

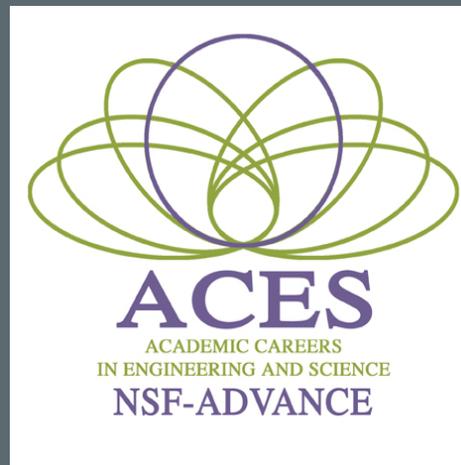


CASE

CASE WESTERN RESERVE UNIVERSITY

Provost's Leadership Retreat

26 October 2004



www.case.edu/admin/aces

Retreat Objectives

- Gain knowledge about NSF ADVANCE and ACES activities at Case
- Learn from the experiences of ACES Phase 1 test departments, and other leading NSF ADVANCE institutions
- Create a collective understanding of the needs for institutional transformation at Case
- Identify strategies for addressing issues related to women faculty
- Gain new ideas through interaction with other S&E deans and chairs



Retreat Agenda

- Welcome and Introductions
- ACES Year 1 – Overview, Experience of Test Depts., Evaluation
- U of Michigan’s ADVANCE program
- Dean’s Panel of New Initiatives at Case
- SWOT exercise
- Georgia Tech’s ADVANCE program
- Next steps



What is the Problem?

Myth:

“...there are insufficient numbers of women and minorities on the pathway from graduate student to faculty member...the “pipeline” problem.”

Fact:

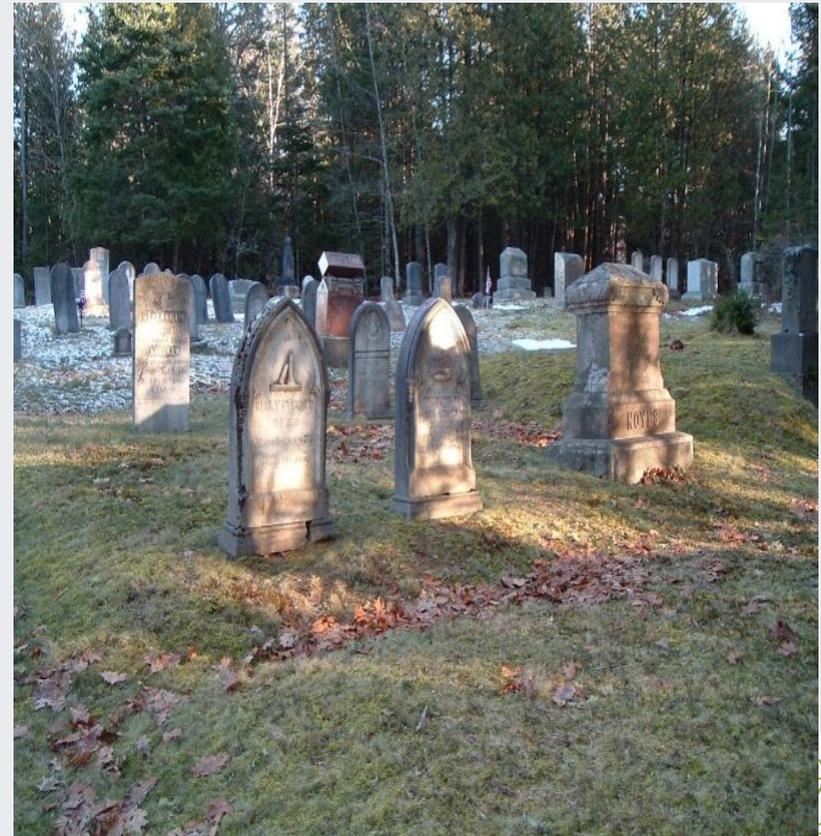
“The data indicate that this is true for minorities, [in S & E] false for women.”

Source: Cathy A. Trower and Richard P. Chait, *Faculty Diversity: Too little for too long*



Academic Transformation is Possible

“The progress of this institution ...will be directly proportional to the death rate of the faculty.”



ACES
ACADEMIC CAREERS
IN ENGINEERING AND SCIENCE
NSF-ADVANCE

How Close Was Your Answer?

1911

William T. Foster (1879-1950)

President, Reed College

There were 46 students and 5 faculty members at the time.

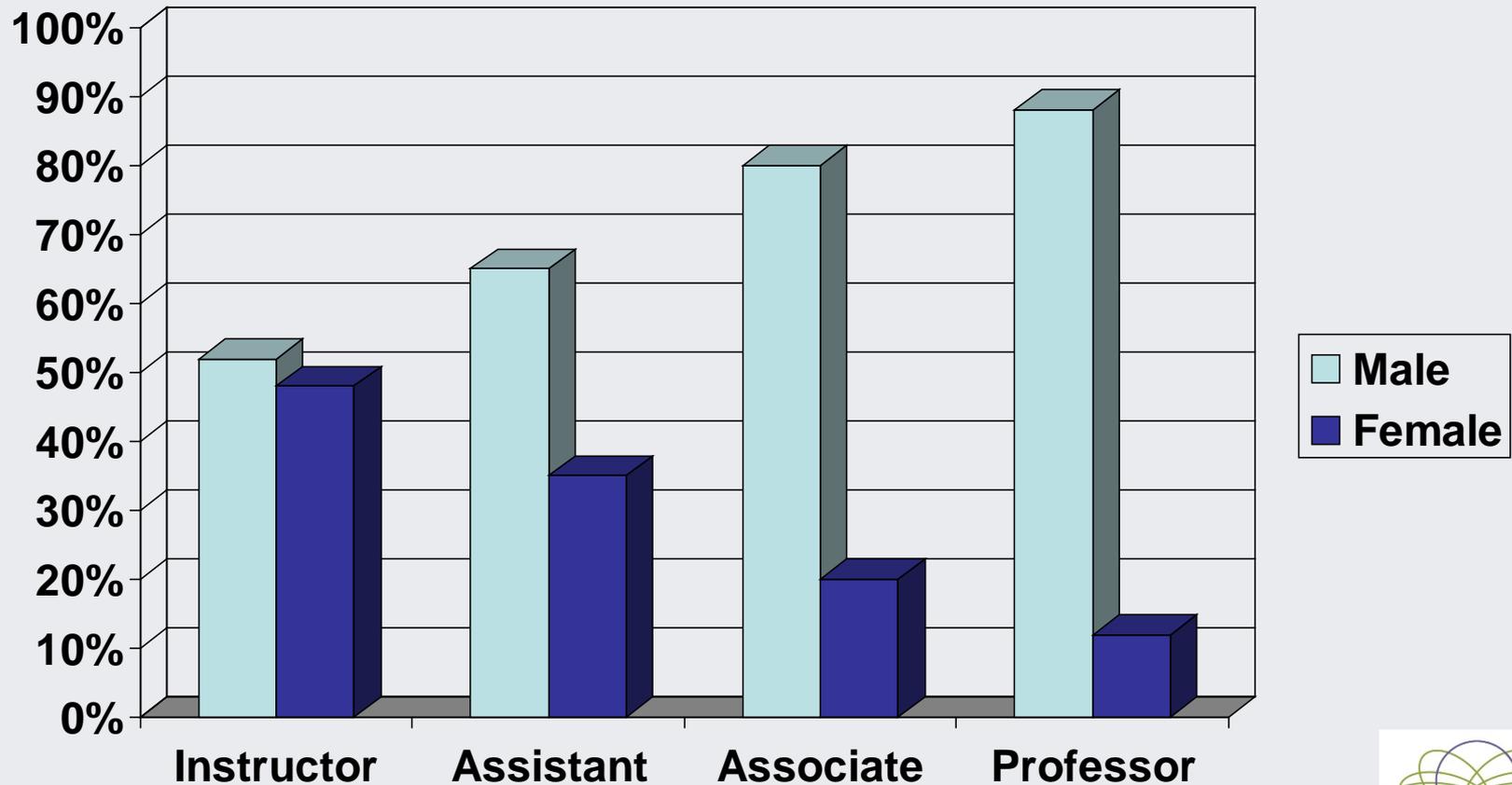


Areas of Concern at Case

- Low % of women faculty in S&E fields
- Low % of African-American & Hispanic-American faculty in S&E fields
- Retention of senior women and minority faculty in S&E fields
- Absence of women faculty in academic leadership positions in S&E fields
- Women faculty across Case report lower satisfaction with the academic climate



2003-04 Full-time S&E Faculty



Source: Payroll/Institutional Research Data



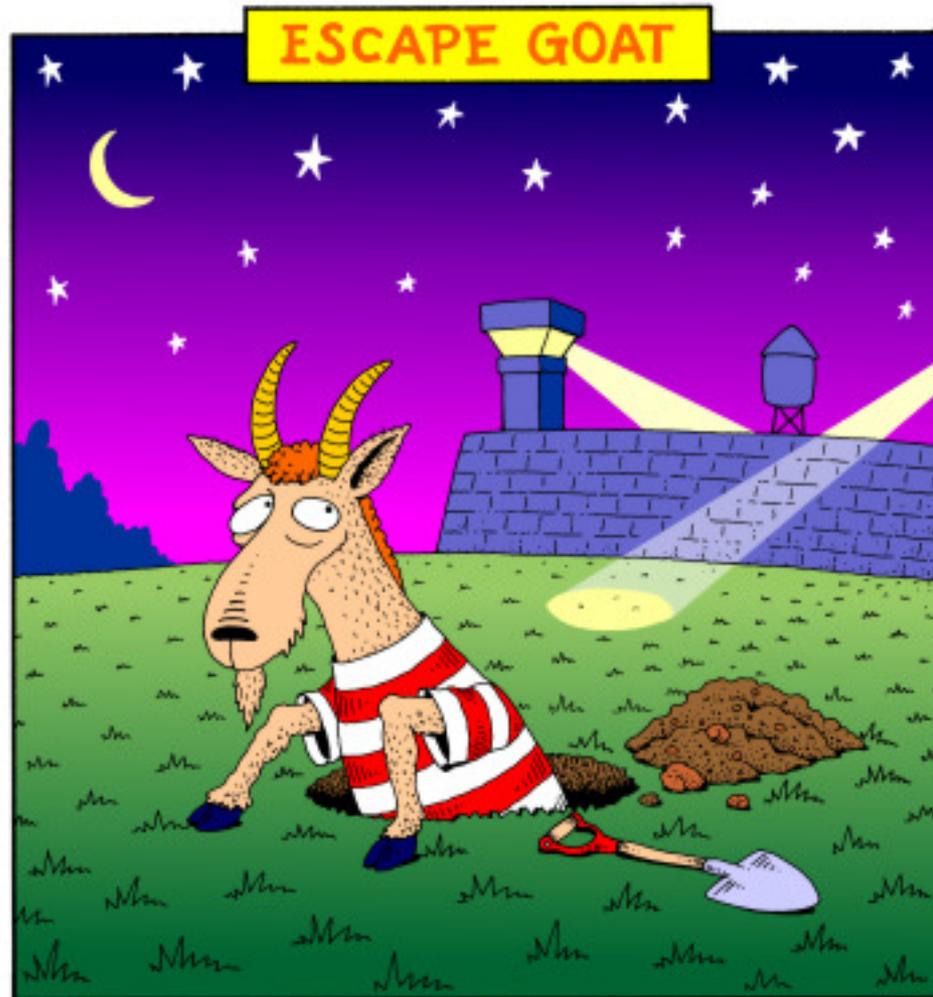
Women Faculty Report That Case's Climate is Not Inclusive (2004 Survey):

Female faculty as compared to male faculty:

- Feel less supported and valued in their academic units, and feel more pressure and restrictions
- Perceive that gender, race, and family obligations make a difference in how faculty members are treated
- Rate their academic unit head's leadership lower, and rate the resources and supports they provide lower
- Perceive that compensation and non-research supports are less equitably distributed
- Perceive lower transparency in allocating compensation, office and lab space, teaching requirements, and clerical support
- Are less satisfied with their overall community and job experience at Case.



