Improving the Fit Between Family and Career for Academic Women

Kathleen Christensen
Alfred P. Sloan Foundation

Sustaining Women Through Critical Transition Points in Science, Engineering and Medicine Workshop

National Academies of Science
September 19, 2008
Increase in Women Ph.D.s – 1973 to 2005

PhD Recipients from U.S. Universities (U.S. Citizens Only)

Source: NSF, Survey of Earned Doctorates, taken from Webcaspar.
Source: UCOP, “Long Range Planning Presentation,” before the University of California Board of Regents, September 2002
UC Berkeley (UCB) Tenure-Track Faculty, Postdoctoral Scholars, Graduate Students, and Undergraduates

Dec. 2007

<table>
<thead>
<tr>
<th>Position</th>
<th>Women</th>
<th>Men</th>
</tr>
</thead>
<tbody>
<tr>
<td>UCB Full Prof. (Step 6+)</td>
<td>18%</td>
<td>82%</td>
</tr>
<tr>
<td>UCB Full Prof. (&lt;Step 6)</td>
<td>30%</td>
<td>70%</td>
</tr>
<tr>
<td>UCB Associate</td>
<td>36%</td>
<td>64%</td>
</tr>
<tr>
<td>UCB Assistant</td>
<td>40%</td>
<td>60%</td>
</tr>
<tr>
<td>UCB Lecturers</td>
<td>49%</td>
<td>51%</td>
</tr>
<tr>
<td>UCB Postdocs Scholars</td>
<td>35%</td>
<td>65%</td>
</tr>
<tr>
<td>UCB Doctoral Stud.</td>
<td>43%</td>
<td>57%</td>
</tr>
<tr>
<td>UCB Master's Stud.</td>
<td>48%</td>
<td>52%</td>
</tr>
<tr>
<td>UCB Undergrads</td>
<td>54%</td>
<td>46%</td>
</tr>
</tbody>
</table>

N=

609
384
298
246
620
928
6,009
4,218
24,636

Leaks in the Academic Pipeline for Women*

* Results are based on Survival Analysis of the Survey of Doctorate Recipients (a national biennial longitudinal data set funded by the National Science Foundation and others, 1979 to 1995). Percentages take into account disciplinary, age, ethnicity, PhD calendar year, time-to-PhD degree, and National Research Council academic reputation rankings of PhD program effects. For each event (PhD to TT job procurement, or Associate to Full Professor), data is limited to a maximum of 16 years. The waterline is an artistic rendering of the statistical effects of family and gender.

Note: The use of NSF data does not imply NSF endorsement of research methods or conclusions contained in this paper.
Family Status of Tenured Faculty
Sciences, Social Sciences, and Humanities in the U.S.*

**Women**
- Married with Children**: 44%
- Married without Children: 19%
- Single with Children**: 11%
- Single without Children: 26%

N=10,652

**Men**
- Married with Children**: 70%
- Married without Children: 15%
- Single with Children**: 4%
- Single without Children: 11%

N=32,234

*PhDs from 1978-1984 Who Are Tenured 12 Years out from PhD.
**Had a child in the household at any point post PhD to 12 years out.

Family Status of Tenured Faculty in the Sciences*

*PhDs from 1978-1984 Who Are Tenured 12 Years out from PhD in STEM, Bio. Sciences & Health Sc.
**Had a child in the household at any point post PhD to 12 years out.

Source: Marc Goulden, UCB, Survey of Doctorate Recipients. Sciences, 1979-1999,
Having Fewer Children Than They Wanted:
UC Faculty, Ages 40-60

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

http://ucfamilyedge.berkeley.edu
Fast-Track Professionals* with Babies**

*Working 1 or more weekly hours.
**Children, Ages 0 or 1 in Household.

Everybody is Very Busy \textit{(UC Faculty, ages 30-50)}

http://ucfamilyedge.berkeley.edu
Child Care – Average Hours per Week
Univ. of California Faculty

http://ucfamilyedge.berkeley.edu
Mean Weekly Hours Worked by Science and Social Science Tenure-Track Faculty* in the U.S. - 1999

*Pre- and Post-Tenure

Source: SDR Sciences, 1999

*Mean age calculations based on PhD Recipients given up to 14 years from PhD receipt to achieve tenure, e.g. 1999 includes SDR respondents who received their PhD from 1985-1987.
Note: Use of NSF Data does not imply the endorsement of research methods or conclusions contained in this report.
Changing Career Goals - UC PhD Students

Career Goal at Start of PhD

Women

Men

Current Goal

http://ucfamilyedge.berkeley.edu/grad%20life%20survey.html

*Professor w. Research Emphasis
### Reasons Most Commonly Cited by UC PhD Students for Shifting Career Goal away from Professor with Research Emphasis

