GENDER MATTERS

PRIYAMVADA NATARAJAN
YALE UNIVERSITY
Blind Auditions: Rouse & Goldin (2001)
Legal challenges by the famous Jazz musician Art Davis (double bassist) in the 1980s
Challenge in Academia

• HIRING
• NURTURING
• PROMOTION
• RETENTION

EVALUATION of EXCELLENCE
RATIONALE FOR GENDER PARITY IN ACADEMIA

Half the sky? Meritocracy?

RECONSTRUCTING THE NOTION OF EXCELLENCE AND MERIT

The price of exclusion – economic calculation
Reflection of “customer/client”
Inclusion of new ideas – innovation
Value based – equity, fairness
Global challenges – rethinking role of the university and education in a more diverse, interconnected world
Harnessing the power of the best
Power of intellectual diversity
The Challenge in Academia
the need for re-framing

**DEMOGRAPHIC DIMENSION**
Opening the door – and keeping it open and flowing
Discipline specific challenges

**CULTURAL DIMENSION**
Conscious bias
Unconscious bias
Challenge in all disciplines

WHAT TO DO ABOUT UNCONSCIOUS BIAS?
if it is universal, is it inescapable?

HOW TO GENERATE INSTITUTIONAL COMMITMENT
awareness=>compliance=>leads to commitment?
ON THE TRAIL OF A FEW STUDIES

Hiring, Salary, Mentoring

Moss-Racusin & Handelsman (2012)
Resume study of undergraduates looking for a summer internship in a lab as manager; Male and Female Chairs; mix of universities

Gender Gap and Nepotism advantage (friendship bonus)

Steinpreis, Andres & Ritzke (1999)
The impact of gender on the review of CVs of applicants

Winneras & Wold (1995)
Postdoctoral Fellowship, Swedish MRC, peer-review scores and evaluation
TRIX & PENSKA (2010)
Recommendation letters for hiring U.S. Medical School Faculty; gendered differences
Less solid, not as leaders, mention personal lives & traits

NIH-Grant Funding (2008)
Grant Application outcomes for the R01 scheme, the new PI research grant; controlling for prior research awards, publications, institution
Award Likelihood

SHELTZER & SMITH (2014)
Membership in Elite labs; Nobel Laureate and NAS member training
10-40% fewer women trained as post-doctoral researchers
MERVIS (2005)

*Pioneer Awards*, NIH – sudden jump in number of women awardees in a couple of years (to 50%)

Encouraged to apply, self-nomination, more time schooling reviewers on implicit bias

SUGIMOTO ET AL. (2013)

*Bibliometric* global study research output, patents, citations, influence, network, collaboration

Significant Gender Disparity world over

BORNMANN, MUTZ & DANIEL (2008)

*Meta-analysis* of gender differences in grant peer-review

~7% gender penalty

BIAS IN TEACHING EVALUATIONS

MacNell, Driscoll & Hunt (2014)

blinded study online course, promptness rating (4.35 versus 3.55 rating), female profs conforming to female stereotypes rating less harshly,
JOAN WILLIAMS, KATHERINE PHILLIPS & ERIKA HALL (2014) Hastings Center, University of California (557 female scientists)

**WHAT PUSHES WOMEN OUT OF STEM?**

**BIAS**

**NOT PIPELINE ISSUES**

**NOT PERSONAL CHOICES**

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**PERCENT OF U.S. WOMEN IN STEM WHO REPORT...**

<table>
<thead>
<tr>
<th>Issue</th>
<th>Black</th>
<th>Latina</th>
<th>Asian</th>
<th>White</th>
<th>Overall</th>
</tr>
</thead>
<tbody>
<tr>
<td>Having to provide more evidence of competence than others to prove themselves</td>
<td>77%</td>
<td>65%</td>
<td>64%</td>
<td>63%</td>
<td></td>
</tr>
<tr>
<td>Colleagues have suggested they should work fewer hours after having children</td>
<td>8</td>
<td>9</td>
<td>37</td>
<td>26</td>
<td></td>
</tr>
<tr>
<td>At work, they find themselves pressured to play a stereotypically feminine role*</td>
<td>8</td>
<td>28</td>
<td>41</td>
<td>36</td>
<td></td>
</tr>
<tr>
<td>Women in their work environments are supported one another</td>
<td>56</td>
<td>79</td>
<td>71</td>
<td>77</td>
<td></td>
</tr>
<tr>
<td>They’ve been mistaken for either administrative or custodial staff</td>
<td>48</td>
<td>47</td>
<td>23</td>
<td>32</td>
<td></td>
</tr>
</tbody>
</table>

*Such as “Office Mother” or “Dutiful Daughter.”

**SOURCE** JOAN C. WILLIAMS, KATHERINE W. PHILLIPS, AND ERIKA V. HALL

HBR.ORG
INTERVENTIONS
legal constraints
quotas, AA
Equal Op

MEASURING EFFICACY
Metrics, How to evaluate
Gender Equality Project*

SUSTAINABILITY
Actors? gender fatigue?