It's Not About Blame

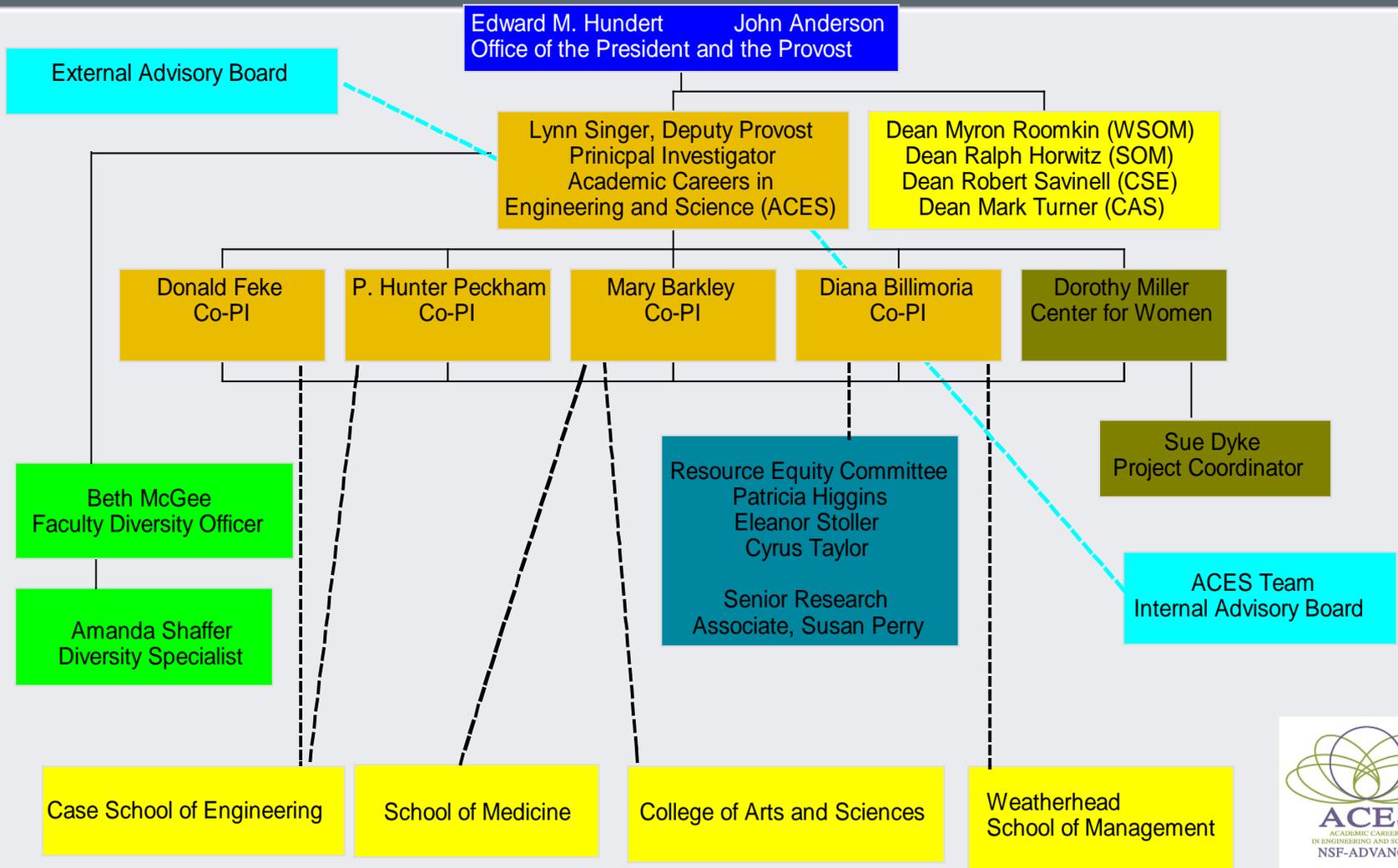


Case's NSF ADVANCE Award

- Academic Careers in Engineering and Science (ACES)
- \$3.5 Million Institutional Transformation Award
- 2 Phases over 5 years
- Case is the first private institution to receive award



ACES Organizational Chart



NSF Fundable Departments

College of Arts & Sciences

Anthropology
Astronomy
Biology
Chemistry*
Geological Sciences
Mathematics
Physics
Political Science
Psychology
Sociology
Statistics

Case School of Engineering

Biomedical Eng
Chemical Eng
Civil Eng
Electrical Eng & Computer Science
Macromolecular Science & Eng
Materials Science & Eng
Mechanical & Aerospace Eng *

School of Medicine

Anatomy
Biochemistry
Center for RNA Molecular Biology
Genetics
Molecular Biology & Microbiology
Neurosciences
Pharmacology
Physiology & Biophysics *

Weatherhead School of Management

Economics
Information Systems
Marketing & Policy Studies
Operations Research
Organizational Behavior *

* denotes Phase I Test Department



ACES Goals and Objectives

- Increase number of women at all academic levels
- Stimulate department change
- Transform campus-wide culture
- Institutionalize transformation



ACES Initiatives: Senior Leadership

- Deans accountable to Provost for institutional progress
- Executive coaching for deans
- 5 endowed chairs for senior women scientists and engineers
(President Hundert's fundraising commitment)



ACES Initiatives: School and Department Level

- Chairs coaching (3 chairs of test depts.)
- Women faculty coaching & mentoring (14 women faculty in test depts.)
- Networking events for deans, chairs, & women faculty
- Educational support & faculty development for departments (in 2 test departments)



ACES Initiatives: All S & E Departments

- Distinguished lectureships (11 awards)
- Opportunity grants (15 awards)
- Faculty search committee support (4 departments/search committees)
- Minority summer undergraduate research program (hosted 7 minority scholars and one faculty member)
- Student awareness training (in 2 test departments)



University Wide Initiatives

- Search committee toolkit (online at www.case.edu/admin/aces)
- Partner hiring policy
- Center for Women events (online at <http://www.case.edu/provost/centerforwomen/>)



ACES Phase I - Four Test Depts.

- Chemistry (Arts and Sciences)
- Mechanical & Aerospace Engineering (Engineering)
- Organizational Behavior (Management)
- Physiology & Biophysics (Medicine)



ACES Phase II - Extension of Best Practices to 10 Departments

- **College of Arts and Sciences**
 - Anthropology
 - Geological Sciences
 - Mathematics
 - Political Science
- **School of Engineering**
 - Biomedical Engineering
 - Chemical Engineering
 - Electrical Engineering & Computer Science
- **School of Medicine**
 - Biochemistry
 - Molecular Biology and Microbiology
- **School of Management**
 - Marketing and Policy Studies

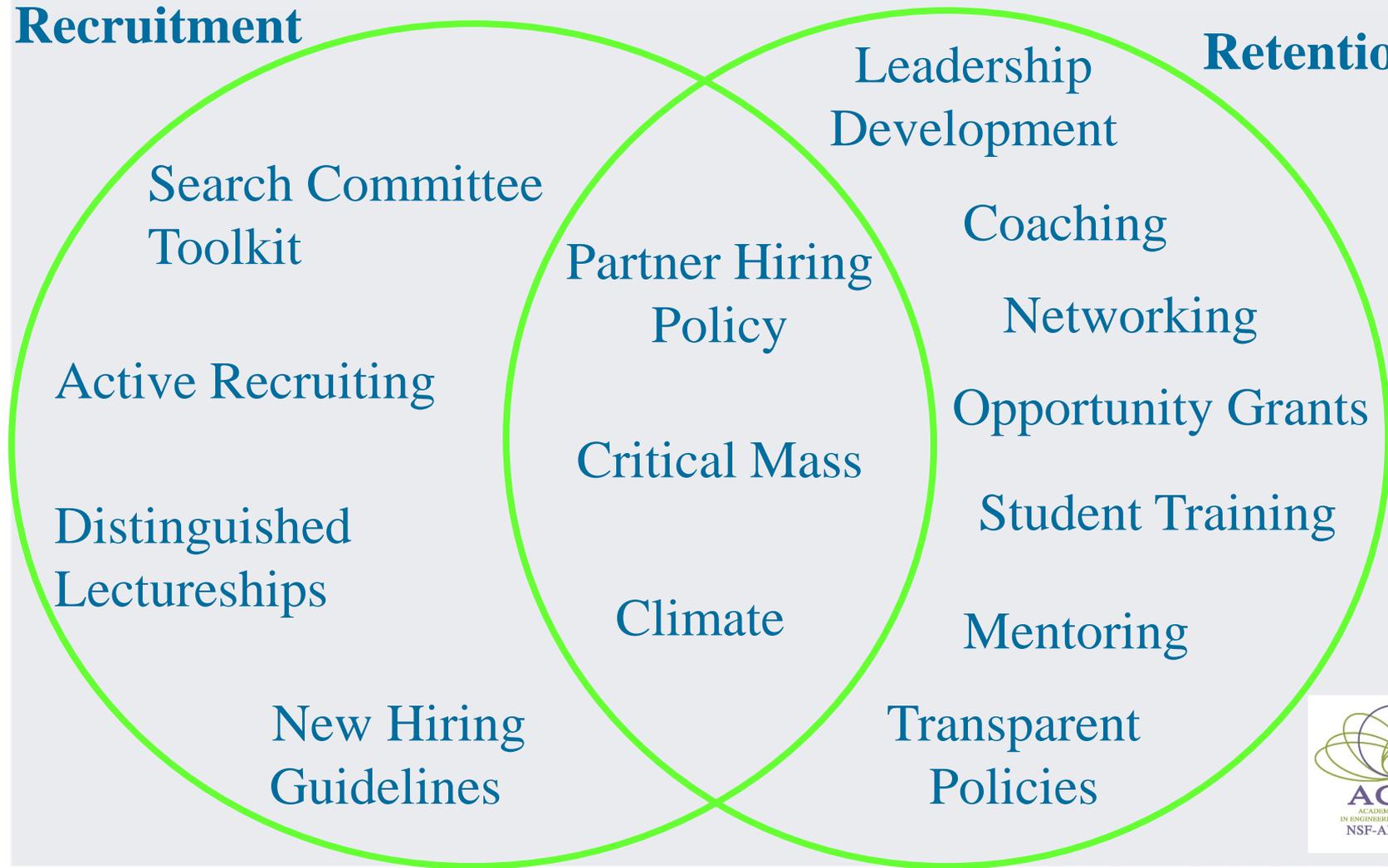




Overview of ACES Initiatives: Case's Recruitment and Retention Strategies

Recruitment

Retention



University Mechanisms for Support: Office of the President and the Provost

- Provost & Deputy Provost review of annual and mid-tenure evaluations of non-tenured faculty
- Provost's Opportunity Fund for hiring women & faculty of color
- A one-year extension of pre-tenure period after each live birth or adoption
- Child care center for faculty



Q & A?