<table>
<thead>
<tr>
<th>% Citing Factor As “Very Important*” in Career Goal Shift</th>
<th>Total</th>
<th>Men</th>
<th>Women</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Negative experience as PhD student</td>
<td>45%</td>
<td>44%</td>
<td>46%</td>
</tr>
<tr>
<td>2 Other life interests</td>
<td>42%</td>
<td>35%</td>
<td>48%</td>
</tr>
<tr>
<td>3 Professional activities too time consuming</td>
<td>41%</td>
<td>35%</td>
<td>45%</td>
</tr>
<tr>
<td>4 Issues related to children</td>
<td>36%</td>
<td>21%</td>
<td>46%</td>
</tr>
<tr>
<td>5 Geographic location Issues</td>
<td>35%</td>
<td>28%</td>
<td>40%</td>
</tr>
<tr>
<td>6 Feelings of isolation/alienation as PhD student</td>
<td>33%</td>
<td>31%</td>
<td>35%</td>
</tr>
<tr>
<td>7 Bad job market</td>
<td>30%</td>
<td>29%</td>
<td>30%</td>
</tr>
<tr>
<td>8 Career advancement issues</td>
<td>30%</td>
<td>34%</td>
<td>27%</td>
</tr>
<tr>
<td>9 Job security</td>
<td>29%</td>
<td>29%</td>
<td>29%</td>
</tr>
<tr>
<td>10 Spouse/partner issues or desire to marry</td>
<td>27%</td>
<td>22%</td>
<td>32%</td>
</tr>
<tr>
<td>11 Monetary compensation (e.g. salary, ben.)</td>
<td>27%</td>
<td>31%</td>
<td>23%</td>
</tr>
<tr>
<td>12 Other career interests</td>
<td>25%</td>
<td>23%</td>
<td>27%</td>
</tr>
</tbody>
</table>

*Not applicable is excluded from analysis.

N=956 to 1201  402 to 529  550 to 666

Yellow shading indicates the group’s response is significantly higher than the other group’s response (P<.01).

http://ucfamilyedge.berkeley.edu/grad%20life%20survey.html
Career Flexibility –

Structurally Realigns the Academic Career Path to Fit the Needs of an Increasingly Diverse Work Force
Career Flexibility Policies

- Extended time to tenure – modified duties, tenure clock stoppage
- On and off ramps through leave policies
- Slow-down periods – including reduced appointments
- Delayed entry – including practices to foster later than usual career starts
- Phased retirement
## Existing Career Flexibility Policies

<table>
<thead>
<tr>
<th>Type of Institution</th>
<th>Average #</th>
</tr>
</thead>
<tbody>
<tr>
<td>Research Universities</td>
<td>3</td>
</tr>
<tr>
<td>Doctoral &amp; Masters Granting Institutions</td>
<td>1</td>
</tr>
<tr>
<td>Baccalaureate Degree Granting Institutions</td>
<td>1</td>
</tr>
<tr>
<td>Associate Degree Granting Institutions</td>
<td>&lt;1</td>
</tr>
</tbody>
</table>

Source: University of Michigan, Center for the Education of Women
Type of Work/Family Policies at Research Universities

Source: University of Michigan, Center for the Education of Women
Fear of Bias Prevents Use of Policies and Impacts Families

Women | Men
--- | ---
19% | 14%
33% | 37%
34% | 19%
33% | 19%
32% | 33%
19% | 18%

“Came back to work sooner than I would have liked after new child to be taken seriously as an academic.”

“Missed children’s important events when they were young to appear committed to my job.”

“Did not bring children to the office during their school breaks because I worried that other faculty would be bothered.” [parents]

“Did not ask for reduced teaching load when needed for family reasons, because of adverse career repercussions.”

“Did not ask for parental leave even though it would have helped me to take it.” [parents]

“Did not ask to stop the tenure clock for a new child even though it would have helped me to take it.” [parents]


19
Getting to the Next Stage: Formal Faculty Policies Not Enough

• Culture
• Programmatic Change
• Early Career Interventions
Changing the Culture

- Internal Assessment – baseline data
- External Assessment - benchmarking
- Ongoing monitoring of progress
- Engagement of leadership
- Training of key gatekeepers - chairs
- Communications campaign
- Transparency
- Commitment of central funds
- Level the playing field
- Building the business case
Promising Programmatic Change

• University of Florida
• Lehigh University
• Duke University
• Iowa State
Early Intervention: Graduate Students

- Assessment of work-family issues
- Paid family leave
- Part-time post doc appointments
- University & federal grant policies
- Delayed entry/alternate entry points
  - non-tenure lines (research or teaching)
  - re-tooling and re-entry fellowships
Princeton University – Family Friendly Policies for Graduate Students

- Three months of paid maternity leave
- Extensions of academic deadlines and fellowships
  (leave time does not count against any limits on time to receive financial support or finish degrees)
- Child care support of up to $5,000 a year per child (up to 2 children)
- Back-up Child Care Funds when regular child care is not available
- Travel payments for academic conferences includes child care
  (either at home or on site - when needed)
- Mortgage assistance (to reduce both points and closing costs for graduate students purchasing real estate anywhere in the country)
Achieving the Fit between Academic Careers and Family

**Goal:** Offer women and men at all career stages genuine choices regarding children and marriage

**Method:** Design and implement policies and practices to insure professional gains are not offset by familial losses

**Challenge:** Change the culture
Alfred P. Sloan Awards for Faculty Career Flexibility

• Recognizes leadership and innovation in career flexibility

• In 3rd Round:
  - Round 1 – Research Universities
  - Round 2 – Master’s Universities
  - Round 3 - Liberal Arts Colleges (in progress)

• Up to 6 Awards in each round
• Awards range from $200,000 to $250,000 each
• Award monies used to accelerate progress