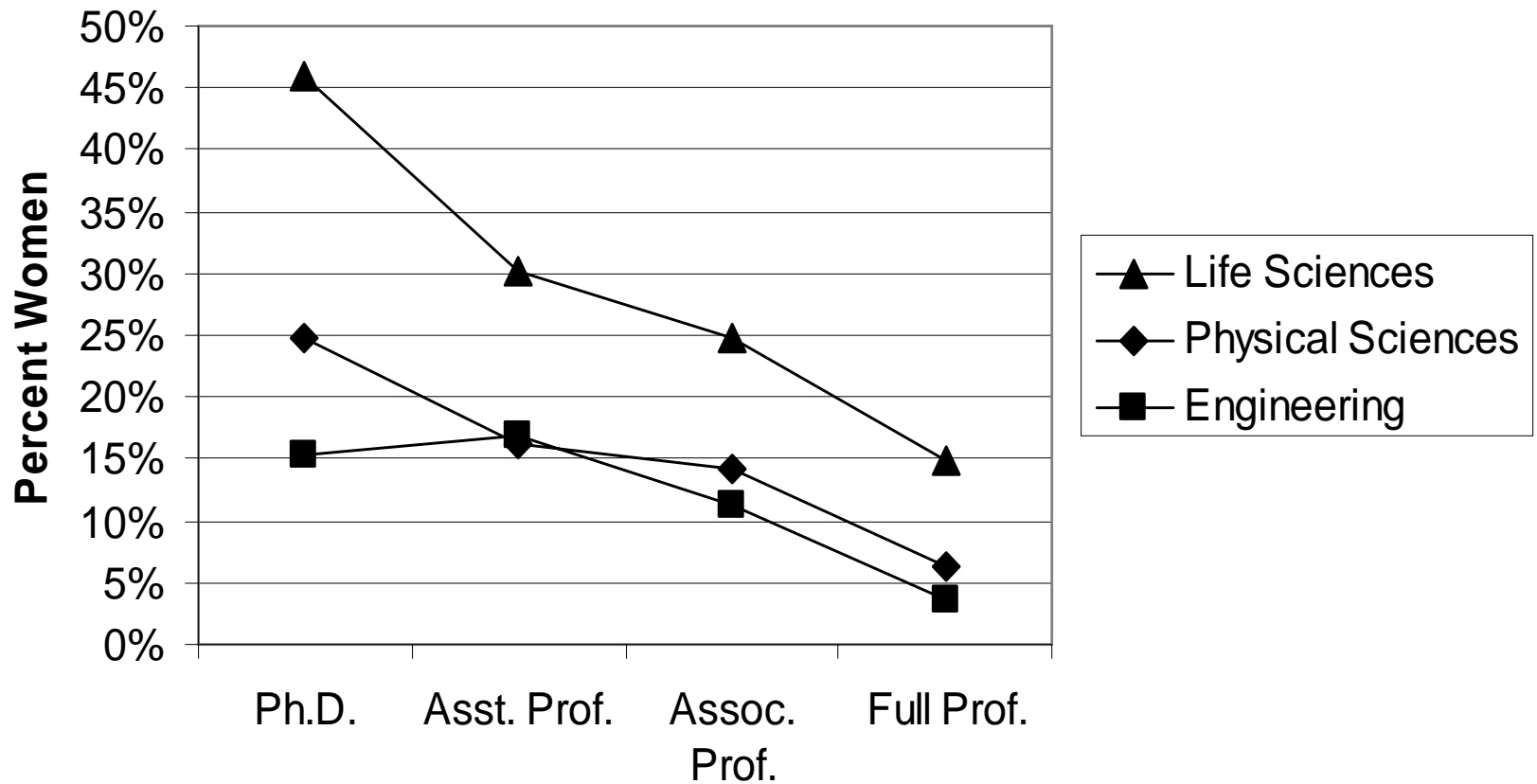


The Problem





The Problem





The Problem



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

“Increasing the number of women earning science and engineering doctorates will have little effect on the number of women in academic positions, unless attention is paid to recruiting women to these positions and retaining them once hired.”



Past Solutions

- Increasing the pipeline
 - Biology?
- 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



What is “climate?”

- The atmosphere or ambience of an organization as perceived by its members. An organization's climate is reflected in its structures, policies, and practices; the demographics of its membership; the attitudes and values of its members and leaders; and the quality of personal interactions. (UW-Madison, 2002).



Work/Life Balance

- UW-Madison, Univ of Michigan, Univ of Washington, others: Life Cycle Grants
- Georgia Tech: Childcare, lactation spaces, Active Service/Modified Duties policy
- Virginia Tech: Dual Career Hiring program
- Univ of Alabama-Birmingham: Tenure clock extensions
- Iowa State Univ: Cost/benefit analysis of w/l policies