CASE

CASE WESTERN RESERVE UNIVERSITY

Appendix of Supplementary Information

Faculty Composition in S&E Departments at Case (2003-04)

S&E Depts.	Full-Time	Part-Time/ Adjunct	Total
Female	111 (22%)	27 (33%)	138 (23%)
Male	400 (78%)	56 (67%)	456 (77%)
Total	511	83	594

University	Full-Time	Part-Time/ Adjunct	Total
Female	727 (31%)	508 (33%)	1235 (32%)
Male	1616 (69%)	1029 (67%)	2645 (68%)
Total	2343	1537	3880



Source: Institutional Research – Human Resources

Women in S&E – Tenure Status at Case (2003-04)

S&E Tenure-track Status	Tenured	In Tenure Track	Total (Tenured + In Tenure Track)	Non-Tenure Track
Female	37	37	74 (18%)	15 (42%)
Male	246	86	332 (82%)	21 (58%)
Total			406	36

Source: Institutional Research – Human Resources
Count is based on faculty paid through CASE only



P&T Awards in S&E Depts. at Case (2003-04)

Tenure Awards	S&E Departments	University
Female	1 (7%)	5 (19%)
Male	13 (93%)	21 (81%)
Total	14	26

Source: Office of the Provost

Promoted to Professor	S&E Departments	University
Female	2 (22%)	10 (30%)
Male	7 (78%)	23 (70%)
Total	9	33

Source: Institutional Research – Human Resources



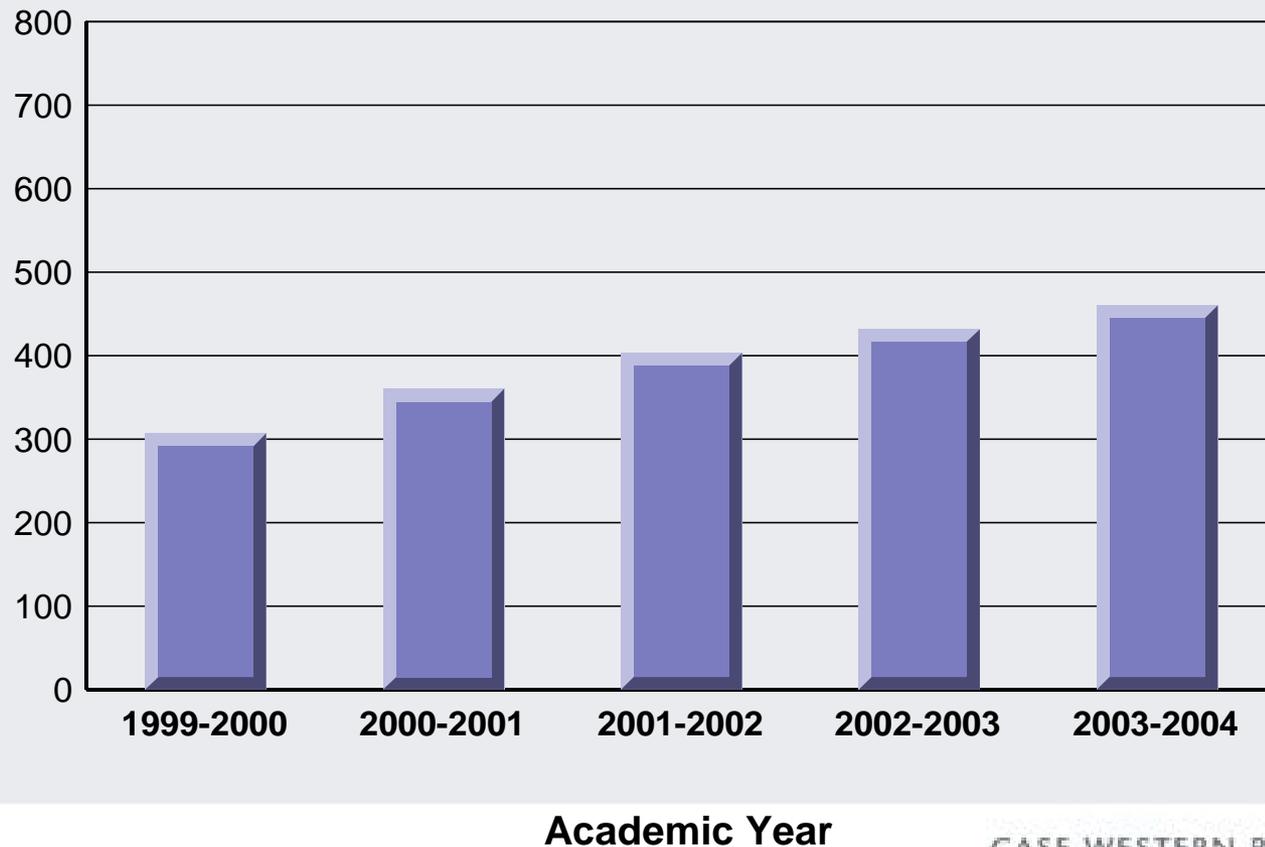
Academic Leadership in S&E Depts. at Case (2003-04)

S&E Leadership	Endowed Chair	Dept. P&T Committee	Administrative Position
Female	8 (14%)	17 (22%)	9 (15%)
Male	49 (86%)	59 (78%)	51 (85%)
Total	57	76	60



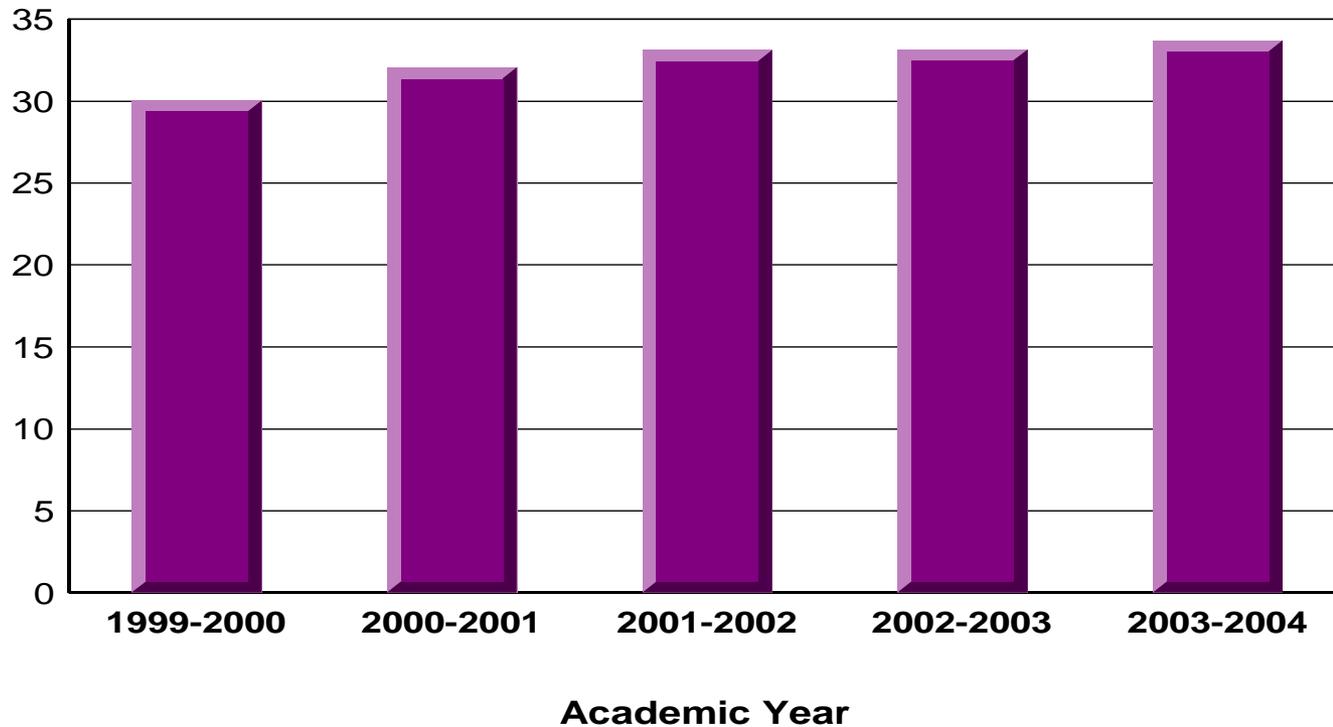
Growth in Number of Women Faculty at Case (1999-2004)

Number of Women Faculty



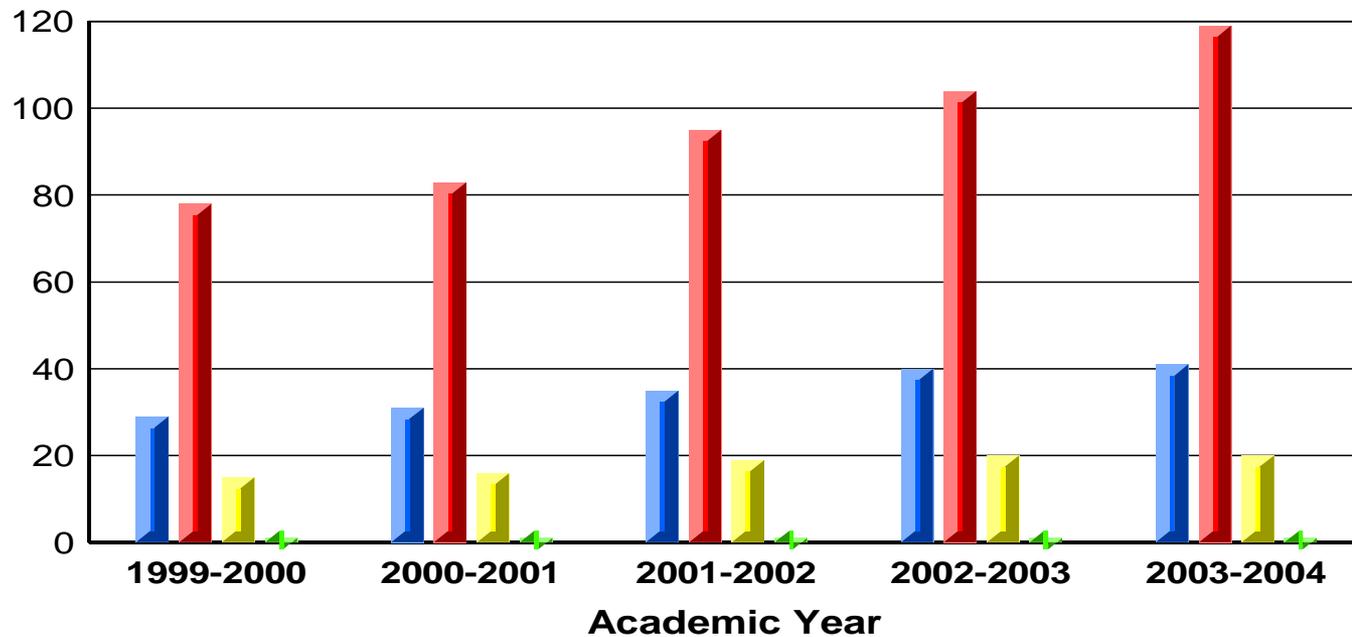
Growth in Percentage of Women Faculty at Case (1999-2004)

