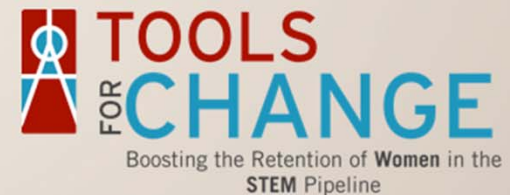


RETAINING WOMEN IN STEM FIELDS

PROFESSOR JOAN C. WILLIAMS

Hastings Foundation Chair, Director
Center for WorkLife Law
University of California, Hastings College of the Law



**BUILDING A DEPARTMENT
IN A ERA OF TIGHT BUDGETS**

TIGHT BUDGETS

- *Institutional expenditures in research per professor has tripled since 1970*
 - *During same era, state support declined sharply*
- *One way to save money is to reduce costs; many “inevitable” costs are not inevitable*

HIRING PEOPLE COSTS MONEY

Average Start-up Costs for Assistant Professors at Private Research I Universities (2002 survey of over 200 public and private research universities)

PHYSICS/ASTRONOMY, BIOLOGY,
CHEMISTRY, ENGINEERING
\$390,237 – 489,000

SENIOR SCIENCE FACULTY

\$700,000 in physics **to**
\$1.442 million in engineering

*Low end: **\$47,000** for a start-up package at public university.*

LOST GRANTS

WHEN SOMEONE LEAVES, SO DO HER GRANTS

RECOUP OF START-UP PACKAGE

“*It can take 10 years for a new faculty member in science or engineering to develop enough of a positive revenue stream from grants to recoup start-up costs.*”

Source: (Callister, 2009)

LOST FACULTY PRODUCTIVITY

- *How much time do you spend on each search?*
 - *One dean estimated she spends 2 full weeks on each search*
 - *Average committee member: 25 – 40 hours*
- *Total costs of average search: \$54,825*

HIGH COSTS OF CHURN AND BURN



- *Departments with a chilly climate for **WOMEN** incur these costs **over** and **over** again*
- *So do departments without effective implementation of work-life policies*

BIG SAVINGS IN FACULTY RETENTION

- *Estimated savings associated with retaining a faculty member in one STEM field:*
 - *Costs of replacement:* **\$383,000**
 - *Costs of retention with flex policies:* **\$78,516**
 - *Total savings:* **\$304,162**
- *Estimated savings in a less technology-intensive field:* **\$105,548.**
- *Savings ranged from \$54,453 - \$306,717.*

Source: (Harris, Carlson, & Bowen, 2009; Carlson, 2009)

SIMULATOR

- *Forthcoming at www.ToolsForChangeInSTEM.org*
- *Allows you to put in your own statistics, and calculate your own costs/savings*



KEEPING IN THE GAME



- *Individuals and couples are looking for departments that enable them to meet their family as well as their career needs*
- *Not a guarantee you'll get someone... but necessary just to keep your department in the game*

CLIMATE

TIME NORMS

“Historically male careers “measure...excellence and commitment not only by productivity and competence but by the number of hours logged... —that is part of the politics of time.”

“Time becomes a proxy for dedication and excellence.”

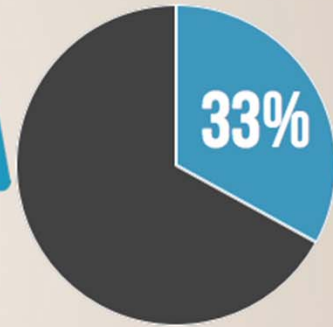
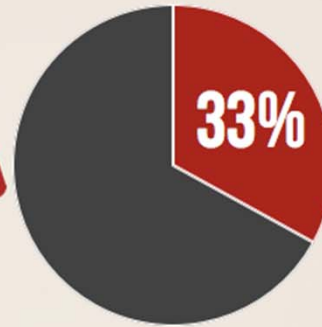
TIME NORMS IN ACADEMICS

“In physics, we select for not only for talents that are relevant to success in science, but also for assertiveness and single-mindedness.”