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

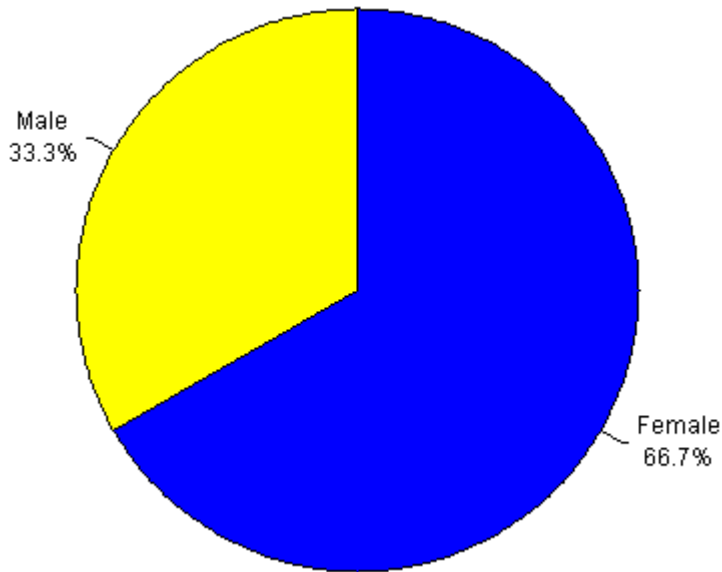


Vilas Life Cycle Professorship Program

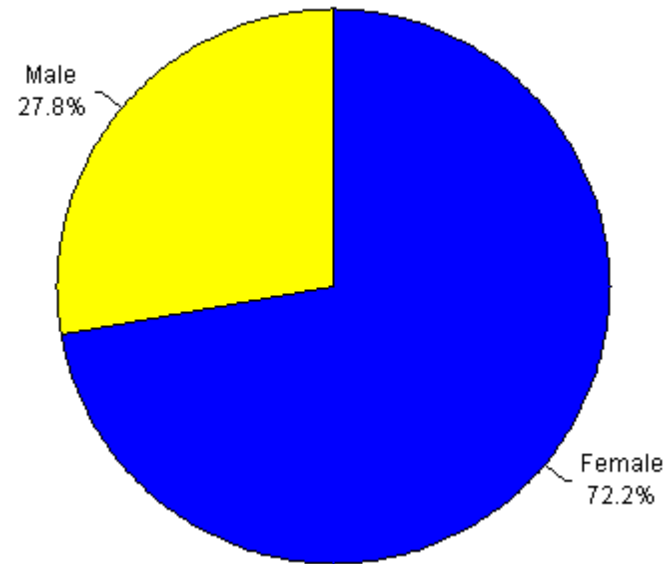
- Fall 2002 – Spring 2004, Pilot Program
 - Four rounds, 17 Applicants, 7 Awards
 - ADVANCE funding supplemented by Graduate School
- Fall 2004, Bridge Funding
 - One round, 5 Applicants, 3 Awards
 - Graduate School and Provost Office funding
- Spring 2005 +, Vilas Life Cycle Professorships
 - Three rounds/year, 27 Applicants, 18 Awards
 - Vilas Trust funding, \$372,000 per year