Percentage of Women Faculty



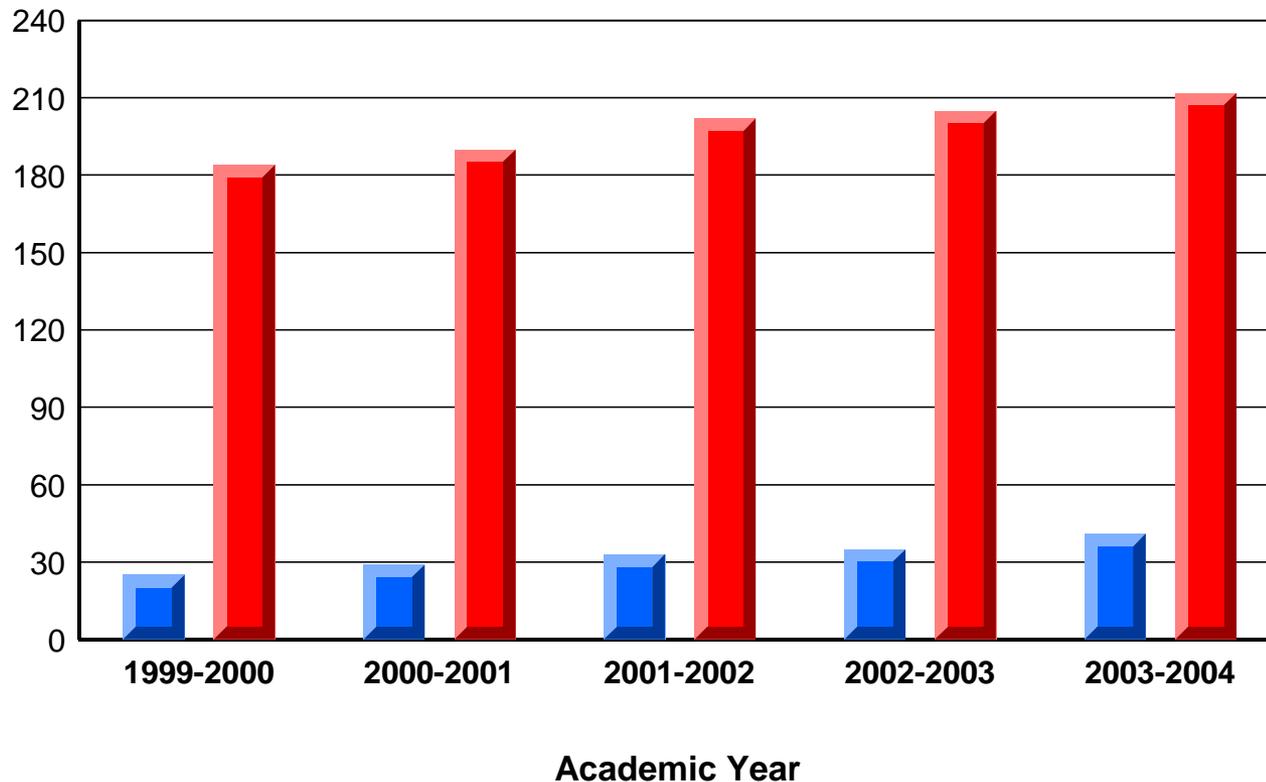
Growth in Number of Minority Faculty at Case (1999-2004)

Number of Minority Faculty



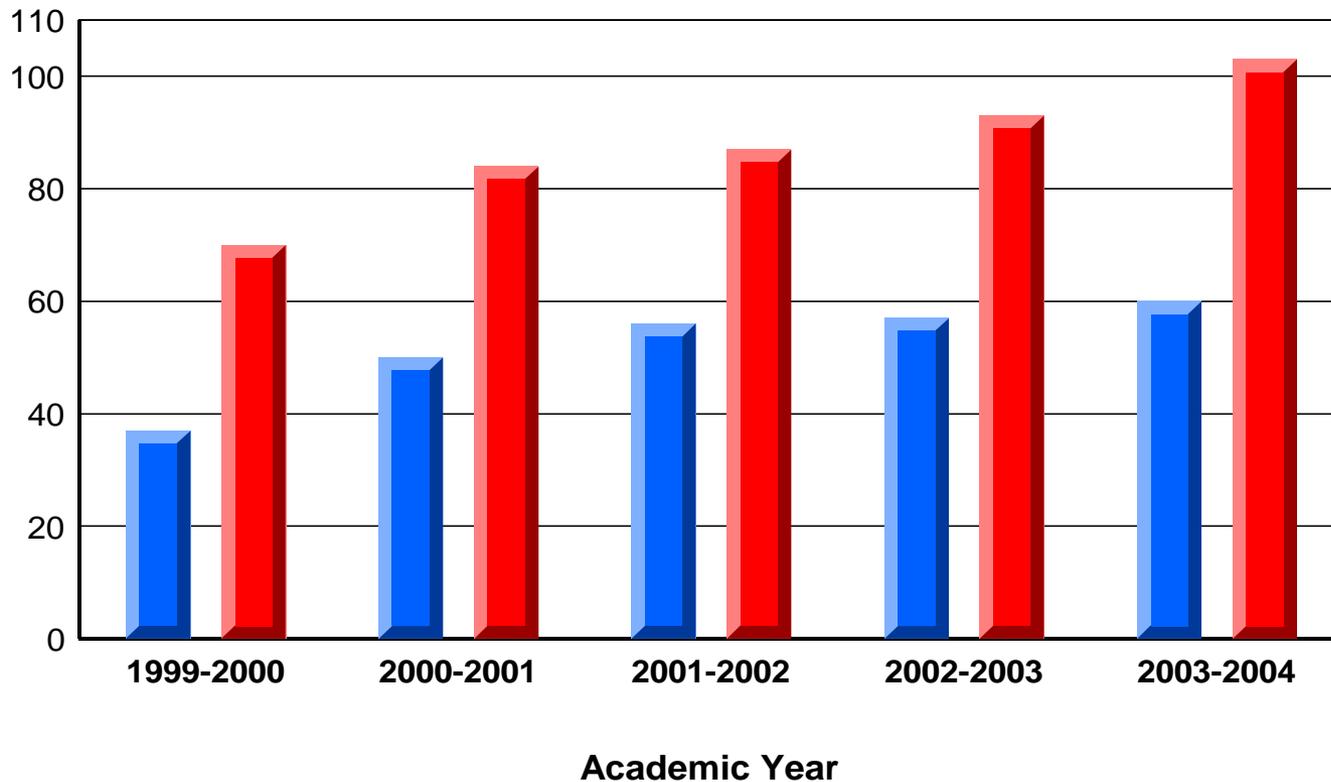
Growth in Number of Professors at Case 1999- 2004

Professors, Excluding Medical School



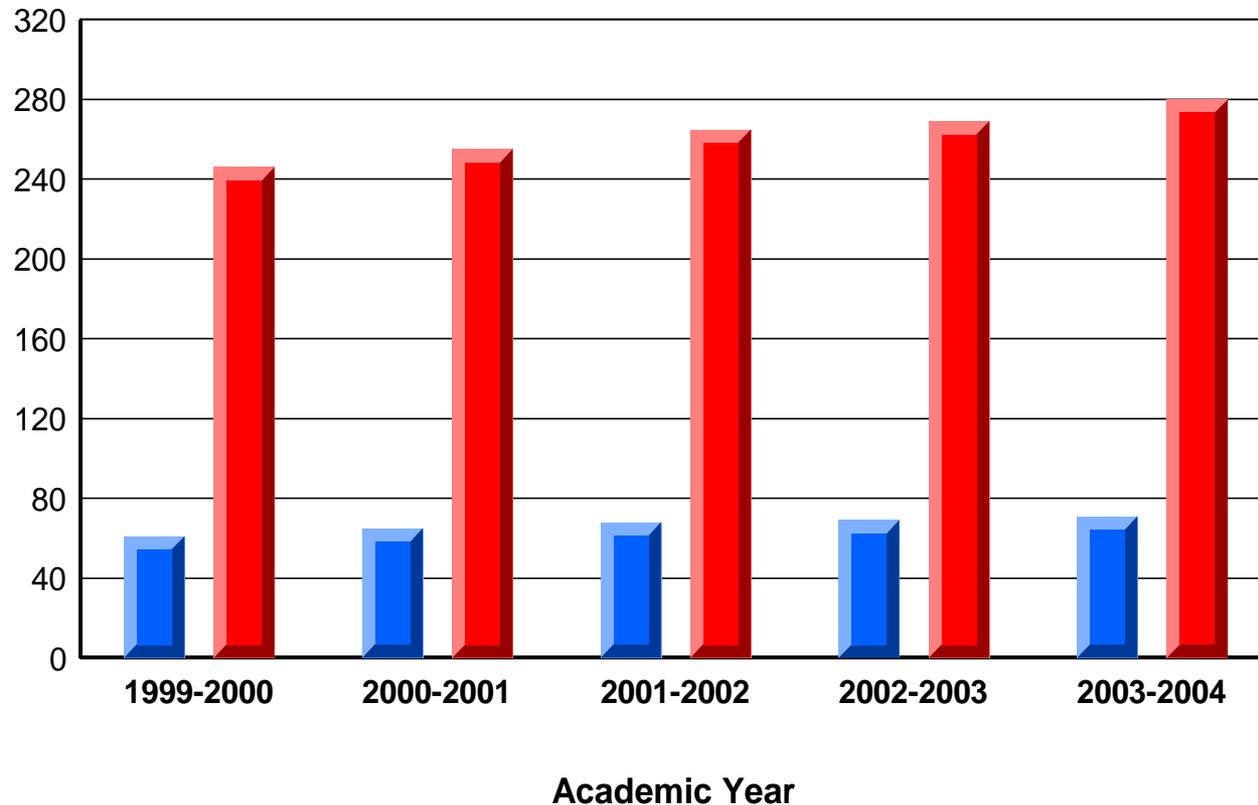
Growth in Number of Associate Professors at Case 1999-2004