CULTURAL CHANGE

BIAS
Awareness
NUDGE vs. SHOVE?

BIAS MITIGATION
new studies? translation?

SURMOUNTING
BIAS sustainable &
effective solutions
STRATEGIES FOR AMPLIFICATION

shaming? signaling? norm generation

awareness

compliance

commitment

rewards, certification reinforcement new metrics for resource reallocation

OUTSIDE ACTORS CATALYSTS
Peer Institutions Rankings Funding agencies Foundations
Where Are Women and Men of Color at Yale?

Distribution of Minority Faculty, University-Wide (2011-2012)*

**Ladder Faculty**

- **Total Ladder White Men**: 1127 (52%)
- **Total Ladder Minority Men**: 306 (14%)
- **Total Ladder White Women**: 554 (25%)
- **Total Ladder Minority Women**: 200 (9%)

**Tenure Faculty**

- **Total Tenure White Men**: 666 (66%)
- **Total Tenure Minority Men**: 99 (10%)
- **Total Tenure White Women**: 203 (20%)
- **Total Tenure Minority Women**: 39 (4%)

*Male and Female Native American, Native Hawaiian/Pacific Islander, and Multi-Racial faculty members constitute less than 1% in each category.

**Source**: Office of Institutional Research, University-Wide Headcounts, Race by Sex 2011-2012; OIR W105
A Tale of Two Pipelines

Percentage versus Career Stage
INSTITUTIONAL SELF-ASSESSMENT

Pilot Project at Yale funded by the Alfred P. Sloan Foundation
Conducted in collaboration with EDGE FOUNDATION, Switzerland!
CLOSING THE ACADEMIC GENDER GAP

- Recruitment
- Retention
- Promotion
GENDER EQUALITY SELF-ASSESSMENT

KEY FINDINGS 2014

YALE UNIVERSITY

TRIANGULATION OF POLICY ARTICULATION, PERCEPTION & IMPLEMENTATION

INPUTS: DEMOGRAPHIC DATA, FACULTY SURVEY, POLICY QUESTIONNAIRE

FUNDED BY THE SLOAN FOUNDATION
The results of the EDGE gender equality assessment are based on an analysis of the following sources of information, as provided by Yale:

- **Yale University statistics** covering the period January to December 2013
- the responses from 176 surveyed faculty (19% of the total workforce) to the 21 survey questions [PILOTED IN A FEW DEPTS IN THE FACULTY OF ARTS & SCIENCES]
  - the answers to the additional customized 10 questions are also were also included
- the answers from Deputy Provost Frances Rosenbluth to the 29 questions of the gender equality policies and practices questionnaire
  - one additional customized question was asked on the existence of the informal mentoring programs, not included in the analysis
Challenges and Barriers to Progress

• Implicit and explicit bias – in hiring and retention
• Hostile/Unwelcoming climate
• Family and Care commitments
• Dual career challenges
• Industry competition
• Small community and/or weak institutional support systems for women and minority faculty
• Institutional culture and climate
• Lagging retirement
**Interventions: How to improve**

- Direct policy interventions (e.g. hiring incentives)
- Institutional policies for family leave, child care, elder care
- Improved research, policy and education on sexual misconduct
- **Mentorship and sponsorship programs**
- Education about bias
- Transparency and accountability
- Cultural and political pressure to improve & change
POLICY INTERVENTIONS

• LOCAL – understand local policies, politics within institutions, data collection (self-diagnosis – Yale pilot)

• ACADEMIC COMMUNITY – coordinated effort in specific fields e.g. ATHENA SWAN in the U.K.

• NATIONAL LEVEL – AAS, NSF, NIH, SNSF, MRC...

• INTERNATIONAL – Scientific Bodies resolutions/guidelines, charters (IAU)
REFORMS IN THE TENURE EVALUATION PROCESS

- Training on implicit biases, discussion prior to: [implicit.harvard.edu/implicit/takeatest.html](https://implicit.harvard.edu/implicit/takeatest.html)
- Training about persistent biases in evaluations – letters of recommendation, teaching evaluations
- Awareness of accumulation of advantage
- Census of resource allocations for every candidate
- Reduce over-reliance on metrics that are known to be biased
- Transparency about what it takes to get promoted
WHAT CAN UMass DO?

• Mentoring and Sponsoring
• Cluster hiring and funding
• Awareness of implicit biases
• **Audits – require gender equity analysis for salary, lab space, promotion rates**
• Data collection and longitudinal studies
• Allowances for childcare & elder care time and expenses
• Incentives for early stage participation & retention
• Incentives for mentoring/sponsoring
• Incentives for demonstrated improvement
• Dual-career solutions - industry and university partnerships for placements
• Career planning workshops and opportunities