Vilas Life Cycle Professorship Program



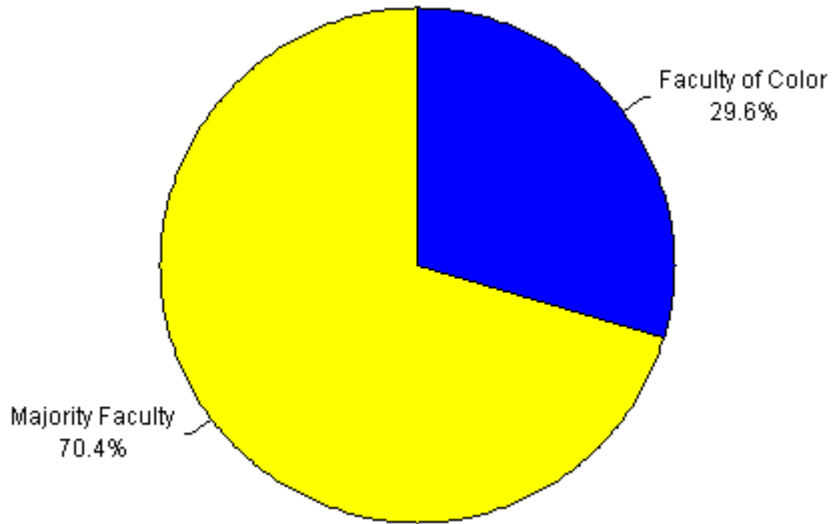
Applicants



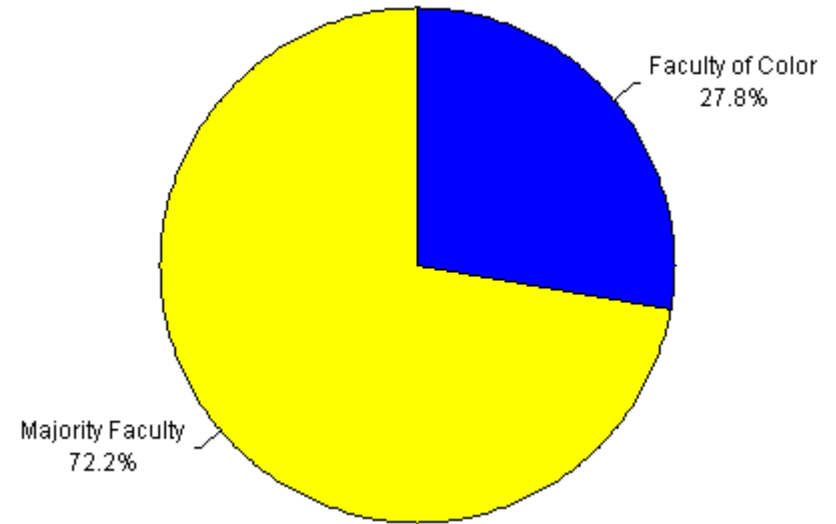
Awardees



Vilas Life Cycle Professorship Program



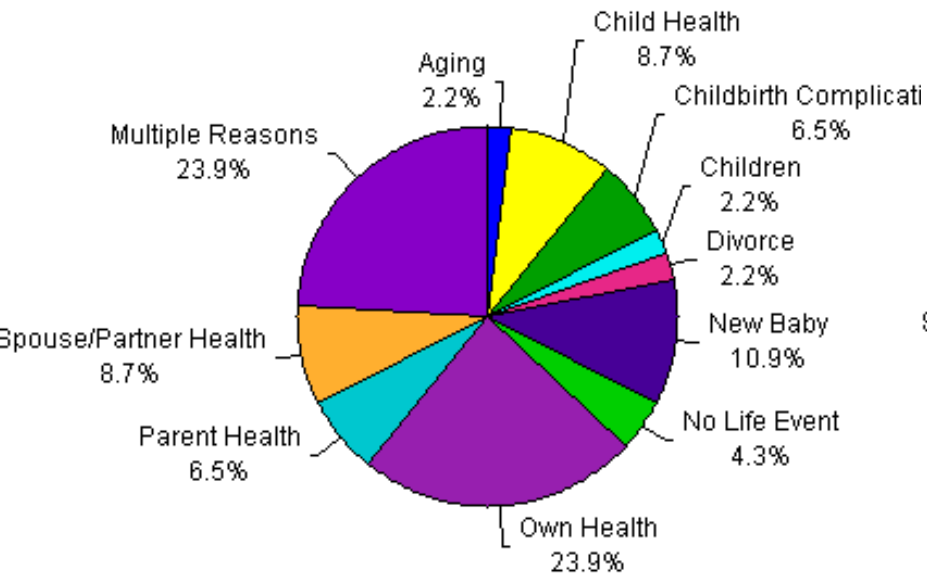
Applicants



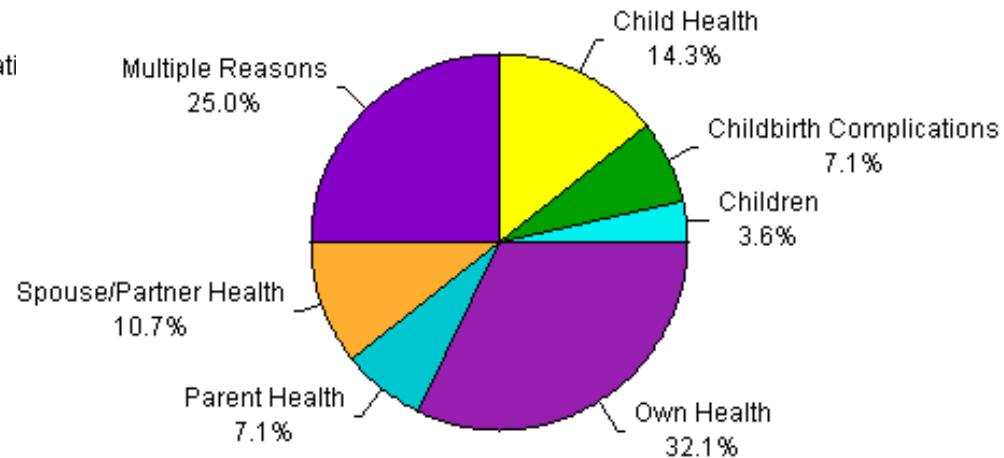
Awardees



Vilas Life Cycle Professorship Program



Applicants



Awardees



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Recruiting & Hiring

- Hiring process is an obvious critical juncture
 - Entry point to the faculty
 - Determines the “complexion” of faculty for decades
- Hiring processes vary enormously across departments, colleges, universities
- Faculty normally receive little or no training in running an effective hiring process
- Unconscious biases and assumptions can easily enter the evaluation of candidates



Recruiting & Hiring

- UW-Madison: *Searching for Excellence & Diversity* workshops
- Univ of Michigan: STRIDE
- Univ of Washington: Hiring Toolkit
- Univ of Illinois-Chicago: SUCCEED
- Univ of California-Irvine: Equity Advisors
- New Mexico State Univ, Univ of Montana: Supplement startup and/or salary for women hires



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



Unconscious Biases and Assumptions