Associate Professors, Excluding Medical School



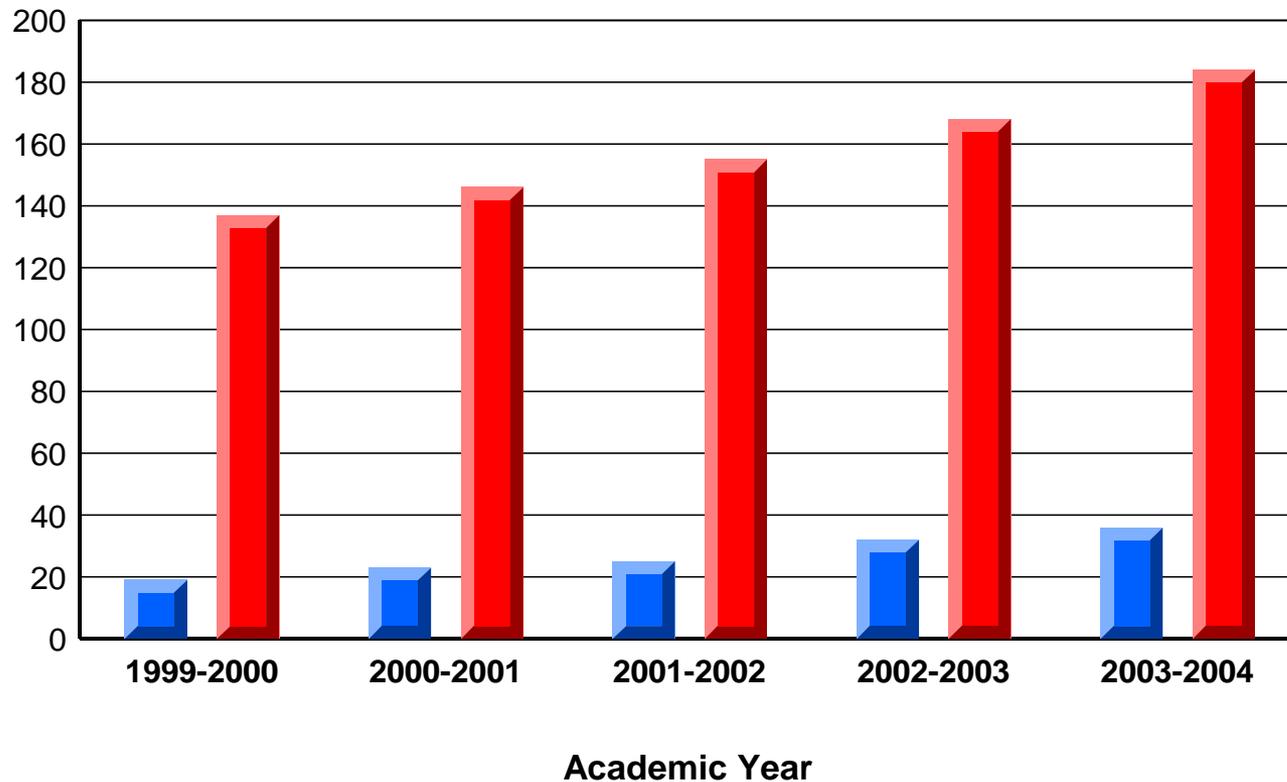
Growth in Tenured Faculty at Case 1999-2004

Tenured Faculty, Excluding Medical School



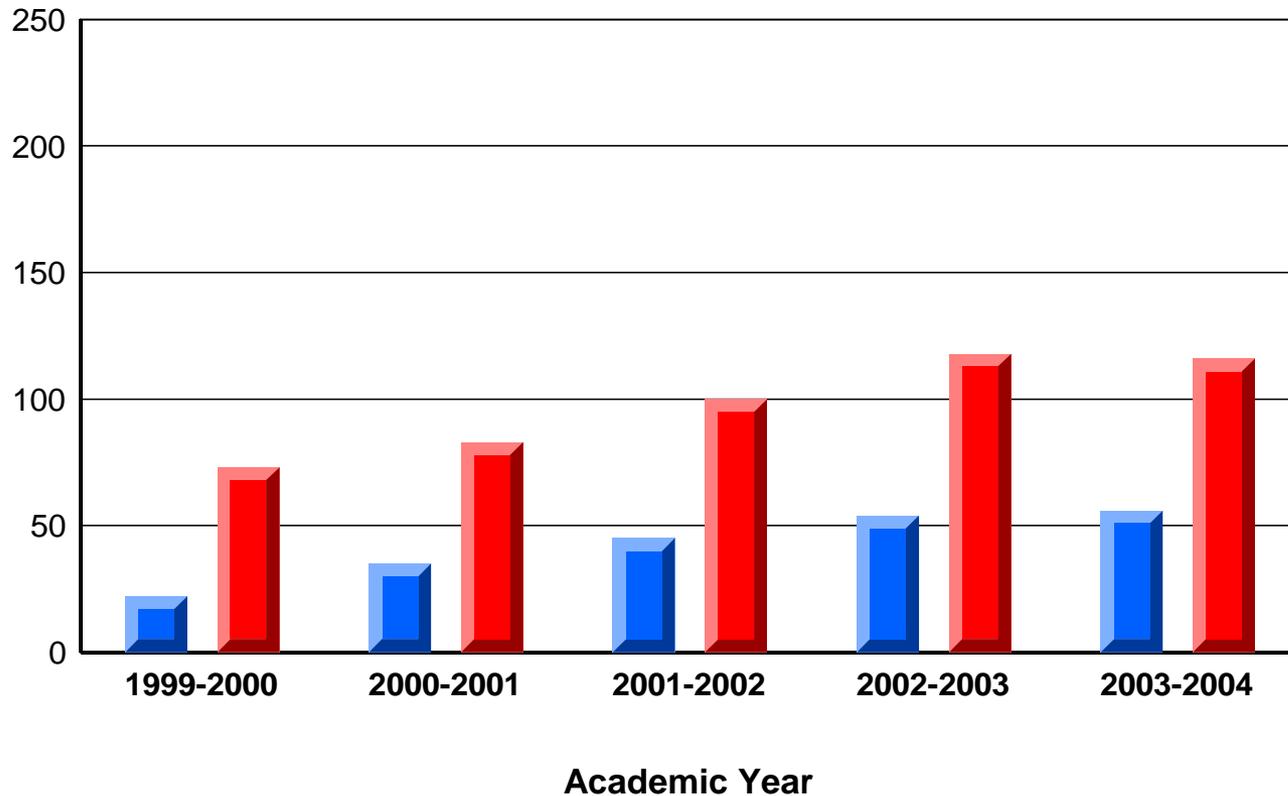
Growth in School of Medicine Professors (1999-2004)

Professors, Medical School



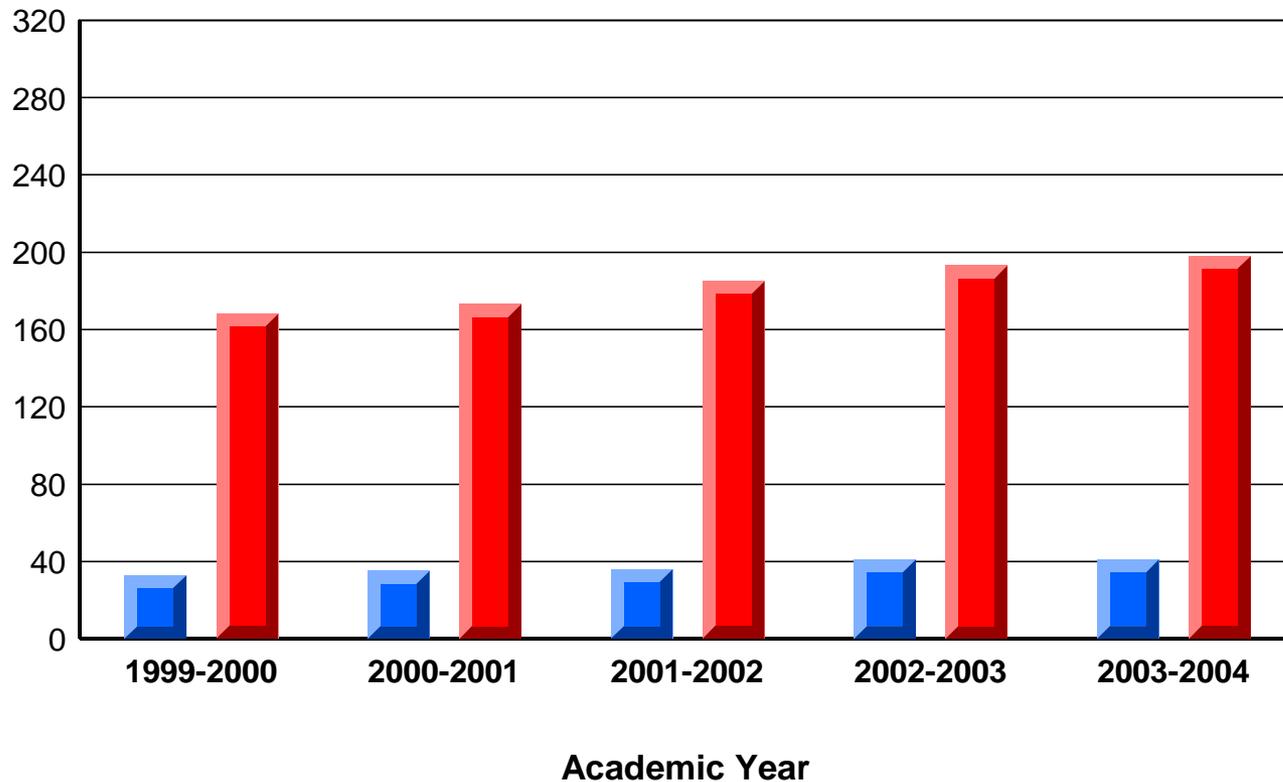
Growth in School of Medicine Associate Professors (1999-2004)

