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.”
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
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)
<table>
<thead>
<tr>
<th>Department</th>
<th>Courses</th>
</tr>
</thead>
<tbody>
<tr>
<td>College of Arts and Sciences</td>
<td>Anthropology, Geological Sciences, Mathematics, Political Science</td>
</tr>
<tr>
<td>School of Engineering</td>
<td>Biomedical Engineering, Chemical Engineering, Electrical Engineering &amp; Computer Science</td>
</tr>
<tr>
<td>School of Medicine</td>
<td>Biochemistry, Molecular Biology and Microbiology</td>
</tr>
<tr>
<td>School of Management</td>
<td>Marketing and Policy Studies</td>
</tr>
</tbody>
</table>
Overview of ACES Initiatives: Case’s Recruitment and Retention Strategies

Recruitment
- Search Committee Toolkit
- Active Recruiting
- Distinguished Lectureships
- New Hiring Guidelines

Retention
- Leadership Development
- Coaching
- Networking
- Opportunity Grants
- Student Training
- Mentoring
- Transparent Policies

Partner Hiring Policy
Critical Mass
Climate
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?
Appendix of Supplementary Information
## Faculty Composition in S&E Departments at Case (2003-04)

<table>
<thead>
<tr>
<th>S&amp;E Depts.</th>
<th>Full-Time</th>
<th>Part-Time/Adjunct</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female</td>
<td>111 (22%)</td>
<td>27 (33%)</td>
<td>138 (23%)</td>
</tr>
<tr>
<td>Male</td>
<td>400 (78%)</td>
<td>56 (67%)</td>
<td>456 (77%)</td>
</tr>
<tr>
<td>Total</td>
<td>511</td>
<td>83</td>
<td>594</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>University</th>
<th>Full-Time</th>
<th>Part-Time/Adjunct</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female</td>
<td>727 (31%)</td>
<td>508 (33%)</td>
<td>1235 (32%)</td>
</tr>
<tr>
<td>Male</td>
<td>1616 (69%)</td>
<td>1029 (67%)</td>
<td>2645 (68%)</td>
</tr>
<tr>
<td>Total</td>
<td>2343</td>
<td>1537</td>
<td>3880</td>
</tr>
</tbody>
</table>

Source: Institutional Research – Human Resources
# Women in S&E – Tenure Status at Case (2003-04)

<table>
<thead>
<tr>
<th>S&amp;E Tenure-track Status</th>
<th>Tenured</th>
<th>In Tenure Track</th>
<th>Total (Tenured + In Tenure Track)</th>
<th>Non-Tenure Track</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female</td>
<td>37</td>
<td>37</td>
<td>74 (18%)</td>
<td>15 (42%)</td>
</tr>
<tr>
<td>Male</td>
<td>246</td>
<td>86</td>
<td>332 (82%)</td>
<td>21 (58%)</td>
</tr>
<tr>
<td>Total</td>
<td>406</td>
<td></td>
<td></td>
<td>36</td>
</tr>
</tbody>
</table>

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)

<table>
<thead>
<tr>
<th>Tenure Awards</th>
<th>S&amp;E Departments</th>
<th>University</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female</td>
<td>1 (7%)</td>
<td>5 (19%)</td>
</tr>
<tr>
<td>Male</td>
<td>13 (93%)</td>
<td>21 (81%)</td>
</tr>
<tr>
<td>Total</td>
<td>14</td>
<td>26</td>
</tr>
</tbody>
</table>

Source: Office of the Provost

<table>
<thead>
<tr>
<th>Promoted to Professor</th>
<th>S&amp;E Departments</th>
<th>University</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female</td>
<td>2 (22%)</td>
<td>10 (30%)</td>
</tr>
<tr>
<td>Male</td>
<td>7 (78%)</td>
<td>23 (70%)</td>
</tr>
<tr>
<td>Total</td>
<td>9</td>
<td>33</td>
</tr>
</tbody>
</table>

Source: Institutional Research – Human Resources
# Academic Leadership in S&E Depts. at Case (2003-04)

<table>
<thead>
<tr>
<th>S&amp;E Leadership</th>
<th>Endowed Chair</th>
<th>Dept. P&amp;T Committee</th>
<th>Administrative Position</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female</td>
<td>8 (14%)</td>
<td>17 (22%)</td>
<td>9 (15%)</td>
</tr>
<tr>
<td>Male</td>
<td>49 (86%)</td>
<td>59 (78%)</td>
<td>51 (85%)</td>
</tr>
<tr>
<td>Total</td>
<td>57</td>
<td>76</td>
<td>60</td>
</tr>
</tbody>
</table>
Growth in Number of Women Faculty at Case (1999-2004)

Number of Women Faculty

<table>
<thead>
<tr>
<th>Academic Year</th>
<th>Number of Women Faculty</th>
</tr>
</thead>
<tbody>
<tr>
<td>1999-2000</td>
<td>300</td>
</tr>
<tr>
<td>2000-2001</td>
<td>350</td>
</tr>
<tr>
<td>2001-2002</td>
<td>400</td>
</tr>
<tr>
<td>2002-2003</td>
<td>450</td>
</tr>
<tr>
<td>2003-2004</td>
<td>500</td>
</tr>
</tbody>
</table>
Growth in Percentage of Women Faculty at Case (1999-2004)

Percentage of Women Faculty

Academic Year

<table>
<thead>
<tr>
<th>Academic Year</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1999-2000</td>
<td>30</td>
</tr>
<tr>
<td>2000-2001</td>
<td>30</td>
</tr>
<tr>
<td>2001-2002</td>
<td>30</td>
</tr>
<tr>
<td>2002-2003</td>
<td>30</td>
</tr>
<tr>
<td>2003-2004</td>
<td>30</td>
</tr>
</tbody>
</table>
Growth in Number of Minority Faculty at Case (1999-2004)

Number of Minority Faculty

Academic Year


African American | Asian American | Hispanic American | Native American
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

Academic Year

Growth in Tenured Faculty at Case 1999-2004

Tenured Faculty, Excluding Medical School

Academic Year

Growth in School of Medicine Professors (1999-2004)

Professors, Medical School

Academic Year

- 1999-2000
- 2000-2001
- 2001-2002
- 2002-2003
- 2003-2004
Growth in School of Medicine Associate Professors (1999-2004)

Associate Professors, Medical School

Academic Year

2003-2004
Growth in School of Medicine Tenured Faculty (1999-2004)

Tenured Faculty, Medical School

Academic Year

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

Expected levels given 1987 pool

National Percentages of Female Faculty in the Social Sciences, Sciences, and Engineering: 1987-1997*

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*. 

The Leaky Pipeline
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
<table>
<thead>
<tr>
<th>Perception vs Reality</th>
</tr>
</thead>
<tbody>
<tr>
<td>Since many of the problems encountered by female faculty are minor, this emphasis on remedies to improve the climate is an overreaction.</td>
</tr>
<tr>
<td>Over time, small disadvantages accumulate into significant ones that have large impacts on career success and satisfaction.</td>
</tr>
</tbody>
</table>
“…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
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


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).

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

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

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

Lowered success rate

Accumulation of disadvantage

Performance is underestimated

Evaluation bias

Gender schemas

Lack of critical mass
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
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”

Perception vs Reality

**Perception**

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

**Reality**

*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