- An impressive body of controlled experimental studies and examination of decision-making process in real life show that:
 - On the average, people are less likely to hire a woman than a man with identical qualifications
 - People are less likely to ascribe credit to a woman than to a man for identical accomplishments
 - When information or time is scarce, people will far more often give the benefit of the doubt to a man than to a woman



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Departmental Climate

- “Chilly climate” for women in academic departments is a recurring theme in much of the literature
- Climate surveys continually document the differences in men and women faculty’s perceptions of their work environments
- Climate often cited by women as a reason for leaving a university, or academia



Departmental Climate

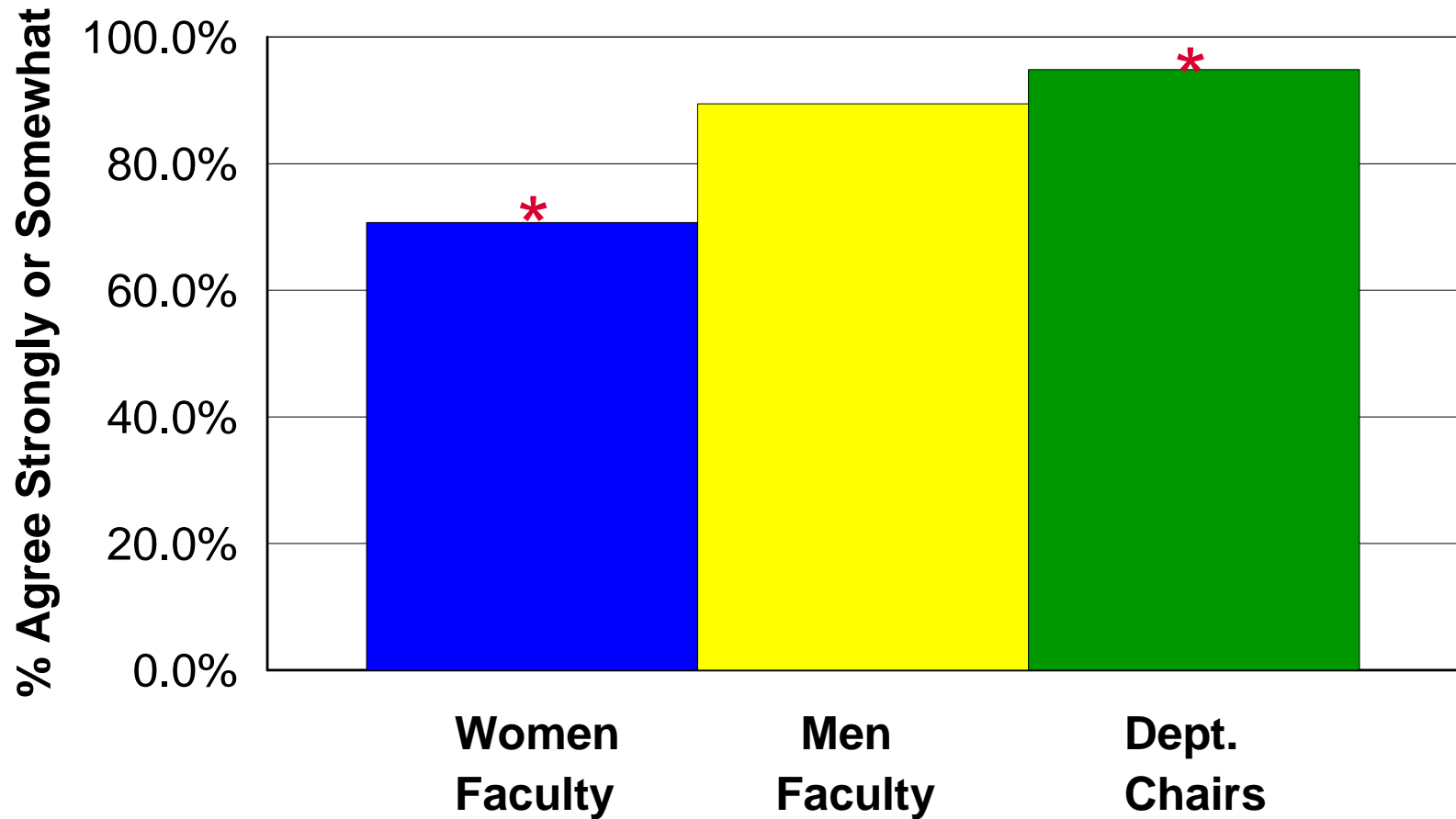
- UW-Madison: *Enhancing Department Climate: A Chair's Role* workshops
- Univ of Washington: Department head professional development workshops
- Case Western Reserve Univ: Coaching for department chairs
- Univ of Michigan, Utah State Univ: Interactive theater program
- Univ of Rhode Island: Climate grants for departments
- Univ of Michigan: STEP program