Associate Professors, Medical School

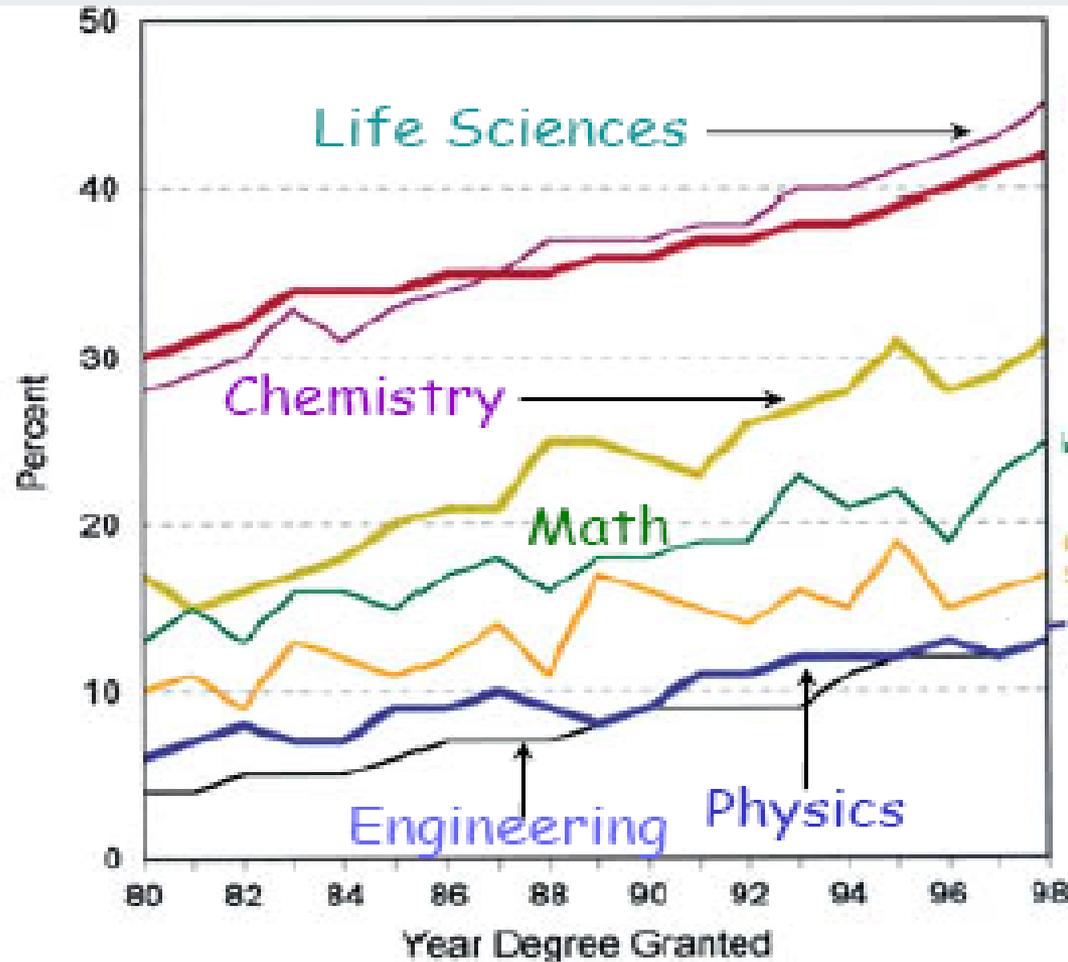


Growth in School of Medicine Tenured Faculty (1999-2004)

Tenured Faculty, Medical School



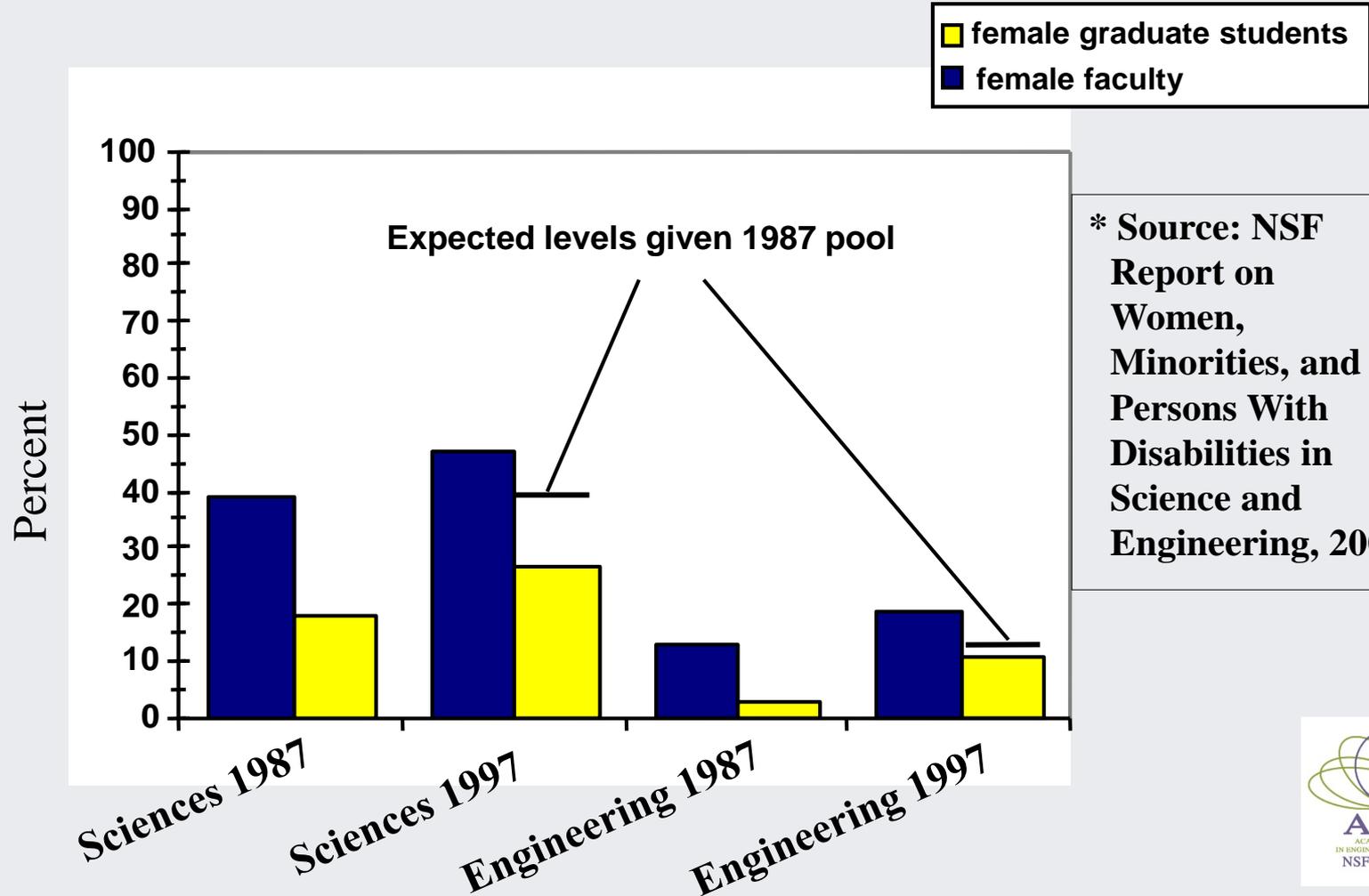
Percent of Ph.D.s Earned by Women by Field (National)