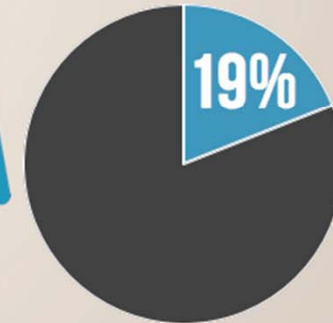
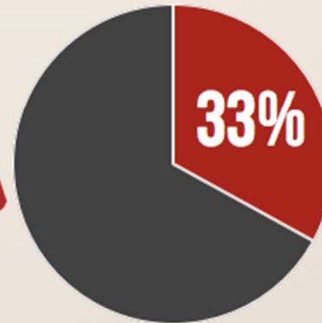
Source: (Georgi, 2000)

BIAS AVOIDANCE IN ACADEMIA

Did not ask for parental leave, though needed it



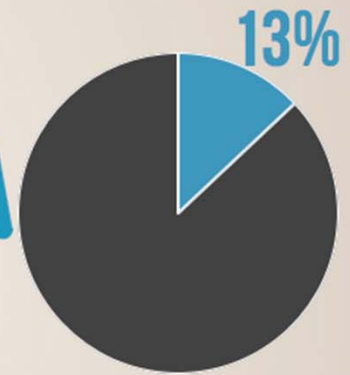
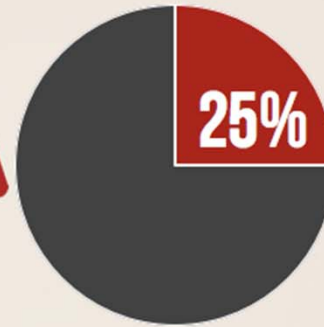
Did not request reduced teaching load, though needed it



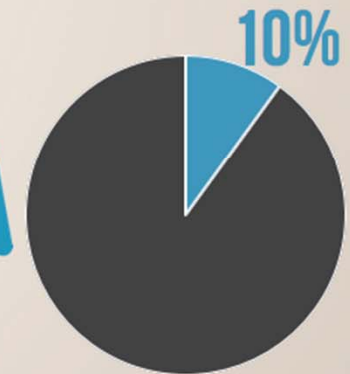
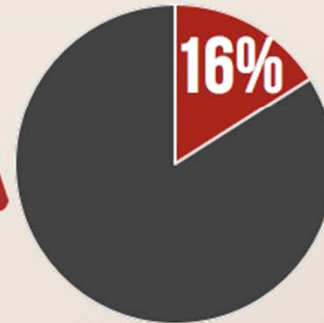
Sources: (Bardoel, Drago, Cooper, & Colbeck, 2011)

BIAS AVOIDANCE

Had fewer children than I wanted



Stayed single



Source: (Bardoel, Drago, Cooper, & Colbeck, 2011)

IMPACT OF TIME NORMS ON WOMEN



FATHERS

- *50% more likely to begin tenure-track job*
- *38% more likely to get tenure*
- *95% of U.S. **MOTHERS** work <50 hours/week*

MOTHERS

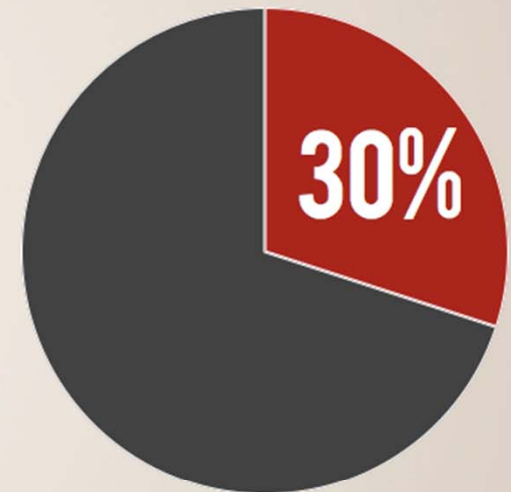
- *35% less likely to enter a tenure-track position*
- *27% less likely to get tenure*
- *59% of married mothers think of quitting*

Sources: (Bombardieri, 2005; Goulden, Frash, & Mason, 2009; Mason & Golden, 2003)