Enhancing Department Climate: A Chair's Role

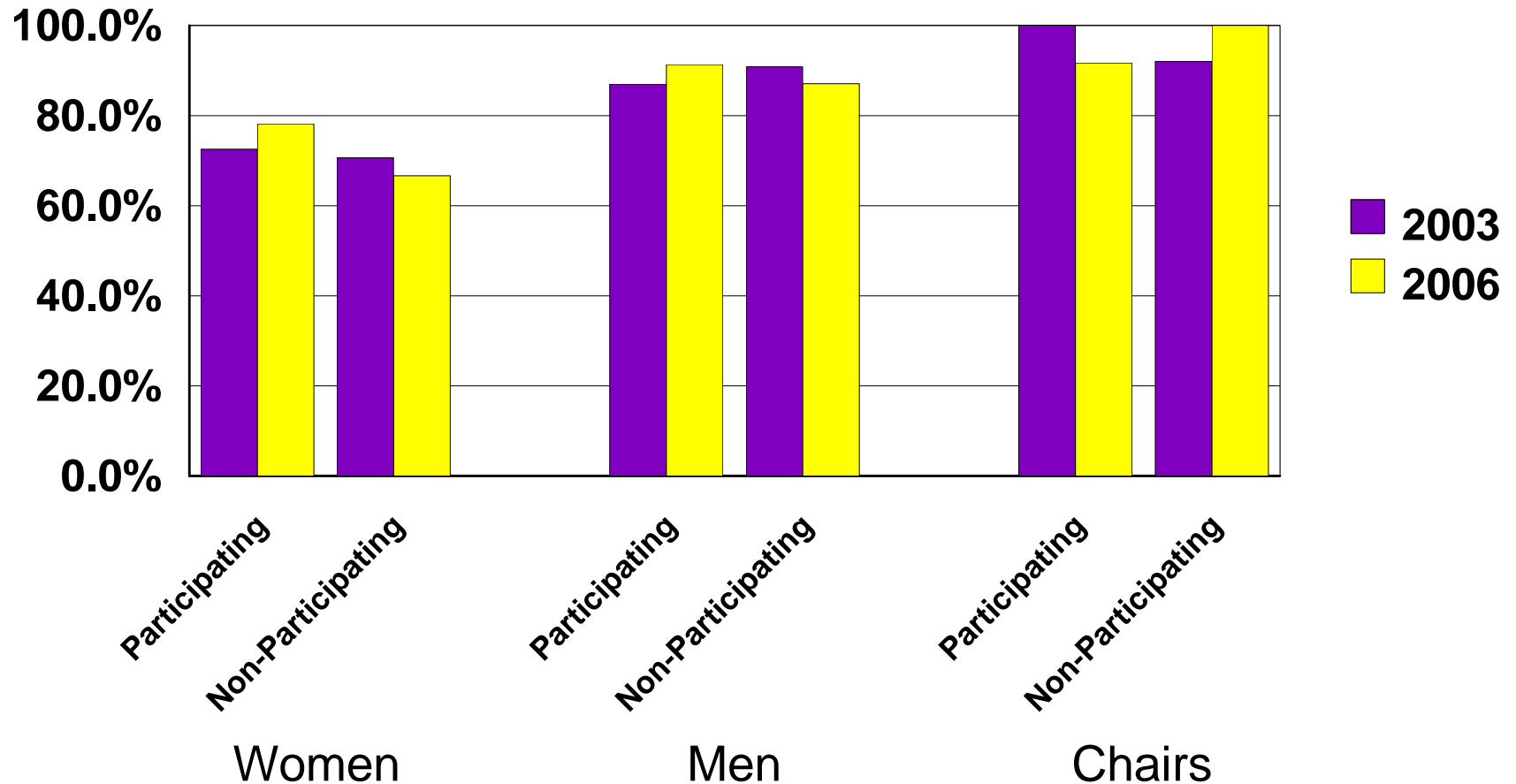
- Individuals experience climate in their immediate workplace – the department
- Chairs can significantly influence womens' experiences in their departments
- Chairs' perspectives of climate differ from those of other faculty, especially women faculty

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



Departments Resurveyed	Mean 1 st Survey	N	Mean 2 nd 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
Overall Mean Score	3.47		3.72		0.25

