Influencing the Culture by Changing the Climate in Academic STEM Fields

“Moving Beyond Fixing the Women to Changing the Culture in Academic STEM Fields”

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45 minute - ROADMAP

Background
• Define Terms in Context
• National Data – Tenure Status in STEM

ROADMAP

Background
• Framework Promote Gender Equity
  ▶ Barriers Women’s Participation in STEM

ORGANIZATIONAL CULTURE

Culture: A pattern of shared basic assumptions that gets passed down over time.

1. Artifacts
2. Rituals
3. Values
4. Norms

Extremely resistant to change

(Schein, 1992)
ORGANIZATIONAL CLIMATE

Climate: Perceptions of organizational practices.

1. Communication
2. Leadership
3. Work-life integration

More malleable and more easily studied


Tenure Status of Women in STEM by Field (2010)

Tenure Status of Underrepresented Minorities in STEM (2010)

FRAMEWORK FOR PROMOTING GENDER EQUITY IN ORGANIZATIONS

Frame 1: Equip the Woman
Frame 2: Create Equal Opportunity
Frame 3: Value Difference
Frame 4: Re-vision Work Culture
Equip (not fix) the Woman

Provide opportunities to build skills for success.

- Negotiation
- Leadership
- Conflict Management
- Assertiveness Training
- Budget Management
- Public Speaking/Presentation Skills

Create Equal Opportunity: Level the Playing Field

Remove structural and procedural barriers that interfere with access and advancement of specific groups.

Processes impacted:
- Hiring
- Performance Evaluation
- Promotion and Tenure

What Major Factors Limit Women’s Advancement in Academic STEM Fields?

UC Faculty Family Friendly Edge
Supported by NSF ADVANCE Community Research

- Lack of family friendly policies (Frame 2)
- Implicit bias (Frame 3)

Conclusion: The University of California’s ability to attract and retain the best faculty over the next decade will depend largely on a culture that values and supports both work and family life needs of all faculty over the course of their career.

Department chairs and deans have a central responsibility in understanding the importance of a family friendly department and in implementing policies, sharing resources, and reinforcing cultural practices to assist all faculty. Given that the tenure clock generally coincides with the biological clock, women faculty often face particular challenges in achieving balance and success.
Everybody is Very Busy (UC Faculty, ages 30-50)

<table>
<thead>
<tr>
<th>Gender/Children Status</th>
<th>Professional</th>
<th>Housework</th>
<th>Caregiving</th>
</tr>
</thead>
<tbody>
<tr>
<td>Women with Children</td>
<td>14.6</td>
<td>51.2</td>
<td>19.8</td>
</tr>
<tr>
<td>Men with Children</td>
<td>20.3</td>
<td>55.6</td>
<td>10.6</td>
</tr>
<tr>
<td>Women without Children</td>
<td>8.1</td>
<td>59.8</td>
<td>10.6</td>
</tr>
<tr>
<td>Men without Children</td>
<td>8.6</td>
<td>59.1</td>
<td>10.6</td>
</tr>
</tbody>
</table>

Percent Citing Factor as a Major Reason for Not Using ASMD

- *These questions were based on Robert Drago's Mapping Project Survey Instrument (http://lsir.la.psu.edu/workfam/facultysurvey.htm).
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Use of Family Friendly Policies and Sabbaticals by Eligible UC Assistant Professors*

<table>
<thead>
<tr>
<th>Category</th>
<th>Women, Assist. Prof.</th>
<th>Men, Assist. Prof.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Active Service Modified</td>
<td>48%</td>
<td>44%</td>
</tr>
<tr>
<td>Paid Leave</td>
<td>54%</td>
<td>46%</td>
</tr>
<tr>
<td>Temporary Childcare Stoppage</td>
<td>43%</td>
<td>42%</td>
</tr>
<tr>
<td>Sabbatical</td>
<td>46%</td>
<td>47%</td>
</tr>
<tr>
<td>Unpaid Leave</td>
<td>47%</td>
<td>45%</td>
</tr>
</tbody>
</table>

Frame 2

Major Reasons Eligible UC Parents Did Not Use Active Service Modified Duties (ASMD)

- "I was not the primary caregiver to the child" 27%
- "I did not need the time" 14%
- "I did not know about the policy" 26%
- "It might have hurt my chances for tenure or promotion" 51%

Percent who indicated "Yes," "I had fewer children than I wanted" 22%

Having Fewer Children Than They Wanted: UC Faculty, Ages 40-60, by Gender and Number of Children

- No Children: 22% (Women), 30% (Men)
- 1 Child: 42% (Women), 46% (Men)
- 2 Children: 13% (Women), 32% (Men)
- 3+ Children: 0% (Women), 24% (Men)
Leaks in the Pipeline for Women PhDs in the Sciences

Family Friendly Policies that Matter Most
Coache data: n= over 15,000 pre-tenure faculty

- Dedicated personnel to staff work-life services offices.
- Written policies:
  - Dual career couples hiring
  - Early promotion and tenure
  - Parental leave
  - Modified duties
  - Part-time tenure option
  - Stop the tenure clock provisions
- Provide childcare, lactation rooms, flexibility, family socials and cafeteria menu of benefits that include eldercare.