IMPACT ON WOMEN

WOMEN EARN 30% OF PHD'S IN STEM

- *What % of faculty in your department are women?*
- *What % of full professors are women?*



**RISK MANAGEMENT
IN AN ERA OF TIGHT BUDGETS**

CLASSIC TENURE SUITS

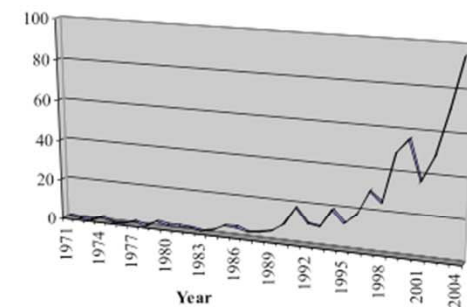
- *Classic litigation against a university: tenure suit based on gender discrimination*
- *Hard to win*
 - *Academic deference doctrine*
 - *Glass ceiling bias often is subtle*

GROWTH IN POTENTIAL LIABILITY

FAMILY RESPONSIBILITIES DISCRIMINATION (FRD)

- *400% increase*
- *80 with verdicts or settlements over \$100,000*
- *20 over \$1 million*
 - *Before recent \$250 million class action verdict*

Figure 1. Number of Family Responsibilities Discrimination (FRD) cases, 1971-2004



MEET FRD

MATERNAL WALL

Provost allegedly said professor's decision to stop the clock was a "red flag" and that

“As a **MOTHER** of two infants, she had responsibilities that were *incompatible with those of a full-time academician.*”

(\$500,000 reported tentative settlement)

Source: (Frasch, Mason, Stacy, Goulden & Hoffman, 2007)

MEET FRD



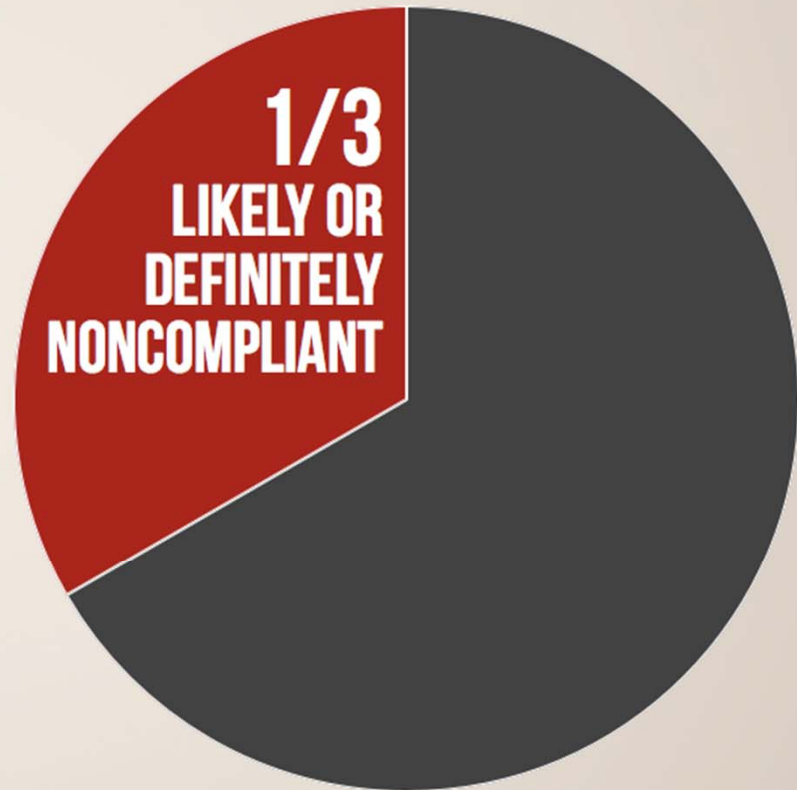
- *Frigid climate for* **FATHERS**
- *Gender bias against* **MEN** *as well as* **WOMEN**

“*My request for family leave was met with a sneering denial by my chair.*”

Source: (Frasch, Mason, Stacy, Goulden & Hoffman, 2007)