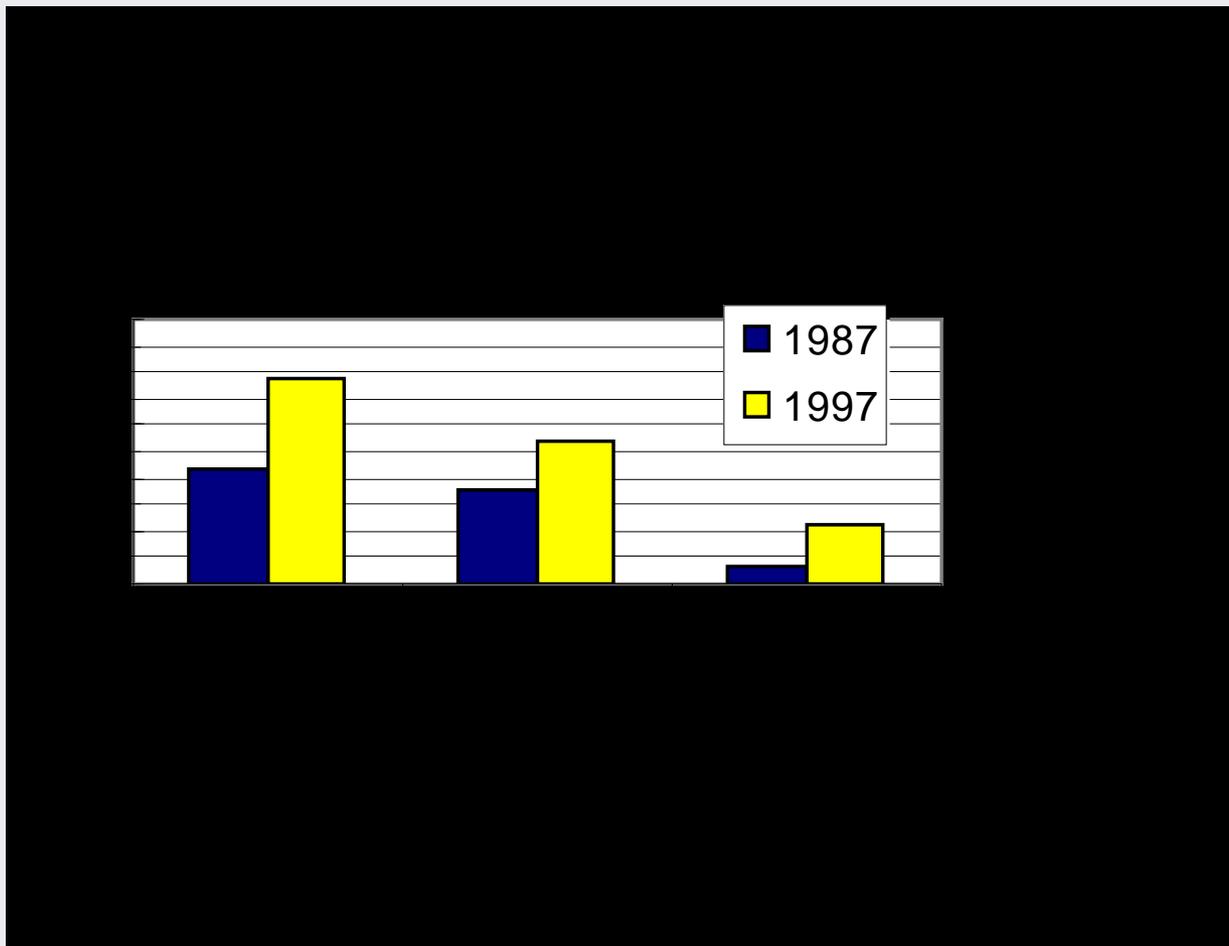
APS News, The Back Page, January 2000



National Percentages of Female Graduate Students and Faculty in S&E: 1987 & 1997



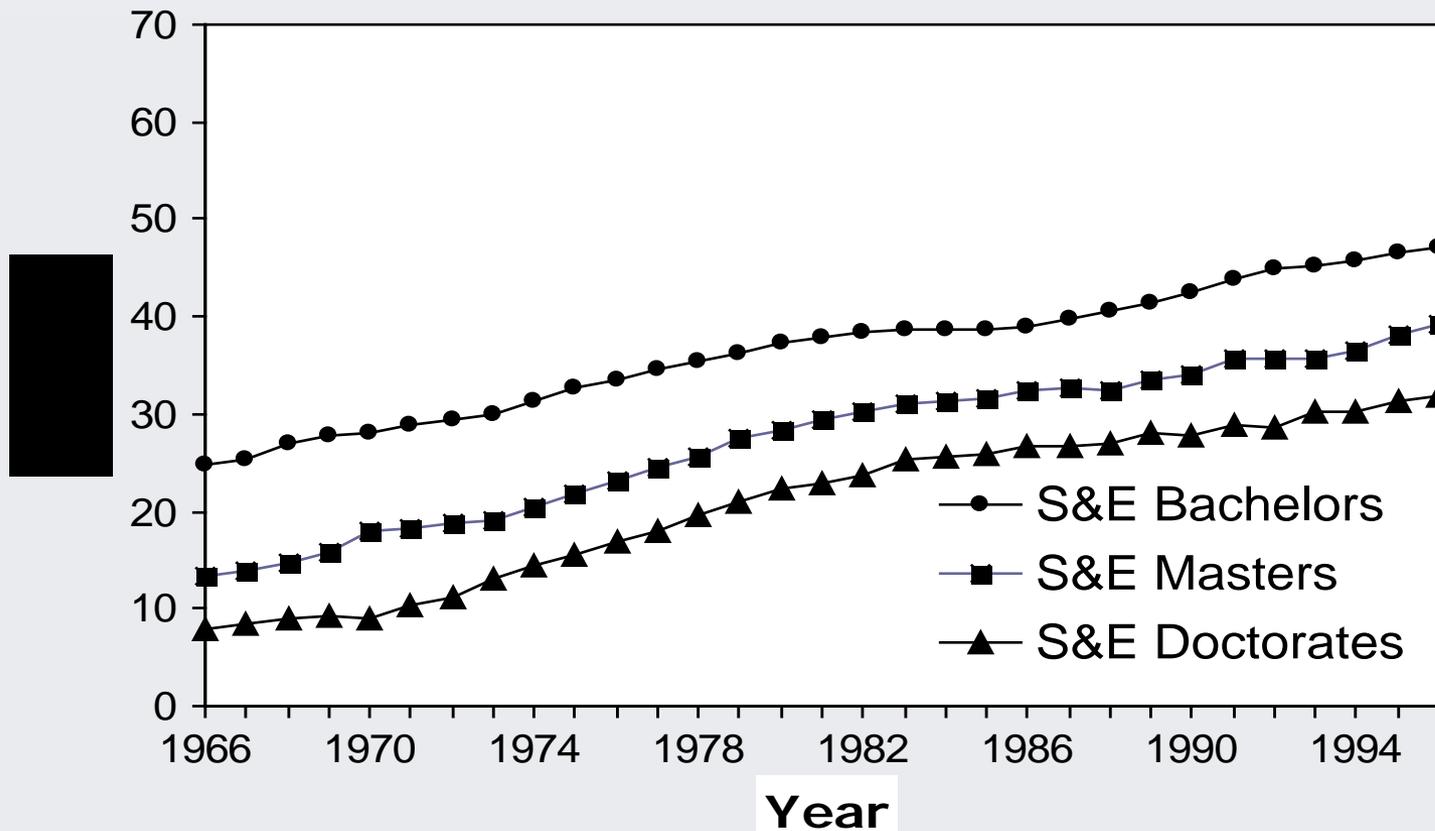
National Percentages of Female Faculty



*** Source: NSF Report on Women, Minorities, and Persons With Disabilities in Science and Engineering, 2000**



The Leaky Pipeline



Assume 7 years post-BA/BS to earn a Ph.D.: e.g., in 1988 women were 40% of S&E Bachelors; in 1995 they were 30% of Doctorates.

National Science Foundation/Division of Science Resources Studies, *Survey of Graduate Students and Post doctorates in Science and Engineering*.



Some Aspects of the Problem

- Men and women rating ...CV's give lower ratings when they believe work is a woman's
- Student ratings – tougher on women
- MIT Resources Study found that:
 - “Marginalization increases as women progress, accompanied by differences in salary, space, awards”
 - Problems especially flourish in departments with non-democratic practices ... cronyism and unequal access to resources

Source: Association of American Medical Colleges



Perception vs Reality

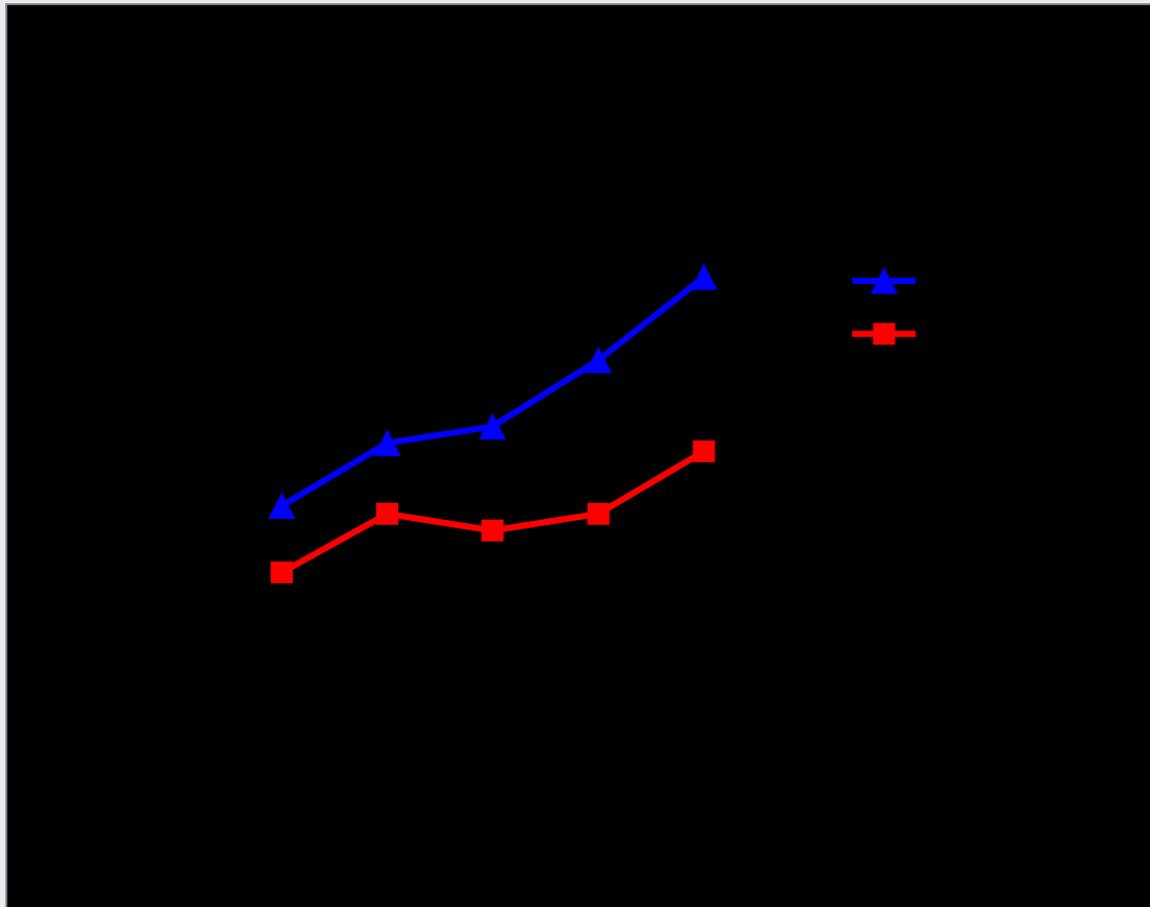
Since many of the problems encountered by female faculty are minor, this emphasis on remedies to improve the climate is an over-reaction.



Over time, small disadvantages accumulate into significant ones that have large impacts on career success and satisfaction.

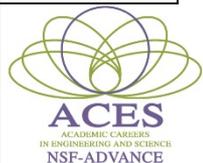


Gender Bias in Funding Postdoctoral Fellowships



“...the success rate of female scientists applying for postdoctoral fellowships at the MRC during the 1990’s has been less than half that of male applicants.”

C. Wennerås & A. Wold
Neotism and sexism in peer-review. *Nature*
387:341-343, 1997



Evaluation and Gender Bias

Women applying for a postdoctoral fellowship had to be 2.5 times more productive to receive the same competence score as the average male applicant

(Wenneras & Wold, (1997) *Nature*, 387, 341)

University psychology professors prefer 2:1 to hire “Brian” over “Karen”, even when the application packages are identical

(Steinpreis, Anders & Ritzke (1999) *Sex Roles*, 41, 509)



Study of Three U.S. Federal Agencies Using Peer Review

Rating of proposals

- Better for men than women at all 3 agencies
- Strongly related to perceived track record and being known to reviewer