Department Chairs Role in Creating a Family Friendly Department

- Make it a priority.
- Become conscious about unconscious bias issues concerning caregiving and gender.
- Know the family accommodation policies and laws.
- Actively highlight, advertise and support your departments family accommodation policies for all faculty.
- Make the use of family accommodations standard operating procedures.
- Maintain zero tolerance for discriminatory or disparaging comments and behaviors.
- Proactively recruit and hire diverse faculty, including those who have temporarily slowed their careers for family reasons.

Value Difference

Provide content-rich programming for academic leaders, faculty, staff, students that increase understanding, awareness of issues that prevent people from diverse backgrounds from fully engaging in and benefitting from the enterprise; the critical value they contribute; and the significant loss to the organization if they are marginalized.
What Major Factors Limit Women’s Advancement in Academic STEM Fields?

- Lack of family friendly policies (Frame 2)
- Implicit bias (Frame 3)

Feelings – Afraid or Angry?

CONDRY & CONDRY, 1976

Unconscious Bias

Debbie *Afraid*

Danny *Angry*

What happened when the baby was named?
What functions are affected by unintended bias/implicit associations?

- Hiring and Advancement
- Evaluation of CVs
- Letters of Recommendation
- Service Assignments
- Teaching Evaluations
- Citations

What the research says....

“Brian” is preferred 2:1 over “Karen” by psychology professors reviewing resumes. (Steinpreis et al., 1999)

Applicants with African American sounding names have to send 15 resumes compared to 10 for white-sounding names. (Bertrand & Mullainathan, 2004)

Science faculty regardless of gender, rated male student applicants significantly more competent than identical female applicants. (Kroll & Hebl, 2010)
A double-blind review process by Behavioral Ecology caused a significant increase in the publication of articles with a woman as the first author. (BUDDEN ET AL., 2008)

In fields where considerable resources are necessary, women publish less. (AMARAL ET AL. 2012) Confirmed significant disparity especially in STEM fields. (SUGIMOTO ET AL. 2013)

Women professors must do more “emotional work” inside and outside the classroom to earn a positive student evaluation. (CENTRA AND GAUBATZ, 2000; FELDER AND BRENT, 2008; BASOW, 1998)

Recommendation letters for women are shorter, less positive and describe women as students and teachers vs. researchers and professionals. (TRIX & PSENKA, 2003)

In review of recent law school graduate resumes, mothers are held to a higher standard than fathers or women without children. (FUEGEN & ENDICOTT, 2010)

Women are often asked to accept more service assignments, often in the interest of adding diversity and mentoring more students. (GEE AND NORTON, 2009; MIT, 2011)

Women spent much more time on service to the university which is recognized as less prestigious than service to the profession. (MISRA ET AL., 2011)

Women who exhibit strong leadership skills are rated as less “likeable”. (EAGLY & KARAU, 2002; HEILMAN, ET AL, 2004; RIDGEWAY, 2001)


Widely culturally shared
• Both men and women hold them about gender
• Both whites and people of color hold them about race
• People are often not aware of them

Applied more under circumstances of:
• Ambiguity (including lack of information)
• Time pressure
• Lack of critical mass

Good News! - Implicit associations/bias can’t be eliminated but awareness mitigates consequences. Keep talking about it!

Consider and address the underlying systemic characteristics of an organization that leads to inequity in the workplace for underrepresented groups.
Examine Core Assumptions re: Tenure

- Tenure is necessary to protect academic freedom and is required to attract men and women of ability.
- All faculty must excel in research, teaching and service – and at some institutions outreach.
- The scholarship of discovery, particularly WITHIN the discipline should count the most in promotion and tenure decisions.
- Tenure serves all faculty equally well regardless of faculty sex and race.
- The university is a meritocracy in which the most meritorious are promoted and tenured.

Examine Core Assumptions re: Tenure

- Tenure should be “forever” even in the absence of early retirement and presence of longer lives and careers.
- Tenure ensures that faculty will remain productive over an academic career.
- To be an effective faculty member, you must spend your entire career in academe.
- The soon-to-be minority (full-time T/TT faculty) must have lifetime employment. The soon-to-be majority (p/t and f/t faculty and researchers at interdisciplinary research centers) need not.

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COACHE Data 2005-­2006: 7 Exemplar Public Institutions (Trower, 2012) Supported by ADVANCE Community

Frame 1: Equip the Woman

- Sample dossiers of tenure-track faculty who were promoted
- Information websites where faculty can find what they need
- Workshops on getting tenure, running a lab, supervising students, getting grants
Frame 2:

Create Equal Opportunity
• Opportunities for networking, instrumental mentoring, collaboration
• Clarity about expectations for tenure re: weights, allocation of effort for the relevant components of faculty work
• Meaningful annual and midpoint reviews with written feedback about performance and progress towards tenure

Frame 2:

Create Equal Opportunity (cont’d)
• Policies that allow flexibility depending on life circumstances
• Clear, fair and equitable polices/practices re: work/life matters including family friendly and dual-careers
• Support for excellence in teaching and research ($ and non $)

Frame 3:

Value Difference
• Offices with personnel focused on creating an equitable workplace
• Ongoing professional development for chairs, deans and senior faculty about issues affecting tenure-track faculty
• Sustained leadership from the top about the centrality of cultivating faculty talent

Toolkit

Access: http://www.portal.advance.vt.edu/
Access: www.strategictoolkit.org
NSF ADVANCE HRD 0930097
Access: http://gender.stanford.edu/
Access: http://www.toolsforchangeinSTEM.org/
How wonderful it is that nobody need wait a single moment before starting to improve the world.

Anne Frank
Sources & Resources