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

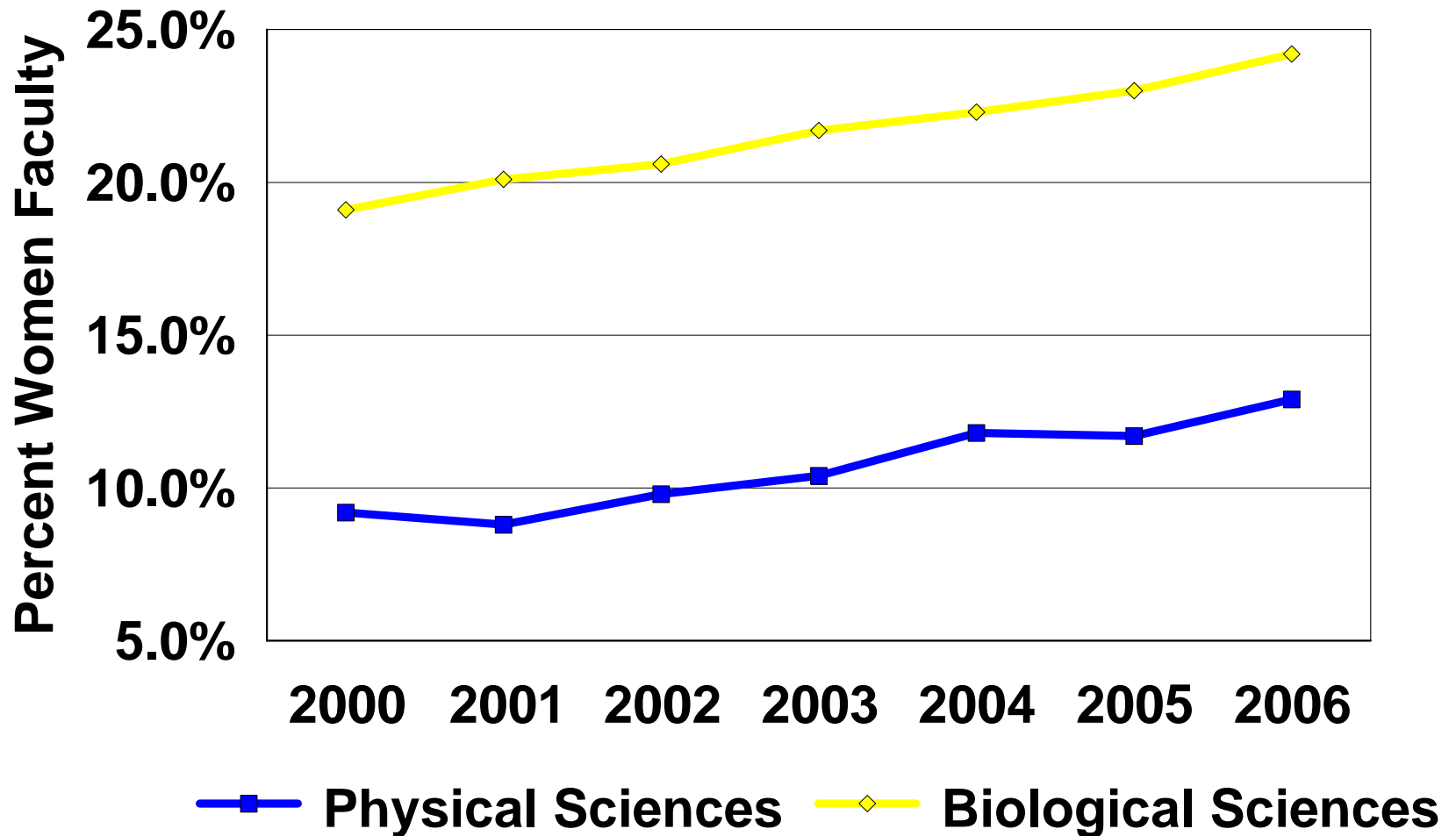




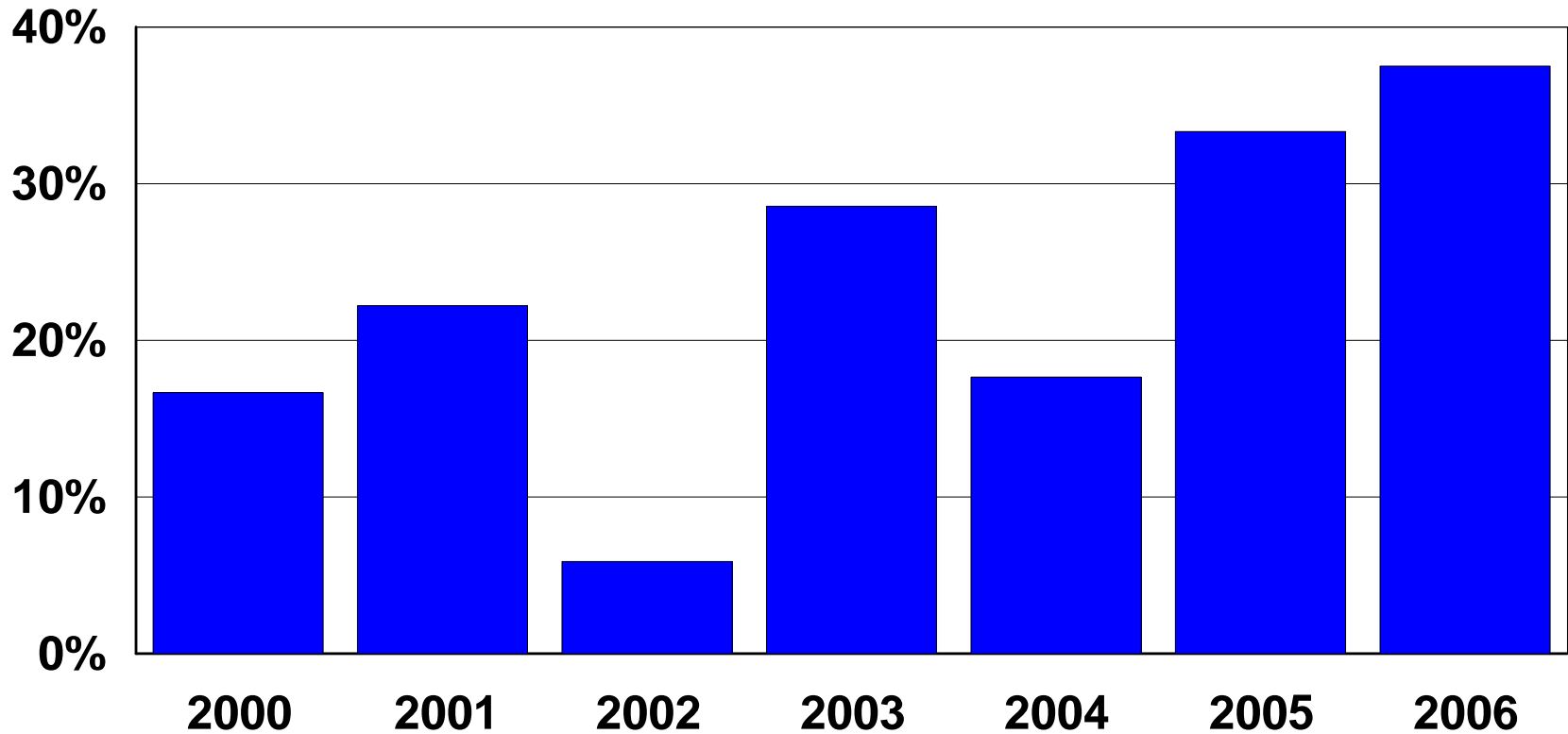
What else?