LEAVE ISSUES

1/3 of academic institutions surveyed had leave policies that were likely or definitely noncompliant



Source: (Thornton, 2003, p. 170)

DO'S AND DON'TS

THE FOLLOWING ARE ILLEGAL



- *Requiring **MOTHERS** to find their own replacements in order to take leave*
- *So is treating **MOTHERS** differently than other leave-takers*

DO'S AND DON'TS

THE FOLLOWING ARE ILLEGAL

- *Discouraging **MEN** or **WOMEN** from taking legally protected leave (Many reports of this in the sciences.)*
- *Penalizing anyone from taking leave*
- *Penalizing anyone for taking advantage of university policies*

RISKY BUSINESS

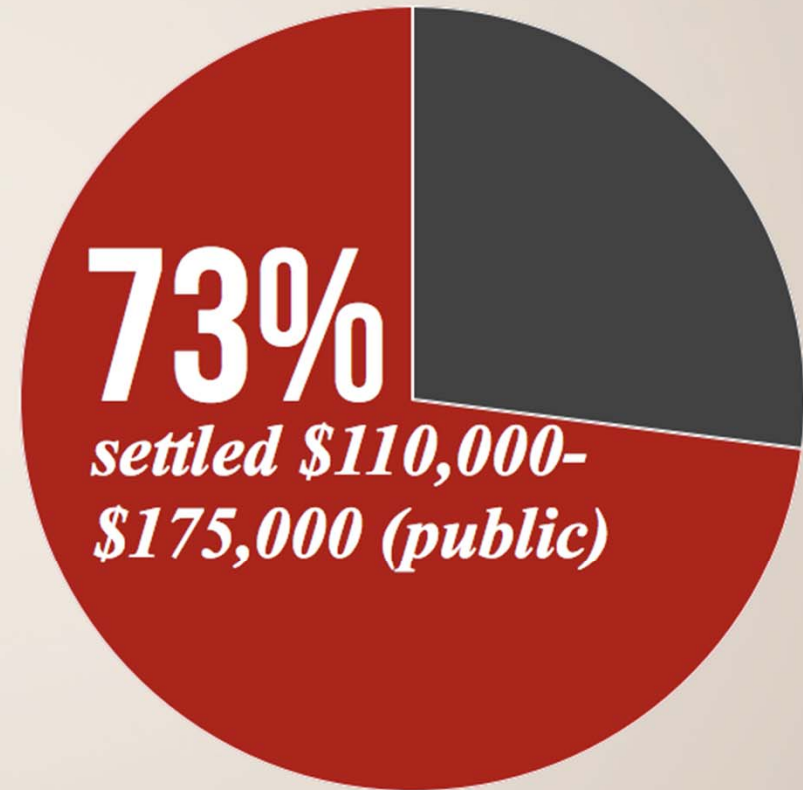
“One woman gave a lecture the same day she gave birth, which I felt was completely ridiculous and her department chair should not have allowed.”

“I was back teaching a day after getting out of the hospital.”

Source: (Frasch, Mason, Stacy, Goulden & Hoffman, 2007, p. 17)

RISKY BUSINESS

- *Claims can be expensive even when they are settled.*
- *Plaintiffs more likely to win FRD suits.*



Source: (Thornton, 2003, p. 170)

STEREOTYPING AND IMPLICIT BIAS

- *Classic way to prove a discrimination suit: comparators*
- *FRD suits*

“stereotyping of women as caregivers can by itself and without more be evidence of an impermissible, sex-based motive.”

PATTERNS OF GENDER BIAS

FOUR BASIC PATTERNS

**PROVE IT
AGAIN!**
(descriptive bias)

**THE
TIGHTROPE**
(prescriptive bias)


**MATERNAL
WALL**

**TUG OF
WAR**

Source: (Williams & Dempsey, in press)

MATERNAL WALL

BIAS AVOIDANCE



“At my campus, most women are afraid to admit that they even have children.”