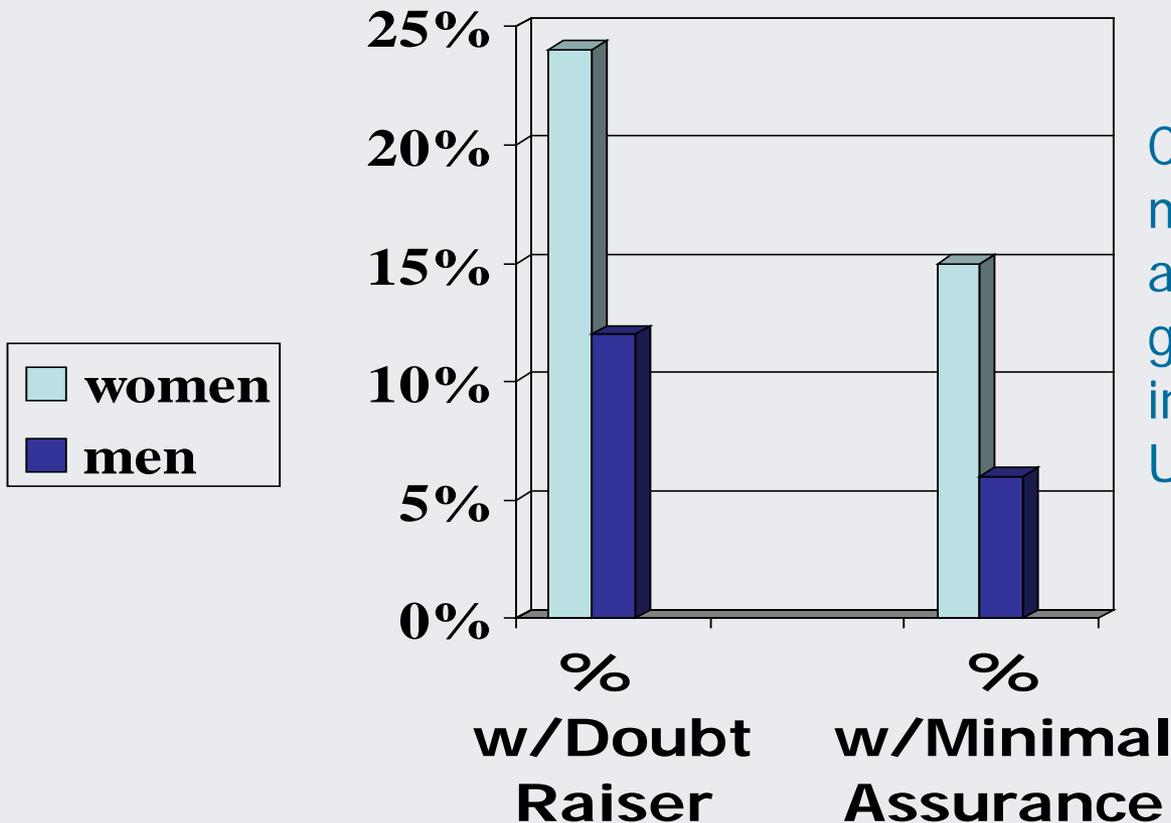
Funding of proposals

- Gender predicted scientific rating, and in turn rating predicted funding

Findings from survey of 1400 reviewers of proposals to NIH, NSF, NEH in 1994



Letters of Recommendation Differ for Men and Women

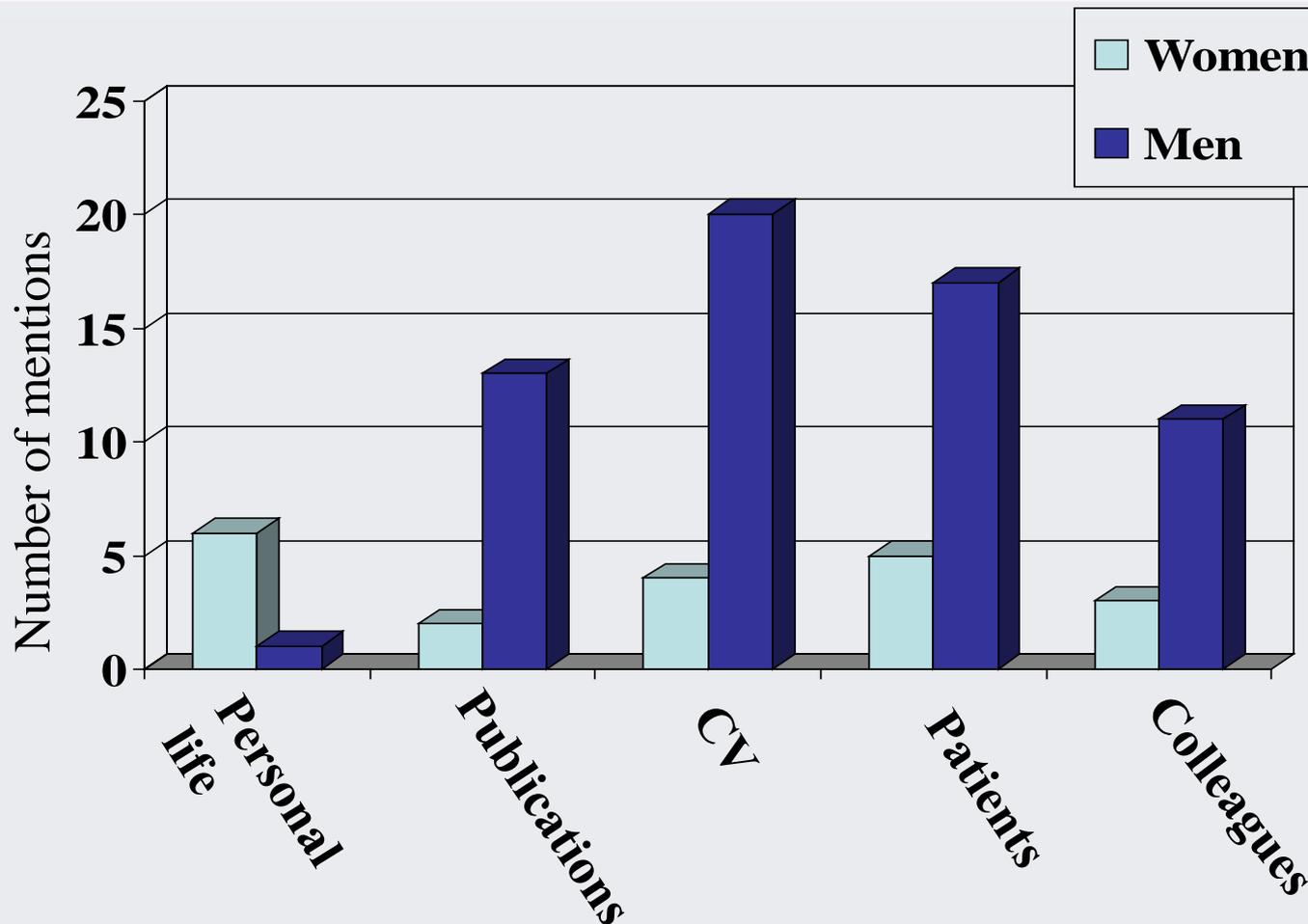


Comparison of letters for male and female applicants all of whom got jobs at this institution (Wayne State University).

Trix, F. and Psenka, C (2003) "Exploring the color of glass: Letters of recommendation for female and male medical faculty," *Discourse & Society*, Vol 14(2):191-220, 2003



Letters of Recommendation Differ for Men and Women (cont'd)



Distinctive content following possessives (his/her)



Trix, F. and Psenka, C (2003) "Exploring the color of glass: Letters of recommendation for female and male medical faculty," *Discourse & Society*, Vol 14(2):191-220, 2003

Examples of factors that contributed to determining salaries: 14 helped men more, 2 helped women more

Factor	Men	Women
BA	adds \$28,000	adds \$9,000
“fast track” designation	adds \$10,900	adds \$200
experience living abroad	adds \$9,200	subtracts \$7,700
choosing international work	adds \$5,300	subtracts \$4,200
speaking another language	adds \$2,600	subtracts \$5,100
negotiating for salary	subtracts \$5,600	adds \$3,500
frequent travel	adds \$ 3,200	adds \$6,300

Egan, M. L. & Bendick, M., Jr. (1994). International business careers in the United States: Salaries, advancement and male-female differences. *International Journal of Human Resource Management*, 5, 35-50.

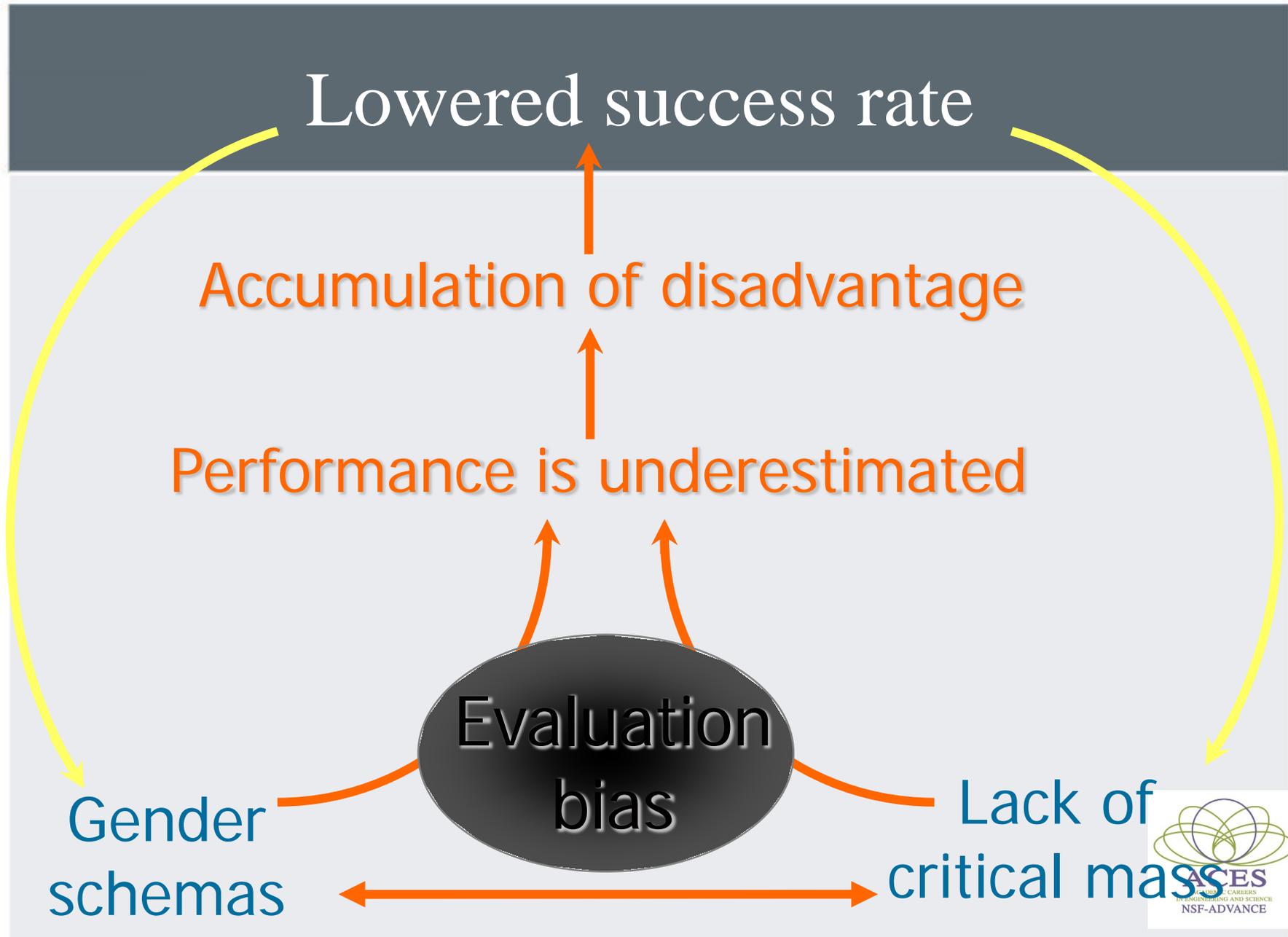


What are Gender Schemas

- Gender schemas are non-conscious hypotheses about sex differences that guide everyone's perceptions and behaviors
- Schemas are expectations or stereotypes that define “average” members of a group
 - Men are instrumental, task-oriented, competent
 - Women are nurturing, emotional, and care about relationships
- Both men and women have the same schemas



Source: Virginia Valian, 1998, *Why So Slow? The Advancement of Women*, MIT Press



How It Happens

Why So Slow: The Advancement of Women by Virginia Valian, Distinguished Professor of Psychology and PI of the Gender Equity Project, Hunter College (CUNY)

- Chosen by the NSF as recommended reading
- Read by ACES participants (chairs, deans, coaches, etc.)
- Discusses: gender schema definition, mountains out of molehills, how bias operates



Molehills become Mountains

Any one slight may seem minor but small imbalances and disadvantages accrue and accumulate into a mountain of disadvantage.



“Mountains are molehills piled one on top of the other”

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



Perception vs Reality

Discrimination is only practiced by a small set of ignorant people.



Research shows that everyone - whether male or female - perceives and treats women differently from men.



How We Can Be Unaware of Our Own Biases

We view ourselves as fair and impartial

We believe advancement is merit-based

We admire the competence of some women, which seems to show that we are free of gender bias

Some women, though the exception, make it to the top, appearing to demonstrate that evaluations are basically fair and that truly able women succeed

It is hard to remember that an exception is just that: an atypical event, and therefore actually evidence that the norm is different

Source: Virginia Valian, 1998, *Why So Slow? The Advancement of Women*, MIT Press