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

Percent Women Faculty, by Division University of Wisconsin-Madison

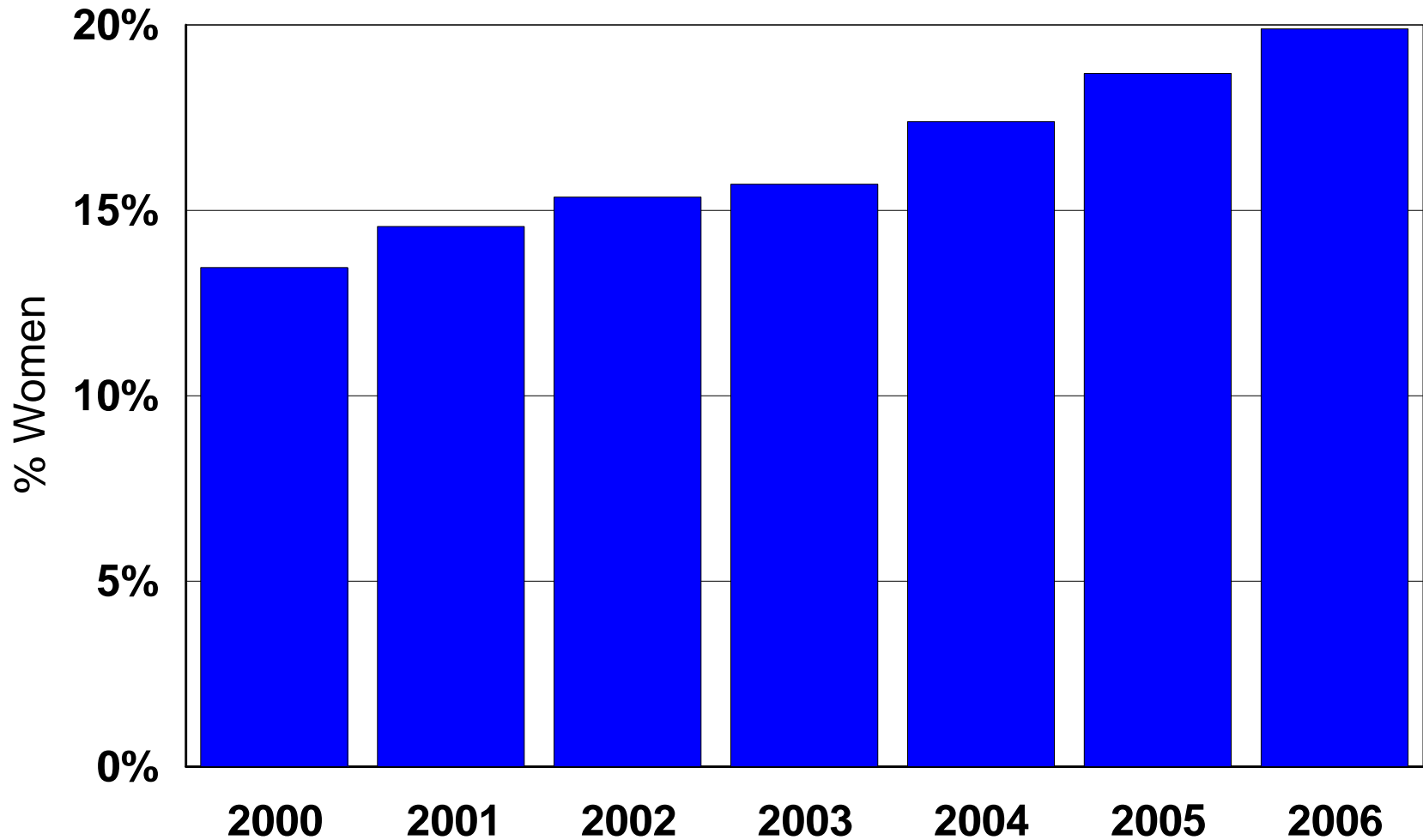


% Female, Major UW-Madison Faculty Awards* Biological & Physical Sciences

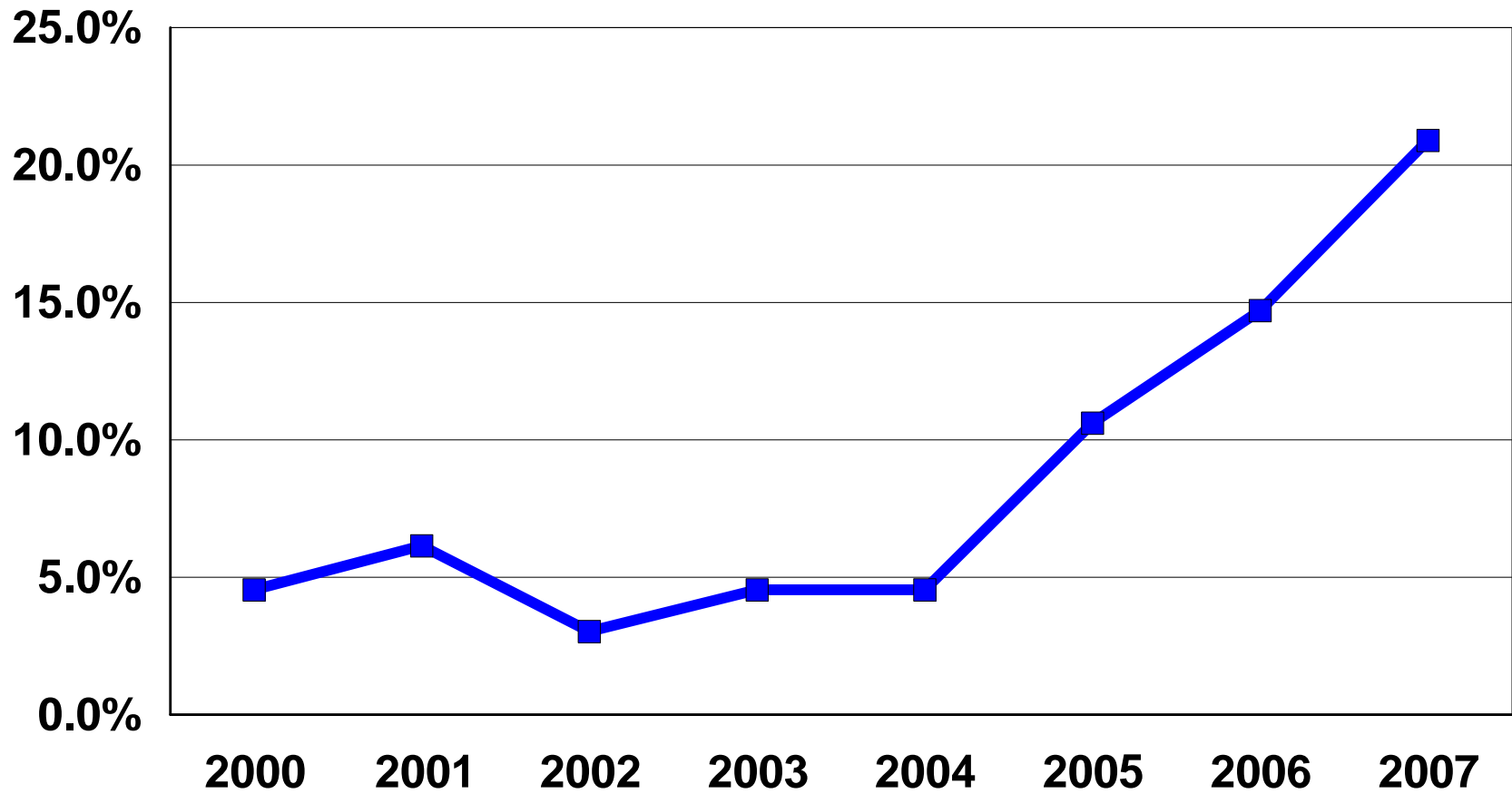


* Vilas Associate, Hilledale, Romnes, Kellett

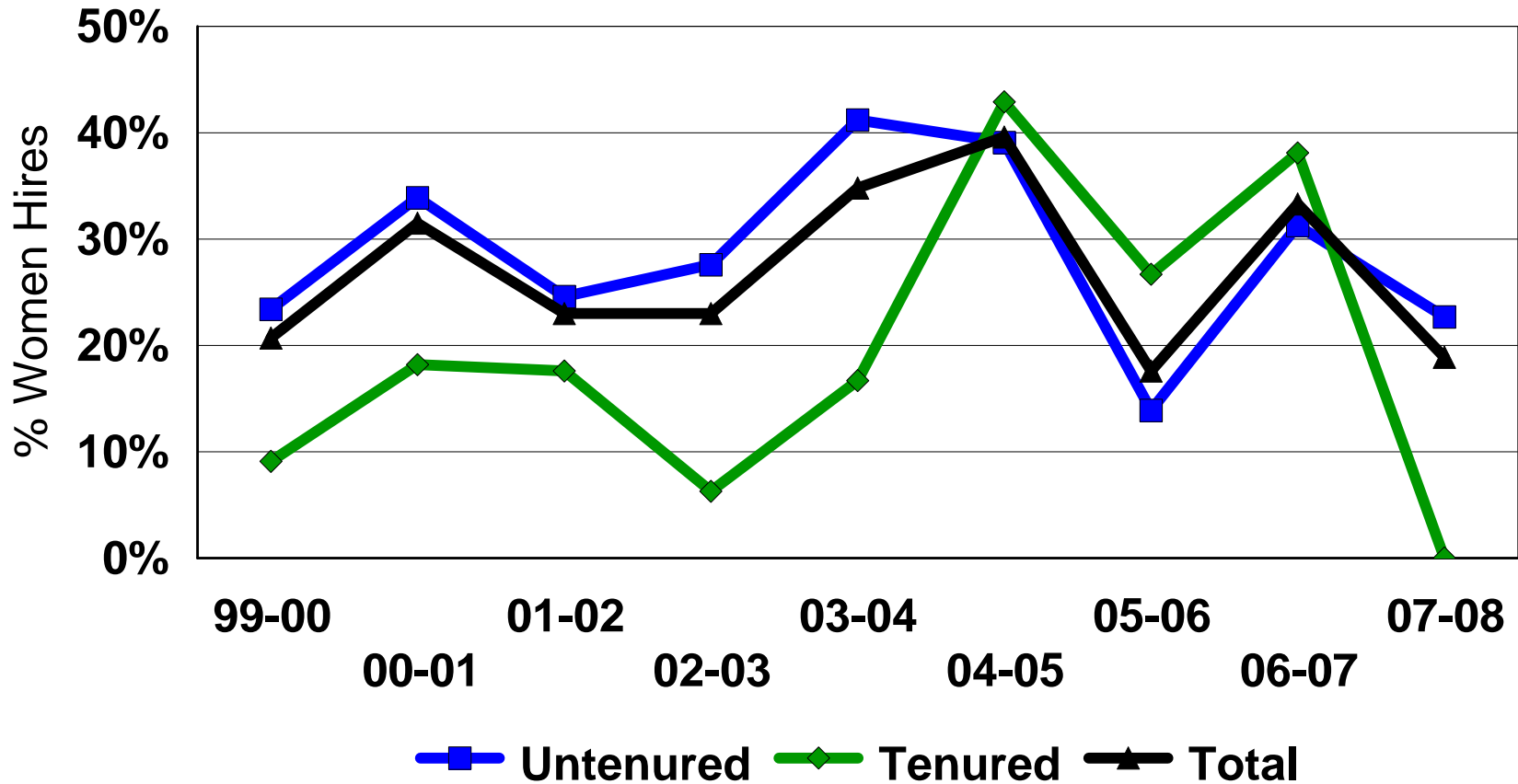
Women as Percentage of Named Professorship Recipients