Sources: (Drago et al., 2006; Frasch, Mason, Stacy, Goulden & Hoffman, 2007, p. 12; Mason and Goulden, 2004)

MATERNAL WALL

FRIGID CLIMATE FOR FATHERS

*Over 40 percent of academic **FATHERS** did not ask to stop the tenure clock for a new child even though it would have helped them to take it.*



Source: (Correll, Benard & Paik, 2007; Butler & Skattebo, 2004; Drago & Corbeck, 2003)

STUDIES

CV REVIEW

*Department chairs given
CVs identical for **MEN**
and **WOMEN***

*Significantly more likely to hire
man as associate and women as
assistant professor*

RECOMMENDATION LETTERS

*For **MEN**:
“brilliant and original”*

*For **WOMEN**: “reliable,
responsible, meticulous”*

THE TIGHTROPE

FEMININE

Liked but not respected

WARM

CONSIDERATE

NICE

MASCULINE

Respected but not liked

OUTSPOKEN

DIRECT

COMPETITIVE

ASSERTIVE

THE TIGHTROPE

TOO MASCULINE

*Showing anger tends to increase the perceived status of a **MAN**, but decrease the perceived status of a **WOMAN** .*

Source: (Brescoll & Uhlmann, 2008)

THE TIGHTROPE

TOO MASCULINE | SELF-PROMOTION

WOMEN *often face social costs for self-promotion, stronger from other **WOMEN** than from **MEN** – but strong from both.*

Source: (Rudman, 1998)

TUG OF WAR

**TUG OF WAR IS THE RESULT OF GENDER DISCRIMINATION,
NOT PROOF THAT**

“this is not a gender problem.”

CONCLUSIONS

- *A chilly climate can undercut your efforts to raise the profile of your department—especially in an era of tight budgets*
- *Gender bias is commonplace in academics*
- *Departmental climate affects attrition*



Boosting the Retention of Women in the STEM Pipeline



MARY ANN MASON

Professor of the Graduate School UC Berkeley and Faculty Co-Director of the Earl Warren Institute for Law and Social Policy



WORK LIFE LAW
UC Hastings College of the Law

JOAN C. WILLIAMS

Distinguished Professor of Law and 1066 Foundation Chair at University of California, Hastings College of the Law

IN PARTNERSHIP WITH:

AWIS

ASSOCIATION FOR WOMEN IN SCIENCE

AWIS is today's premiere leadership organization advocating the interests of women in science and technology.

WWW.TOOLSFORCHANGEINSTEM.ORG

LEVEL THE PLAYING FIELD WORKSHOPS

- ▶ Do Babies Matter? I, II, III
- ▶ It's Cheaper to Keep Her
- ▶ Best Practices for Family Friendly Policies
- ▶ Double Jeopardy?: How Gender Bias Differs by Race
- ▶ What Works for Women at Work
- ▶ Some Things are Illegal

IT'S CHEAPER TO KEEP HER SIMULATOR

Developed by UC Berkeley economists, allows your department or institution to perform a cost/benefit analysis on the presence or absence of family friendly policies, based on the characteristics of the faculty in your own institution or department.

FACILITATOR'S GUIDES

Complete training guides are available for groups to facilitate their own training sessions using the videos, and additional materials available through our website.

This material is based upon work supported by the National Science Foundation under grant number (1106411).

JOAN C. WILLIAMS & RACHEL DEMPSEY

What FOUR PATTERNS
WORKING WOMEN
NEED TO KNOW

Works for
Women

at Work

FOREWORD BY ANNE-MARIE SLAUGHTER

WHAT WORKS FOR WOMEN AT WORK

An essential resource for any working woman, *What Works for Women at Work* is a comprehensive and insightful guide for mastering office politics as a woman. Authored by Joan C. Williams, one of the nation's most-cited experts on women and work, and her daughter, writer Rachel Dempsey, this unique book offers a multi-generational perspective on the realities of today's workplace. Often women receive the message that they have only themselves to blame for failing to get ahead: —Negotiate more! —Stop being such a wimp! —Stop being such a witch! *What Works for Women at Work* tells women it's not their fault. The simple fact is that office politics often benefit men over women. Look for it on shelves beginning **January 17, 2014**, or pre-order your copy wherever books are sold.

PRE-ORDER ON AMAZON.COM