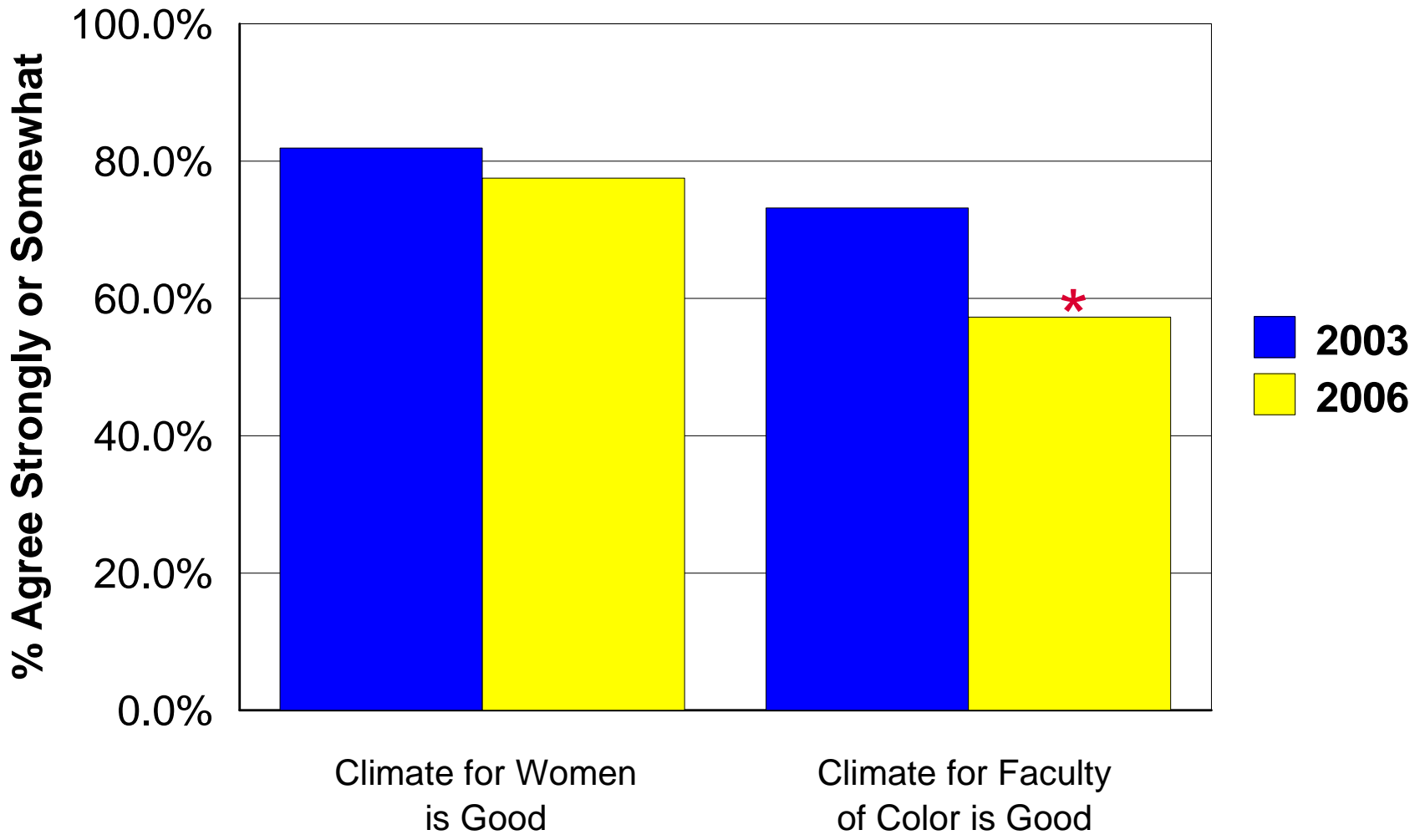
% Women Department Chairs Biological & Physical Sciences



Women as Percentage of New Hires Biological and Physical Sciences



Climate for Women and Faculty of Color Any WISELI Participation





Life Cycle Grant evaluation

“[With other grants] you're competing on a national level on everything, and I think that's fair, but you are at a disadvantage because you just don't have the time and energy at the same level as perhaps other people and so it just gives you that little bit of, little extra money to get things pulled together– have another person, have more reagents, have more whatever you need to have your grant be competitive. I also think it's a good idea because of the investment value. If I get my grant, it's going to pay off for the university several fold over.”



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.



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
- Fearless intervention when required
- Refrain from gender-specific programming



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